

Friday Abstracts

RIME Symposium: Establishing RIME Collaboratives

*Mark Albanese, PhD, University of Wisconsin School of Medicine and Public Health
Kyle Rarey, PhD, University of Florida*

The purpose of this session is to encourage the formation of research collaboratives with individuals with diverse backgrounds and interests to undertake research initiatives set forth by the GEA response to the 2004 AAMC's Institute for Improving Medical Education (IIME) Report. The research collaboratives are envisioned to have as their nucleus those who attend the CGEA meeting and from there to develop multi-institutional collaborations at a minimum and to serve also as a means to bring individuals from other AAMC groups or even outside medical education into this research arena. In previous work, the RIME (Research in Medical Education) Section of the GEA identified relevant research considerations for each of the following five strategies proposed in the IIME report: patient-centered care, high quality care, professional choice and development, efficiency of education, and effectiveness of education. At the fall 2006 national RIME meeting, groups worked to prioritize potential research projects for each strategy of the IIME report in order to further its goal of promoting a dynamic research agenda and identifying appropriate funding. During the presentation, the prioritized research considerations for each strategy will be reviewed followed by discussion of how to design and implement research collaboratives, and monitor their progress and success.

Clerkship Administrators' Certificate Program: Workshop 4: Project Presentations

*Gary Beck, MS, University of Nebraska
Fredrick McCurdy, MD, PhD, Texas Tech Regional University
Virginia Cleppe, AM, Medical College of Wisconsin*

Faculty Development SIG Invited Workshop: Having fun with faculty: Creative activities used in faculty development

*Marcy Rosenbaum PhD, University of Iowa College of Medicine
Kathryn Huggett PhD, Creighton University
Deborah Simpson PhD, Medical College of Wisconsin
Janet Riddle MD, University of Illinois-Chicago*

A. Rationale/Background

Engaging clinicians who may have literally run from their clinic/attending responsibilities to four hours of face-to-face faculty development is challenging. Compounding that challenge is the need for faculty development instructors to model the educational principles and practices we teach, including responding to feedback, capturing and sustaining learner interest, and selecting teaching strategies that maximize transfer of learning. New methods of teaching and evaluation continue to emerge as research in education, psychology, and the neurosciences advances our understanding of how people learn. As a result there is increasing interest among faculty members in using more active learning techniques (e.g., small group activities, team based learning, role plays, etc) as methods of instruction.

Based on educational and psychological principles, we know that learning is best facilitated when learners are actively engaged with the material, and it is timely and addresses problems/issues faced by the learner. (Knox 1987, Slotnick et al., 1998, Clark and Mayer 2002). The problem or challenge faced by faculty developers is how to make the content of their programs engaging and firmly grounded in the science of education in order to enhance the transfer of learning.

B. Objectives:

The purpose of this session is to share creative activities used in faculty development programs drawing on the recent series of faculty development/fellowship articles published in Academic Medicine (Nov 2006; 81(11): 934-994) and generate additional strategies to engage our faculty development enrollees. This topic will be of interest to anyone involved in faculty development from leaders to enrollees independent of program length (e.g., ½ day workshop to educational fellowships). After participating in this session, participants will be able to:

1. Describe and implement 2-3 creative activities successfully used in faculty development programs for engaging faculty learners.

Friday Abstracts

2. List common characteristics of teaching activities that successfully engage learners.
3. Generate additional strategies for engaging learners specific to selected faculty development topics.

C. Topic Outline:

The main points to be made in this session include:

1. Emphasizing on the importance and challenge of engaging learners in faculty development activities through the use of active learning strategies.
2. Providing examples of active learning strategies successfully used in existing faculty development programs to engage learners.
3. Application of active learning principles to challenging topics in faculty development.

D. Methods/Session Activities:

Several techniques will be used to assist participants in grappling with the problem of identifying creative, engaging and fun ways to teach faculty about education. The general approach for this session will include demonstration of several creative teaching strategies from existing faculty development programs, identification of the shared characteristics of these activities, and discussion of how specific faculty development topics identified by participants could be approached using creative activities.

A detailed workshop outline including time allotted for each activity is presented below:

Experience of presenters:

Marcy Rosenbaum, PhD – Directs educational fellowship programs for on-campus faculty, community based faculty and fellows as well as providing programming and consultation for teaching skills improvement in her role as Faculty Development Consultant for the Office of Consultation and Research in Medical Education at the University of Iowa.

Kathryn Huggett, PhD - In her role as the Director of Medical Education Development and Assessment at Creighton University School of Medicine, Dr. Huggett directs faculty development for education and works with medical school faculty to promote scholarship in education, to foster educational leadership, and to develop effective educators

Janet Riddle, MD - Associate Director, Scholars for Teaching Excellence Faculty Fellowship, University of Illinois-Chicago College of Medicine.

Deb Simpson, PhD – Drawing on >25 years of successes (and flops) in faculty development ranging from 1-hour grand rounds to 2-year programs in local and national settings, she will address the need for faculty developers to role model risk-taking as a teacher.

UGME Invited Session:

Should patient safety education be implemented in the UGME curriculum?

David Mayer, MD, MHPE, University of Illinois College of Medicine Chicago

Deb Klamen, MD, MHPE, Southern Illinois University School of Medicine

Ara Tekian, PhD, MHPE, University of Illinois College of Medicine- Chicago

Anne Gunderson, GNP, CRRN-A, University of Illinois at Chicago

C. Leslie Smith, MD, MS, Southern Illinois University School of Medicine

The goal of a medical school curriculum is to address problems that affect the health of the public.ⁱ Medical errors and patient safety have emerged as central, public concerns in the United States. Since the release of the Institute of Medicine's (IOM) report in 1999 entitled *To Err is Human; Building a Safer Health System*ⁱⁱ, there has been considerable discussion in both the public and private sectors regarding ways to modify the current medical education system to address these growing concerns. At the educational level, the Association of American Medical Colleges (AAMC) called for a "collaborative effort to ensure that the next generation of physicians is adequately prepared to recognize the sources of error in medical practice, to acknowledge their own vulnerability to error, and to engage fully in the process of continuous quality improvement (CQI)."ⁱⁱⁱ Efforts to increase awareness regarding patient safety are on-going at the graduate medical education level. David Leach noted that all six of the ACGME core competencies encompass patient safety education.^{iv} These calls for action raise a number of questions for educators active in UGME:

- 1.) Should patient safety education be incorporated into UGME?
- 2.) If so, what educational components should be included in an already crowded UGME curriculum?
- 3.) When is the appropriate time to introduce these educational components? Should the content be integrated? Should the content be longitudinal?
- 4.) Should patient safety education at the UGME level be interdisciplinary?

Friday Abstracts

- 5.) Will inclusion of these educational components into UGME increase development of patient safety competencies during GME?

Identifying the educational needs for patient safety specific to undergraduate medical education is challenging in an already overcrowded curriculum. To date, there has been little published in the medical education literature focusing on patient safety knowledge and skills that might be introduced into UGME. During the plenary session, the speakers will share with CGEA membership:

- 1.) A review of the current patient safety educational literature and interdisciplinary curricular initiatives recently implemented at the student level.

Computer SIG Invited Session:

CHANGING LEARNING ENVIRONMENT THROUGH TECHNOLOGY

Heather L Hageman, MBA, Washington University School of Medicine

Kelly Noll, PhD, Washington University School of Medicine

Michael Caputo, Washington University School of Medicine

Geraud Plantegenest, MD, Michigan State University School of Medicine

Brian Mavis, PhD, Michigan State University School of Medicine

Michael Karr, BFA, University of Kansas School of Medicine

Tony Paolo, PhD, University of Kansas School of Medicine

Rationale: Recent introduction of various technologies in medical schools have impacted how and when medical students learn. Some of these technologies have resulted in faculty changing the way they teach. Many schools are piloting or launching the same technologies concurrently and the sharing of their “lessons learned” will be helpful to other schools considering such technologies.

Objectives: To share “lessons learned” from the introduction of recent technologies at three medical schools, including Camtasia (screen-capture software including digital audio synchronized with PPT slides), podcasting (definition), audience response systems, virtual microscopy (ie, Aperio Image Scope and Bacus), tablet PC computers (which enable students to take notes on electronic files), electronic textbooks, PDAs and patient tracking software, electronic classrooms, wireless networks, and Learning Management Systems (i.e., Blackboard, Angel, etc). The faculty will share how these technologies are employed at their schools, the successes/pitfalls of the implementation of these technologies, and the reactions of both the learners and teachers. Technological support for these products will be discussed as well.

At the end of this session, participants will be able to:

1. Be familiar with the current technologies employed in medical student learning.
2. Identify key elements of success and potential barriers to implementation of the technologies discussed.
3. Assess whether these technologies could be successfully implemented in their schools.
4. Assess the potential impact of technologies on their faculty, students and support staff.

Topic Outline: The focus will be on identifying best practices in technological implementation with emphasis key success factors and barriers to implementation.

Methods/Session Format: The purpose of this workshop is to share how and when students learn has changed through the introduction of recent technologies.

Section I (15 min, 5 min each leader) – Experiences of Workshop Leaders - Leaders will share their experiences:

- ◆ University of Kansas SOM launched an entirely electronic revised curriculum for AY06-07 which includes Tablet computers for each student, digital recording of lectures (Camtasia, student ambassadors), PDA logging, Aperio Image Scope (virtual microscopy), a learning management system, separate student server download area, and electronic textbooks (AccessMedicine, LWW, OneNote, GoBinder). Print copies are not provided to students who can use their tablets to take notes. Students can organize the course content and their notes and search everything.
- ◆ Michigan State College of Human Medicine uses Camtasia and podcasting and we have been studying the impact of these resources on the medical student experience. Camtasia recordings of Live and Pre-recorded lectures for basic science lectures have been available to

Friday Abstracts

students at our school since Fall 2005. Currently, students have access within 24 hours to recorded lectures in different delivery formats (e.g., streaming media, downloadable format). In addition, we are pilot testing mobile PDA and video iPod versions of the lectures. These resources have provided a foundation to study the impact of these resources on the medical student experience. Online lectures have helped to address the different learning styles for our medical student population and increase the availability and accessibility of content beyond the classroom learning experience.

- ◆ Washington University SOM has a traditional curriculum and is characteristically a late adopter of technologies for use in formal teaching environments. Tablets PCs for student use in the lecture halls were piloted on a small scale in spring of 2005, but students were not interested. In the fall of 2006, the following technologies were introduced: Camtasia Recording Software, Bacus Digital Imaging, and Turning Technologies Audience Response System. These were implemented at student and institutional suggestions for supplementing the curriculum. Camtasia was introduced, as an alternative to student-requested videotaping of lectures when videotaping proved too problematic to implement. The Bacus digital image repository was introduced at faculty request to be able to use real-time interactive microscopy in the context lecture hall and small-group settings. The Turning Technologies system was introduced as a way of encouraging student/faculty interaction in-group settings, allowing faculty to get a real-time sense of student appreciation and comprehension of the learning materials.

Section II (30 min) – Technology Petting Session – Specific, less-well-known technologies will be demonstrated to participants so they can gain a greater understanding of how they are employed. Technologies included in this session will be: Camtasia, Bacus, podcasting, audience response systems and use of tablet PCs for notetaking.

Section III (30 min) – Small Group Discussion – Participants will be divided into small groups, led by workshop faculty, to discuss the following questions:

- ◆ What *key elements* must be in place when implementing a new technology in the medical student curriculum?
- ◆ What are common *barriers* to successful technology implementation?
- ◆ What are future potential implications of technology on the *learners*?
- ◆ What are future potential implications of technology on the *teachers*?

Section IV (15 min) – Small groups will identify a spokesperson to summarize their discussion and conclusions. The combined groups will comment on each other's findings, offering additional perspectives and recommendations. Heather Hageman, convener of the CGEA Computer SIG, will take notes on a tablet to project for discussion and to send to participants following the meeting.

Experience:

Michigan State: Geraud Plantegenest is an instructional designer and educational technologist; he has been involved in implementation and coordination of new technologies to enhance student learning. Brian Mavis has been involved in consultation around the evaluation of the impact of new technologies on student learning and performance.

University of Kansas: Michael Karr has a background in instructional technology and is responsible for reviewing and implementing new technologies to enhance student learning and performance. Tony Paolo is responsible for the evaluation of the curriculum and the impact of new technologies on the learning environment and student performance.

Washington University School of Medicine: Kelly Noll is the Director of Curriculum Support; her office oversees the development and distribution of all curriculum-related learning materials, coordinates all aspects of the medical student program of studies, and oversees the implementation and maintenance of curriculum-related technologies for the teaching faculty of the School of Medicine. Mike Caputo is new to the school, joining in October 2006 as assistant dean and chief information officer.

Friday Abstracts

Academic Development SIG Invited Session:

Academic Development: Barriers to Learning

Gina Paul, PhD, Southern Illinois University School of Medicine

Georgia Hinman, PhD, University of Wisconsin School of Medicine and Public Health

Rationale: There are a number of issues that can cause medical students to struggle academically in medical school. These issues often include a lack of study/test-taking skills, reading comprehension deficits, and stress management problems.

Objectives: Participants will learn about the practical applications of techniques designed to assist students in overcoming their individual barriers to success at two Midwest schools and attendees will be encouraged to share their techniques.

Topic Outline: Topics to be discussed include cognitive and behavioral interventions to improve test takers' thinking patterns and test performance, stress management, and the Myers-Briggs Type Indicator which assesses preferred learning styles.

Methods: Each discussant will provide a brief, 10-minute overview on their practices to assist students. The discussants will also provide copies of some of the materials they use (i.e., Performance Analysis Chart and stress management tools). Following the overview, the audience will be encouraged to actively participate in a discussion regarding common problems that they observe and share the strategies they have successfully and unsuccessfully employed.

Experience of Discussants: Gina Paul has been an Assistant Professor and Coordinator of Academic Enrichment since 2003, and Georgia Hinman has been the Co-director of Student Academic Development since 2002 and in the department for ten years.

Questions:

How do you diagnose socio-emotional barriers to learning and create appropriate cognitive-behavioral prescriptions?

How do you help students recognize their learning preferences and use the information to be successful in medical school?

How do you help students develop their learning and test-taking skills?

Concurrent:

Effective Approaches to Teaching and Evaluating Clinical Reasoning Skills

Cynthia Ledford, MD, The Ohio State University College of Medicine

Elizabeth Baker, MD, Rush Medical College

Physicians, unlike other medical professionals, have a unique expectation and responsibility to diagnose and assess patients independently. In many states, if a nurse or pharmacist attempts to diagnose a patient's condition, he has "practiced medicine" without a medical license. While certain aspects of clinical data collection, such as components of the history or examination, can be delegated to non-physicians, and certain aspects of patient management, such as procedures or patient education can also be delegated; only a physician can assume responsibility for the accurate assessment of the patient's clinical situation. Despite the fact that reasoning to arrive at an assessment is a unique and important feature of being a physician, little is known about how to most effectively teach and evaluate these clinical reasoning skills. This workshop will present a structured approach and language, based on cognitive psychology, to explicitly teach and evaluate clinical reasoning skills. Necessary components for accurate clinical judgment include the ability to identify and prioritize problems, to synthesize into a patient illness script, and to prioritize a differential of diagnoses based on pattern recognition. The explicit structured approach presented fosters knowledge organization that supports development of expert reasoning patterns, while allowing alternative strategies of forward thinking or hypotheticodeductive reasoning. Participants will have the opportunity to apply the approach to clinical cases, review learner responses, and evaluate the responses to "diagnose" the learner. Workshop leaders will share effective strategies for common challenges in teaching clinical reasoning skills to novice and intermediate physicians-in-training.

Friday Abstracts

RIME Paper Session:

Investigating a Method to Compensate for the Selectivity of Undergraduate Colleges in Medical Education Research: A Study from One School

Hugh Stoddard, MD, MEd, University of Nebraska College of Medicine

This study proposed and tested a simple adjustment to students' GPAs to determine whether it could account for systematic variation in GPA that was attributable to the admissions selectivity of undergraduate colleges. GPAs earned at various undergraduate colleges were statistically dissimilar; students from less selective colleges received higher GPAs but lower MCAT scores. An arithmetic adjustment, based on college selectivity, was used to compensate for these differences. Pearson correlations indicated that the adjusted GPAs had larger coefficients with medical school outcome measures than unadjusted GPAs. Partial correlations, statistically controlling for MCAT, were no stronger for adjusted GPA than for raw GPA. In medical education research when MCAT scores are available it is unnecessary to adjust undergraduate GPAs to account for the selectivity of the various colleges at which those GPAs were earned. In the event that MCAT scores are unavailable for use as a statistical control, adjusting GPAs as described herein would be advisable.

What predicts achievement of board certification by contemporary US medical school graduates?

Dorothy A. Andriole, MD, Washington University School of Medicine

Donna B. Jeffe, PhD, Washington University School of Medicine

Heather L. Hageman, MBA, Washington University School of Medicine

Alison J. Whelan, MD, Washington University School of Medicine

Problem Statement: Predictors of achievement of specialty-board certification by contemporary US medical graduates have not been fully defined.

Methods: We analyzed board certification in association with demographic variables, medical-school academic-performance measures and residency-training characteristics among our 1994-2000 graduates.

Results: Certification by an American Board of Medical Specialists member-board as of June 2005 was associated with gender, graduation year, military-scholarship status, specialty-choice at graduation and specialty-choice stability (each $p < .02$). Among board-certified graduates, USMLE Step 2CK score was negatively correlated with interval between graduation and certification ($p < .001$). In a multiple logistic regression model, graduates with higher Step 2CK scores were more likely to be board certified; graduates in 1996-2000 and graduates in non-generalist specialties were less likely to be board certified (each $p < .05$).

Conclusions: Board certification provides an important long-term measure of medical graduates' achievements. However, additional measures are necessary to capture relevant information for graduates who pursue non-traditional careers.

The Effects of a Preclinical Curriculum Revision on Cognitive Behavior

David P. Way, MEd, The Ohio State University College of Medicine

Rollin Nagel, PhD, The Ohio State University College of Medicine

Judith A. Westman, MD, The Ohio State University College of Medicine

Charles L. Hitchcock, MD, PhD, The Ohio State University College of Medicine

The primary preclinical curriculum track at a large mid-western medical school recently replaced many of their lectures with small group activities. The medical school had two other preclinical curriculum tracks for use in studying this curriculum revision. The goal of the new curriculum was to meld the best features of all three tracks into one program. The Cognitive Behavior Survey (Mitchell, 1994), which yields scale scores for Memorization, Conceptualization, and Reflection, was given to three classes of students at the conclusion of their preclinical program. High Memorization Scores are interpreted as passive, temporary learning. Conceptualization and Reflection are considered more desirable because they are more active, permanent learning styles. The purpose of this study was to see if new curriculum revision reduced reliance on memorization and increased conceptualization and reflection. Statistical comparisons of CBS Scale scores were made between new vs. old curricula cohorts and preclinical tracks. Results showed significant MANOVA

Friday Abstracts

effects for class cohort ($p < .02$) and pathway ($p < .001$). There was also a significant class cohort by pathway interaction ($p < .04$). A reduction in Memorization Scores was realized across all pathways between the cohorts with the old and new curricula. However, increases in Conceptualization and Reflection scores for students in the new curriculum were not realized. The authors conclude that the new curriculum goal was not realized. Continued faculty development on methods for fostering Conceptualization and Reflection are needed.

Change in the Incidence of Lapses in Professionalism: What are we doing right?

Kimberly Ephgrave, MD, University of Iowa

Roger Tracy, PhD, University of Iowa

Janeta Tansey, MD, University of Iowa

In recent years the academic medical community has examined lapses in professionalism across the physician career spectrum, from medical students through practicing physicians. We sought to determine whether the incidence of professional lapses in graduates of a single medical school has changed recently, as measured by disciplinary actions of a state medical board.

Methods: Records of disciplinary action from a state board were examined for graduates of a public medical school in the same state. Two cohorts were compared, 1980-1989 ($n=503$) and 1990-1999 ($n=489$). Disciplinary actions from 1980-1995 were examined for the first cohort, and 1990-2005 for the second cohort, so that similar numbers of physician-years (~ 3500) were at risk.

Results: Graduates from the 1980's and 1990's had similar mean time from graduation to discipline (7.0 vs. 6.2 years) but the 80's had 19 individuals disciplined compared with just 6 for 1990's. Additionally, the categories of professional lapses have shifted. The 1980's cohort received 57 % of their disciplinary actions from the state board for substance use, 29% for unprofessional conduct (anger management, inappropriate relations with patients, etc.), and 14% for standard of practice violations. The 1990's cohort had a similar percentage of standard of practice violations (17%), but only 17% substance use actions. The board's annual Composite Activity Index has ranged from 4.7 to 8.1/1000 physicians, with no discernible trend over time.

Discussion: The total incidence of disciplinary actions has fallen dramatically for recent graduates of a public medical school compared to graduates from the 1980's. All types of discipline have decreased, but most notably with regard to substance abuse. Possible contributors include societal/culture changes, the addition of ethics instruction in 1989, and preventive programs for impaired physicians.

Effectiveness of a Postbaccalaureate Premedical Program at Improving the Medical College Admission Test Scores of Underrepresented Minority and Disadvantaged Students

Leon McDougle, MD, The Ohio State University College of Medicine

David P. Way, MEd, The Ohio State University College of Medicine

Christine Yash, MA, The Ohio State University College of Medicine

Postbaccalaureate premedical student programs serve as a valuable resource for increasing the diversity of physicians in the United States. Societal benefits of workforce diversity include increasing the number of physicians who practice in underserved communities, improving patient healthcare and satisfaction, and decreasing health disparities related to cultural barriers such as limited English proficiency. The College of Medicine at The Ohio State University developed the MEDPATH Postbaccalaureate Program in 1990 to meet these goals. After evaluating ten years of MEDPATH Program data from 1990 - 1999, program personnel established new admissions and retention criteria in 2002 to improve student academic outcomes on the USMLE Step 1 and increase the probability of MEDPATH students graduating from medical school on time. A part of the new retention criteria involved the students obtaining a certain score on the MCAT, which the students retook during the MEDPATH program. This study evaluated the new selection and retention criteria to determine if they indeed bolster the probability of MEDPATH participants success in matriculating and graduating from medical school without losing significant numbers of under-represented minorities and disadvantages students from the program.

Friday Abstracts

Library Invited SIG:

Keeping Up with the Medical Literature: Strategies for Managing Information Overload

Erika Sevelson, MS, University of Wisconsin

Bryan Vogh, MA, National Network of Libraries of Medicine, Midwest Region

Curriculum SIG:

Finding Themes in Course Evaluation Comments Using Qualitative Research

Ilene Harris, PhD, University of Illinois College of Medicine-Chicago

Intended Audience: The intended audience for this workshop is clerkship directors and administrators who wish to enhance their educational programs through analysis of written comments from student evaluations.

Purpose and Rationale: As courses and clerkships are evaluated, students are asked to provide written comments about their experiences – good or bad. These comments oftentimes are overlooked because of the vast number of them. Therefore, utilizing qualitative research techniques to find key points within the evaluations will aid in curriculum development and course modification. This workshop will provide helpful tips to analyze evaluation comments and find themes which can be summarized in a more cogent report.

Objectives: At the end of this workshop, participants will be better able to use processes of qualitative research to identify themes in course evaluations.

Format: The workshop will first introduce participants to the concept of qualitative research methods. Once this discussion has been completed, participants will have the opportunity to work through narrative texts to identify themes. Finally, the workshop will be summarized through group discussion about this process and participants identifying ways to incorporate this process.

CME Invited Symposium:

Career Transitions and sustaining Vitality: A Conversation with CGEA Laureates

Janet Riddle, MD, MHPE, University of Illinois College of Medicine

Karen Marcdante, MD, Medical College of Wisconsin

Rationale:

Mid and late career are often challenging times when seasoned faculty seek to maintain intellectual excitement for their work while being valued and rewarded by their institutions. Maintaining this vitality is a difficult task in today's high-pressure environment, but there are many examples of people who have managed to do so. This session is designed for those wishing to learn from the experiences of CGEA Laureates, who will use personal experience to explore strategies for sustaining career vitality.

Objectives:

At the conclusion of the session, each participant should be able to:

- Describe mid and late career challenges based upon personal reflection and the experiences of the panelists.
- Describe resources and strategies for sustaining career vitality.
- Describe key considerations in making career transitions - changing career focus or changing institutions.

Topic outline:

1. Professional development opportunities are available throughout an academic career. An expanded conception of scholarship creates opportunities for continued learning through emphasis on scholarly teaching, interdisciplinary work, and engagement in the community.
2. Balance between faculty work and life is important at all stages of academic careers.
3. Long-term career planning and preparation is important for maintaining career vitality.

Methods/session format:

Introduction of panelists – 5 minutes

Critical incident – 20 minutes

- Each panelist will describe a critical incident from his/her career related to a challenge to sustaining vitality or a change in career focus.

Friday Abstracts

Synthesis of themes from critical incidents by moderators and panelists – 10 minutes

Questions and discussion with audience – 40 minutes

Questions posed by moderators may include:

- What have you done to sustain your vitality?
- What barriers have you overcome in sustaining vitality?
- What one piece of advice would you offer others?
- What is your best faculty development resource for sustaining vitality?

Synthesis of discussion by moderators – 10 minutes

A summary of the discussion and synthesis of themes related to sustaining career vitality will be made available to members on the CGEA website.

Experience of speakers:

CGEA Laureates who have agreed to participate in this session are Ilene Harris, Ernie Yoder, Louise Arnold and Fred McCurdy. Karen Marcidante and Janet Riddle, both members of the CGEA Faculty Development SIG, will moderate the session.

Interprofessional Education: Successes and Challenges

Karyn D. Baum, MD, MsEd, University of Minnesota

Karen R. Cox, PhD, RN, University of Missouri- Columbia

Quality of care and safety in the modern health care system remain challenges. By some estimates, patients receive only half of the recommended medical care (RAND, 2004). Even more alarming are the statistics on medical errors; some estimates are that between 44,000 and 98,000 deaths occur in the United States alone as a result of medical error (Institute of Medicine, 2000). The most common cause of medical errors is communication failures between healthcare professionals (Joint Commission on Accreditation of Healthcare Organizations, 2005). Healthcare professionals now must be equipped with the skills, values, and perspectives required to break this cycle and transform the healthcare system to one predicated upon quality, safety, and patient-centered care. Trainees must not only gain the ability to improve the system, they must be able to work together to effect dramatic and lasting change. Our healthcare curricula must include experience and exposure to each other to equip all students with effective teamwork skills. Furthermore, such education is now recommended by the Institute of Medicine and mandated by accreditation agencies for the various health professions programs. However, designing and implementing such interprofessional educational experiences remain challenging. Overcoming the silos that we have created requires imagination, champions, and thoughtful design and implementation. This symposium will review the development, implementation, and evaluation of two such initiatives within the CGEA region. We will then develop common themes for successful IPE and spend time in small groups considering how symposium participants might be able to institute IPE within their organizations.

Teaching and Evaluating the Use of Telephone and Email to Communicate with Patients

Ruth Stashefsky-Margalit, MD, University of Nebraska Medical Center

Jim Medder, MD, MPH, University of Nebraska Medical Center

Mary Ann Manners, MSPH, University of Nebraska Medical Center

Telephone communication in healthcare has long been in use. Currently, telephone encounters account for about 20% of patient contacts in Primary care. With the advancement and the spread of technology, e-mail encounters are now more frequent, and are recognized as an important mode of direct communication between patients and the health care team. The purpose of this session is to explore experiences and the "state of the art" instruction and evaluation of medical student performance in telephone and e-mail communication with patients. Both modalities present with special advantages and risks and require additional skills beyond those required in face-to-face interactions. As part of the USMLE Step 2 Clinical Skills examination, students may encounter cases involving telephone interviews. While many institutions have prepared their students for assessment of their clinical skills in regular interactions with standardized patients, many have not formally taught the skills necessary for successful telephone and e-mail encounters.

Friday Abstracts

In this session we will review national guidelines for email and telephone communication, describe the development of a teaching and evaluation module with 3rd year medical students, and provide the participants with hands on experience, assessing simulated email and telephone encounters. We will seek participants' teaching experience in this area and conclude with participant feedback and ideas for further development.

Small Group: 1:30-2:15 pm

Tales from the Trenches: Podcasting the Curriculum

Bill Jefferies, PhD, Creighton University

Larry Hurtubise, MA, The Ohio State University College of Medicine

Darren Cheney, MS, The University of Kansas Medical Center

Podcasting is a way to deliver recorded events on demand to a portable media player or computer. This technology is increasingly being used to record, deliver and supplement didactic presentations in higher education. Thus there is a growing need for medical educators to understand the technology, how to implement it and assess its impact on the medical curriculum. This session will focus on the successes and challenges that medical schools face in planning and implementing podcasting. Representatives of three medical schools will provide examples of the approaches used to implement podcasting in the UME curriculum. The session will also highlight the integration of images and multimedia into recorded lectures and how the software and hardware has matured to support the use of this material. Group discussion will focus on ways to implement podcasting, potential pitfalls, podcasting's effects on student behavior and learning, its effect on faculty attitudes, legal aspects of podcasting and potential future innovations in podcasting technology.

Small Group: 2:15- 3:00 pm

How do we sustain our Curricular Efforts After the Money is Gone?

Dawn S. Bragg, Medical College of Wisconsin

Kimberly Hoffman, PhD, University of Missouri-Columbia School of Medicine

Guilia Bonaminio, PhD, Kansas University Medical Center, Center for Aging

Debra Simpson, PhD, Medical College of Wisconsin

Purpose: For the past several years, many important topics needing attention in medical education (e.g. palliative medicine, geriatrics, spirituality, partner violence, tobacco prevention, community health) have utilized external funds to support implementation of curriculum and evaluation efforts in these areas. This funding has afforded educators the opportunity to use the latest technology and educational principles. As a result, many of these schools have demonstrated increased ratings in the targeted curricular areas based on AAMC Graduation Questionnaire results. However, in recent years schools extramural funds have declined and medical educators must find ways to sustain and build on the efforts started using intramural funds. Drawing from the literature in business, companies examine return on investment and/or value added based on product lines. While educators have long used the terms "value added" associated with curriculum change, evidence-based approaches to demonstrating that added value has been limited. This session will discuss evidence-based strategies associated with demonstrating to internal audiences (e.g., deans, curriculum leaders, decision makers) the value-added nature of these curricular efforts as a lever for sustained support.

Objectives: Specific goals are: 1) Identify the potential value-added effects, beyond the initial topic focus, associated with a targeted curriculum / assessment effort and 2) Evaluate the feasibility and utility of selected evidence-based strategies used to demonstrate value added.

Session Format: Three experienced educational evaluators will present examples of evidence-based strategies used at their institutions. The major portion of this session will be devoted to discussion in three small groups guided by specific discussion questions.

Friday Abstracts

RIME Oral Abstracts I

Can 4th Year Medical Students Anticipate, Elicit, and Interpret Physical Findings in a Hypothesis-Driven Physical Exam?

Rachel Yudkowsky, MD, MHPE, University of Illinois at Chicago

Georges Bordage, MD, PhD, University of Illinois at Chicago

Tali Lowenstein, MD, University of Illinois at Chicago

Janet Riddle, MD, University of Illinois at Chicago

Purpose: Diagnostic accuracy is maximized by having both clinical signs and diagnostic hypotheses in mind when doing a physical exam (PE) – having a diagnosis in mind focuses attention on specific signs and vice versa. We sought to assess the ability of early fourth-year medical students to anticipate, elicit, and interpret physical findings relevant to given cases.

Method: We constructed six cases, each providing a brief history and two plausible diagnoses – for example a case of a woman with shoulder pain who could have either tendonitis or adhesive capsulitis. For each case, students were asked to (a) list expected positive PE findings for each diagnosis before examining the patient, (b) examine an SP who simulated one of the diagnoses and noted the accuracy of the PE maneuvers, and (c) document their findings and working diagnosis. 129 fourth-year students each saw three of the six cases during a required formative assessment.

Results: On average, students anticipated 38% (SD=14) of the positive findings related to each diagnosis for each case and 62% of the findings that discriminated between the two diagnoses. They correctly performed 41% (SD=15) of the PE maneuvers relevant to the case and appropriately documented 37% (SD=16) of the positive PE findings present in the patient. Mean diagnostic accuracy (interpretation) was 71% (SD=27).

Conclusion: Students poorly anticipated findings, poorly performed the PE, poorly documented findings and achieved moderate diagnostic accuracy. Assessing the distinct abilities to anticipate, elicit, and interpret findings specific to diagnostic alternatives provides a detailed and useful profile of student-specific skills that can help focus instructional interventions.

Clinical Anatomy and Surgical Skills Training (CASST): Multicenter, Multidisciplinary Program

Kimberly Kenton, MD, MS, Loyola University Medical Center

Scott Graziano, MD, Loyola University Medical Center

Elizabeth Mueller, MD, Loyola University Medical Center

Leslie Rickey, MD, Loyola University Medical Center

Sondra Summers, MD, Loyola University Medical Center

Xavier Pombar, DO, Rush University Medical Center

Brenda Darrell, MD, Illinois Masonic Medical Center

Objective: Surgical training is increasingly challenging with limited work hours, decreased surgical volume, and increasing clinical demands of faculty. Our aim was to develop a multicenter, multidisciplinary Clinical Anatomy and Surgical Skills Training program (CASST) for gynecology and urology residents.

Methods: We followed 5-steps for developing the CASST curriculum. Learning objectives and 5, 3-hour workshops were developed based on faculty consensus opinion and needs assessment results. Learners were assessed with a written test prior to and after the 5 workshops. Participants also completed a program evaluation.

Results: 32 residents and 10-gynecology and urology faculty from 3 academic centers participated. 93% of residents preferred models or cadavers to didactics, and all agreed they would benefit from more formal surgical skills training. Over half thought their skills in all areas surveyed were marginal/poor. Anatomy and surgical skills scores improved significantly (38+15 vs. 65+15, $p<.001$ and 50+12 vs. 80+11, $p=0.39$). PGY2s had higher baseline scores than the PGY1s in anatomy (48+14 vs. 28+10, $p<.001$) and surgical skills scores (59+9 vs. 42+9, $P<0.001$), while post-test scores were not different (70+12 vs. 61+16, $p=.107$ and 83+10 vs. 78+11, $p=.216$). Pre- and post-course performance on anatomy questions correlated strongly ($r=.68$, $p<.001$, Figure 1), while surgical skills only weakly correlated ($r=.392$, $p=.03$). Residents (100%) rated CASST as beneficial.

Friday Abstracts

Conclusion: We developed an effective multicenter, multidisciplinary resident anatomy and surgical skills training program. By including multiple centers and specialties, we were able to reduce costs to individual programs and maximize faculty teaching time and effort

High-Fidelity Patient Simulation-based Pediatric Emergency Training for Emergency Medicine Residents

Mark Adler, MD, Children's Memorial Hospital & Feinberg Medical School, Northwestern University

John Vozenilek, MD, Feinberg Medical School, Northwestern University

Jennifer Trainor, MD, Feinberg Medical School, Northwestern University

Walter Eppich, MD, Feinberg Medical School, Northwestern University

Timothy Erickson, MD, University of Illinois at Chicago

Abra Berg, MS, Evanston Northwestern Healthcare

Jennifer Beaumont, MS, Evanston Northwestern Healthcare Research Institute

William C. McGaghie, PhD, Feinberg Medical School, Northwestern University

Purpose: Clinical exposure to seriously ill children is rare in emergency medicine training. Alternative methods of training are needed. Our goal is to develop and validate a high-fidelity simulation-based pediatric emergency medicine curriculum for emergency medicine residents.

Methods: Sixty-five residents from two EM residencies have participated to date in a randomized, wait-list control trial. Data is reported for the first study phase in which the intervention group has received a six-case, single day training session followed in one month by a three-case evaluation session. In the subsequent phase, the control group will receive training followed by a second evaluation phase. Each resident was evaluated by two raters using performance checklists (37-61 items). Percent correct for each checklist is reported. T-tests and ANOVA were used to compare mean scores and to assess the effect of confounding variables, respectively. Rater agreement was assessed using intraclass correlation.

Results: There was a significant difference in mean score for the Myocarditis case, 54.3% (CI: 51.4-57.4) vs. 48.6 (45.6-51.7). No difference in mean score was noted for the Altered Mental Status (AMS) case, 48.8% (45.2-52.4) vs. 46.0% (41.3-50.6) or the Trauma case, 43.6% (40.4-46.9) vs. 43.8 (40.5-47.0). Training year was significantly associated with performance for the AMS and Trauma cases. There was no performance difference between training programs. Intraclass correlation was 0.86 for each checklist.

Conclusions: In an interim analysis, improvement on one of three assessment instruments was noted. Rater agreement was very good. The dose of instruction may have been insufficient to produce a stronger effect.

Who DOESN'T Want to Become Board Certified? Results from a CGEA Cooperative Project Looking at Trends in Recent Medical School Graduates

Kimberly Ephgrave, MD, University of Iowa

Dorothy Andriole, MD, Washington University

Donna Jeffe, PhD, Washington University

Raj Sabharrwal, PhD, AAMC

Paul Jones, MD, Rush Medical College

Anthony Paola, MD, University of Kansas School of Medicine

Angela Nuzzerallo, MD, Northwestern University, Feinberg Medical School

Heather Hageman, PhD, Washington University

PROBLEM STATEMENT: We sought to characterize contemporary US medical graduates who planned specialty-based careers without pursuing board certification (BC). **METHODS:** With CGEA-collaborative project funding, we analyzed demographic characteristics, academic performance and specialties of 1997-2004 graduates from five Midwestern medical schools who pursued specialty training but responded "No" to the AAMC Graduation Questionnaire (GQ) item, "Are you planning to become certified in a specialty or subspecialty?" Two-tailed chi-square tests assessed between-groups differences.

RESULTS: Our sample included 101 of 3162 (3.2%) private-school and 80 of 2598 (3.1%) public-school graduates. Progressively greater proportions of graduates indicated they did not plan to pursue BC in more recent years (range: 0% in 1997 [0/722] to 6% in 2004 [38/673], $p = .001$). Mean (S.D.) USMLE Step 1 and Step 2 scores of the sample were 217 (19) and 215 (22), respectively. Compared with the national group of 1997-2004 GQ respondents who planned to pursue BC, our graduates who did not plan to pursue BC were more likely to be female (99/181; 51% vs. 40,256/94,101; 42.8% $p < .002$) and specializing in pediatrics

Friday Abstracts

(45/181; 24.9% vs. 11,012/94,101; 11.7%, $p < .0001$) or internal medicine (87/181; 48% vs. 18,650/94,101; 19.8%, $p < .0001$).

CONCLUSIONS: The progressively greater proportions of graduates not planning to pursue BC is concerning. BC is emerging as an important quality-of-care measure for all specialists and lack of BC is associated with state medical-board disciplinary action. Hence, career counseling for contemporary students must include comprehensive information about the necessity of BC for practicing physicians in all specialties.

Teaching as Transformation: The Impact of Facilitating Small Group Discussions on Faculty Instructors' Personal and Professional Development

Arno K. Kumagai, MD, University of Michigan Medical School

Joseph C. Fantone, III, MD, University of Michigan Medical School

Paula T. Ross, BA, University of Michigan Medical School

Few published studies have investigated the effects of preclinical teaching on faculty instructors' personal and professional development. We used qualitative methodology to explore the impact that facilitation of small group discussions of psychosocial issues in medicine had on instructors' perceptions of their own roles as clinicians and teachers. Participants were small group instructors in a two-year preclinical course, the Family Centered Experience, which incorporates patient narratives with longitudinal small group discussions to explore the patient's experience of illness. In-depth interviews were used to elucidate the instructors' personal reflections on the small group experience, and transcripts were analyzed using a phenomenological approach (Moustakas, 1999) to identify emerging themes. Small group facilitation enhanced faculty development in a variety of domains, including: • Reflective practice, i.e., an increased personal awareness regarding their role in the doctor-patient relationship, which prompted changes in clinical practice; • Acquisition of skills in interactive teaching and their application in other venues (e.g., teaching residents); • Reinforcement of a sense of personal connection with students, patients, and colleagues, and with the instructors' original enthusiasm and idealism when entering medicine; and • A sense of personal and professional fulfillment—and in some cases, an actual change in career—in allowing a respite from the demands and frustrations of clinical practice and an opportunity to reflect on issues such as compassion, teaching, and diversity. Small group discussions of psychosocial issues in medicine may be transformative in engaging faculty instructors in cognitive, affective, and experiential domains and enhancing their growth and development as instructors, clinicians, and individuals.

Standardized Patient SIG Invited Session:

MERE Session:

Constructing Effective Standardized Patient Cases for Teaching and Assessing Cultural Competence

Rachel Yudkowsky, MD, MHPE, University of Illinois College of Medicine at Chicago

Kris Slawinski, MA, University of Chicago

Ellen Franklin, MA, MBA, University of Iowa

Jane Banning, MSSW, University of Wisconsin

Rationale:

Always a melting pot, the diversity of cultures in the US continues to be driven by immigration. In 1940, 70% of immigrants were from Europe. By 1992, the pool of immigrants had changed so that 15% came from Europe, 37% came from Asia and 44% came from Latin America and the Caribbean. Generalist physicians can expect that over 40% of their patients may be from minority cultures.

Cultural differences shape behavior and values, and can impact health care access and delivery. Culturally competent clinicians are sensitive to cultural factors that can affect the care of their patients, and work collaboratively with patients, their families and communities.

Simulated encounters with Standardized Patients (SPs) provide a safe and effective way for students and residents to practice a culturally competent approach, learning to communicate and interact effectively with patients from cultures different from their own. Constructing SP cases with a cultural competency focus brings new challenges to SP educators. Can SPs portray patients from cultures other than their own? What

Friday Abstracts

information should be provided to allow the SP to portray a patient from a different culture? Are there predictable, standard components of an SP cultural competency case "script"?

In this MERE session sponsored by the CGEA SP SIG, participants will share cases and materials relevant to cultural competency, discuss their experiences teaching and assessing cultural competency with SPs, and work on constructing a consensus template for case components specific to cultural competency SP cases. The SIG will assemble the cases brought to the MERE and provide a compendium of cultural competency cases and materials for MERE participants and SIG members.

Participants are asked to bring 20 copies of cultural competency cases and/or related materials for sharing with other participants.

Objectives:

At the end of this session participants will be able to better

- Analyze essential components of SP cases that focus on cultural competency.
- Construct effective SP cultural competency cases.
- Utilize SPs creatively to teach and assess cultural competency in healthcare.

Participants will gather a compendium of cultural competency cases and materials that can be adapted for use in their own setting (with appropriate attribution, of course).

Experience:

The facilitators are members of the CGEA Standardized Patient SIG and head the clinical performance / assessment centers in their institutions. All have extensive experience working with standardized patients for instruction and assessment.

Clerkship Administrators SIG Invited Session:

The Clerkship Director and Administrator: A team approach to roles and responsibilities

Joyce Salter, Cincinnati Children's Hospital Medical Center, University of Cincinnati College of Medicine
Constance McAneney, MD, Cincinnati Children's Hospital Med. Ctr, Univ. of Cincinnati College of Medicine
Shobhina Chheda, MD, MPH, University of Wisconsin School of Medicine and Public Health
Sue Morschhauser, Clerkship Program Manager, Univ. of Wisconsin School of Medicine and Public Health

Rationale: The key to a successfully run medical student program relies on a strong working relationship between the clerkship director and the clerkship administrator. Since there are a variety of ways in which each was selected for their job, it is important to establish a collaborative working relationship. Problems develop with lack of experience of each in their respective roles, lack of job training and the lack of participation in the selection of who they are working with/for. Therefore, it is important to develop strategies and share information regarding way to overcome these obstacles.

Objectives: By the end of the workshop, the following objectives will be met:

1. Define the varied roles and responsibilities of the clerkship directors and clerkship administrators including:
 - A. Type of relationship between the Director and the Administrator
 - B. Level of autonomy of Director and Administrator
 - C. Percent of support for Directors and Administrators (time & salary)
 - D. How the roles are divided/shared between the Director and Administrator
 - E. Experience/training to the job of Director and Administrator.
2. Develop strategies to enhance job satisfaction for Directors and Administrators.
3. Develop strategies to enhance the perceived value of the Director and Administrator by those who control/assign time and financial support.
4. Develop strategies to strengthen the Directors and Administrators roles to allow for the least amount of overlap and the most coordination of responsibilities.

Methods: The audience will be solicited for information regarding their roles and responsibilities, job satisfaction, and nature of the Director/Administrator relationship.

With guidance from the moderators, brainstorming with regard to strategies for practical improvements will occur. Handouts from the literature on clerkship roles and responsibilities as well as literature on collegial relationship building and leadership styles will be distributed. The format will be interactive; therefore, if the group is over 25 we will break into smaller groups to ensure a nondidactic session.

Friday Abstracts

Experience: Mrs. Joyce Salter has been employed by Cincinnati Children's Hospital Medical Center for 33 years and has served as Clerkship Administrator for 13 years under 3 different Clerkship Directors.

Dr. Constance McAneney is Associate Professor of Pediatrics at Cincinnati Children's Hospital Medical Center. She has been Director of Medical Student Education for 5 years, Director of the Pediatric Emergency Medicine Fellowship Program for 5 years, and Associate Director of the Division of Pediatric Emergency Medicine for 8 years.

Extreme Makeover: GME Orientation

Peter Nalin, MD, Indiana University School of Medicine

Nancy Baxter, BA, Indiana University School of Medicine

Nancy Bechtel, BS, Indiana University School of Medicine

Linda Bratcher, AB, Indiana University School of Medicine

Carol Robinson, BS, Indiana University School of Medicine

The Office of Graduate Medical Education at Indiana University School of Medicine introduced on-line training modules to ensure that new trainees experienced a more thorough and deeper understanding of the topics presented in the previous all day lecture format. This improved method resulted in a more satisfying, efficient, and flexible new trainee orientation. Feedback from past trainees was used to improve the annual orientation by making it more streamlined, flexible, and meaningful to new trainees. They attended a half day of sessions which focused on topics of humanistic value, including the School's Relationship Centered Care Initiative and Honor Code, sleep deprivation and fatigue, trainee well being, introduction to the general competencies and the duty hour regulations. By adding an on-line curriculum of topics required prior to the beginning of training, the trend of annually increasing on-site orientation was halted. On-line modules were developed in conjunction with the School's Visual Media Department and implemented through the School's curriculum management tool, ANGEL. Formats of the modules included taped lectures, role-play skits, and Power Point presentations. Most modules included a post-test. Compliance was monitored through ANGEL. An added benefit is the availability of the modules for future reference. New trainee evaluations of orientation showed a marked improvement from past orientation evaluations. It is anticipated that the on-line modules will be further expanded in the coming year. The challenge will be to present topics at the appropriate junctures in the training experience and avoid requiring all topics prior to the beginning of training.

Two Institutional Approaches to Addressing Professionalism in Academic Medical Centers

Carol Hasbrouck, MA, The Ohio State University Medical Center

Louise Arnold, PhD, University of Missouri-Kansas City School of Medicine

Linda Stone, MD, The Ohio State University College of Medicine

In this session, two academic medical centers, the University of Missouri - Kansas City (UMKC) and The Ohio State University (OSU), will discuss their different approaches to establishing cultures of professionalism in their institutions. Professionalism in medicine continues to be a topic of interest, as evidenced in the literature which describes efforts to formally define the tenets of professionalism (ABIM, 1997; AAMC, 1998; ACGME, 1999; LCME, 2005; NBME, 2003), assess professionalism in individuals (Arnold, 2002; Ginsburg, 2000; Stern, 2006), maintain individual accountability, and be advocates for positive, respectful environments. Each panelist will highlight how and when their institution initiated the professionalism effort; what the major focus of the effort entailed; what stakeholders were involved; describe processes for addressing professionalism lapses; discuss the advantages and disadvantages of their approaches; and outline future areas to be addressed at their institution. UMKC, in promoting all aspects of students' professional development, emphasized a curricular and assessment approach. The institution has graduated expectations for professional behavior which are codified as competencies and learning objectives, as well as multiple curricular initiatives at all levels of the medical curriculum. Ohio State's approach was more of a total medical center collaboration focusing on environment first, and addressing all three mission areas: education, research and clinical practice. At OSU the student-driven efforts preceding and now integrated with the institution's activities were central to the success of the initiative. Approximately 45 minutes of the session will be devoted to audience questions and discussion.

Friday Abstracts

MERE Session: Use of Medical Student Portfolios for Teaching and Assessing Core Competencies

Marshall Anderson, PhD, Indiana University School of Medicine – Northwest

Elaine Dannefer, PhD, Cleveland Clinic Lerner College of Medicine

Ann Cottingham, MAR, Indiana University School of Medicine

Debra Litzelman, MD, Indiana University School of Medicine

Stacey Jackson, MS, Indiana University School of Medicine

Mary Johnson, PhD, Indiana University School of Medicine – Terre Haute

Darren Cheney, MS, University of Kansas Medical Center

Brian Schmidt, BME, Kansas University School of Medicine

Anne D. Walling, MB, Kansas University School of Medicine

The objective of this MERE session is to introduce the participants to the use of student portfolios as an innovative assessment tool in undergraduate medical education. Presenters include educators from three institutions who are currently using or experimenting with this assessment tool- Cleveland Clinic Lerner College of Medicine (CWRU), Indiana University School of Medicine (IUSM) (both Indianapolis and Terre Haute campuses) and Kansas University School of Medicine – Kansas City and Wichita (KUSM). Use of student portfolios in the basic science years and clinical years of undergraduate medical education will be presented. Twenty minutes will be allowed for presentation/questions with a 10-minute summation by all presenters. A presenter from CWRU will discuss the use of portfolios in a competency-based assessment system. Formative assessments are used by the student to construct formative and summative portfolios. Presenters from IUSM Indianapolis campus will discuss the use of the Electronic Competency Management System to allow students in their fourth year to achieve competencies at the highest performance level to enhance their resident application and training. A presenter from IUSM – Terre Haute campus will discuss the use of an ePortfolio system to track and assess competencies during the basic science years as well as a grading rubric for faculty rating of the ePortfolio. Presenters from KUSM-Kansas City and Wichita will discuss an advising and professional development project, using the portfolio as a tool to store and manage educational artifacts during third year clerkships and track progress toward attaining curricular competencies.

Friday Abstracts

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