

Student Perceptions Of Curricular Strengths And Weaknesses In Preparing Them For The USMLE Step 2 Clinical Skills Exam

Carla Aamodt, MD, and Alison Dobbie, MD
University of Kansas School of Medicine
Saturday, 10:15 - 11:45 am

Purpose: In 2004, the NBME introduced the USMLE Step 2 Clinical Skills exam (Step 2CS) as a medical licensure requirement. In this pilot study we investigated students' perceptions of curricular strengths and weaknesses as they prepared for the national exam.

Methodology: We conducted a modified nominal group session (Dobbie, Rhodes et al. , 2004). Five senior medical students identified the most and least helpful curricular elements for Step 2CS preparation, then edited and grouped these elements. Students voted on the relative importance of each element, producing a final group rank order. Each element could receive 25 points maximum.

Summary of results: The top five helpful elements were: 1) opportunities to diagnose undifferentiated patients (23 points) 2) the local Clinical Skills practice exam (13) 3) Step 2CS- specific review books (12) 4) other clinical experiences (11) and 5) experiential pre-clerkship clinical skills training (7). The five least helpful elements were: 1) the absence of a differential diagnosis course (15) 2) absence of a medical decision-making course (15) 3) lack of reinforcement of clinical skills techniques in the clerkships (14), 4) pre-clerkship courses generally (12), and 5) lack of exam-specific medical interviewing training (10).

Conclusions: Students reported actual and simulated clinical experiences as most helpful preparation for the Step 2CS. Students believed they lacked training in differential diagnosis and medical decision-making. We are currently repeating this pilot at several other institutions.

Dobbie, A., M. Rhodes, et al. (2004). "Using a modified nominal group technique as a curriculum evaluation tool." *Family Medicine* 36(6): 402-6.

Standardized Patient SIG Session: Strategies for Preparing Standardized Patients to Give Feedback

Mary Aiello, MA Southern Illinois University School of Medicine, Moderator
Karen Reynolds, RN, MS Southern Illinois University School of Medicine
Rachel Yudkowsky, MD, MHPE, University of Illinois at Chicago
Friday, 3:15 - 4:45 pm

Standardized patients (SPs) are used at several medical schools for teaching and assessment cases. They often complete patient satisfaction checklists or rating scales assessing communication and interpersonal skills. The National Board of Medical Examiners is completing its first year of the United States Medical Licensing Examination (USMLE) Step 2 Clinical Skills (CS). Medical schools nationwide are preparing students for the exam in different ways. In this presentation, three medical schools will discuss strategies used to prepare students. The University of Kansas Medical Center will discuss their Clinical Skills Assessment (CSA), how it was modified and how they manage a program with relatively few physician hours. Students at the University of Illinois at Chicago College of Medicine (UIC-COM) have multiple standardized patient experiences across the four years, all of which combine to provide a good grounding for USMLE Step 2CS. Students attend a clinical reasoning and communication skills workshop held during the internal medicine clerkship ambulatory rotation. During the rotation students conduct focused SP encounters on effective and ineffective strategies and behaviors. UIC-COM will also review changes made to the M4 exam intended to familiarize students with the Step 2CS format and provide students with constructive feedback. At Southern Illinois University School of Medicine (SIUSOM) each course and clerkship has performance-based assessments. Students are required to complete a clinical competency exam (CCX) in Year 4. SIUSOM modified its Senior CCX to include cases similar to the patient notes used in USMLE Step 2CS.

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Leadership & Scholarship Across the Medical Education Continuum March 9-11, 2006

GME Panel Discussion: Professionalism: Assessment & Remediation

Louise Arnold, PhD, University of Missouri Kansas City School of Medicine
Ernie Yoder, MD, PhD, FACP, Providence Hospital & Medical Centers
Christine Sullivan, MD, University of Missouri Kansas City School of Medicine
Saturday, 10:15 - 11:45 am

Individuals active in graduate medical education certainly agree that Professionalism is a critical competency, but how well do we incorporate educational activities, meaningful assessment, and, importantly, effective remediation into our programs? Although the specific competencies associated with Professionalism are defined by the ACGME (a commitment to carrying out professional responsibilities, adherence to ethical principles, and sensitivity to a diverse patient population), translating these skills to the day-to-day world of residency education and assessment is often challenging. This workshop is facilitated by medical educators known for their work in professionalism, as well as by a current program director who developed an innovative approach to dealing with a trainee assessed as having significant professionalism issues. The following objectives will be the focus of an interactive workshop, incorporating exercises encouraging reflection and discussion:

- Describe why a transparent definition of professionalism is critical;
- Define professionalism in a clear and succinct manner;
- Describe the pros and cons of frequently used approaches to assessing residents' professionalism;
- Identify potentially effective ways to assess professionalism of residents;
- Describe an effective technique to remediate residents' unprofessional behavior; and
- State general principles for remediating professional behavior.

Competency Case Studies - A new method.

Patrick Bankston, PhD, Indiana University School of Medicine
W. Marshall Anderson PhD, Indiana University School of Medicine - Northwest
Saturday, 11:00 am - 11:45 am

Indiana University School of Medicine (IUSM) incorporated a competency curriculum consisting of nine competencies in the four-year undergraduate medical school program six years ago. Our first class to graduate with a competency transcript was in 2003. One of the difficult problems that the school had to address is how to remediate the competencies across the four years. This small group discussion will focus on methods of remediation and their successes and how different institutions can share information about methods of competency remediation through a competency case studies approach.

Questions to be discussed during this session are as follows: 1. Remediation during a course; 2. Remediation at the end of a course; 3. Year-end evaluations of competencies and remediation efforts; and 4. Possible mechanisms for sharing remediation methods between institutions through a competency case studies approach. An example of a successful remediation of a competency at the end of a third year clerkship will be presented. At the end of these discussions there will be a summary of methods, successes, and failures and mechanisms for continued sharing of remediation ideas.

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SESSION ABSTRACTS

A Multi-Faceted Educational Experience Involving Medical Student Comfort and Experience with Palliative Care

Carolyn L. Bell, MD; Susan L Dottl, PhD; Matthew LoConte, MD; James F Cleary, MBBS; Laura C Dast, BA

University of Wisconsin School of Medicine and Public Health, Madison Wisconsin

Saturday, 3:15 - 4:45 pm

Objective: Palliative care is an important part of caring for patients and often poorly modeled by residents and physicians. We developed a day-long multi-faceted educational experience for third-year medical students. The goals of the educational workshop were to enhance their knowledge, comfort, and skills in basic palliative care principles.

Method: Third-year students were surveyed prior to the workshop to assess their existing experience, knowledge, comfort, and skills in palliative care. The educational experience consisted of lectures, small-group workshops, standardized patient interviews, demonstrations, and discussion of the movie "Wit." Students completed a post-test survey after the intervention and a follow-up survey eight months later.

Results: The pre-workshop survey showed most students had little experience either observing or participating in delivering bad news to a patient, discussing resuscitation (DNR) status with patients or patients' families, helping patients make the transition to palliative care, hospice referral, witnessing a code, or pronouncing death. Students' comfort levels in each of these areas tended to be low as well, with from 28% to 72% of students reporting feeling either uncomfortable or very uncomfortable performing each task. There were significant correlations between previous experience and comfort levels at pretest, post-test, and follow-up ($r=0.27$ to 0.70 , $p<.05$). There was a significant increase in comfort levels over time ($p<.05$ for witnessing a code, $p<.001$ for all other areas).

Educational significance: A palliative care educational workshop effectively increased medical students' comfort in addressing key palliative care issues. This increase in comfort persisted over eight months.

CurrMIT Advanced Users Discussion Group

Terri Cameron, MA, Consultant in Medical Education

Deb Lafferty, Mayo Clinic College of Medicine

Al Salas, MA, Association of American Medical Colleges

Robby Reynolds, MPA, Association of American Medical Colleges

Friday, 4:00 - 4:45 pm

CurrMIT users and prospective users discuss challenges they have faced, solutions they have found, and help each other out in an informal small-group discussion and demonstration. This will be lead by 'expert' users from schools in the region, and AAMC's CurrMIT staff. AAMC staff will also demonstrate recent CurrMIT enhancements, and will discuss successful strategies by schools in other regions. Although called "Advanced" Users Group, all are welcome.

Submitting Your Educational Materials to MedEdPORTAL

Chris S. Candler, MD, and Robby Reynolds, MPA

MedEdPORTAL, AAMC

Friday, 1:30 - 2:15 pm

New forms of digital publishing have provided unprecedented opportunities for publication of scholarly works online. The Association of American Medical Colleges has developed MedEdPORTAL to serve as a prestigious publishing venue through which faculty might disseminate their educational works. MedEdPORTAL was designed to promote collaboration and educational scholarship by facilitating the exchange of peer reviewed educational materials, knowledge, and solutions. Through MedEdPORTAL faculty and medical schools may both publish and share instructional and assessment materials.

MedEdPORTAL invites faculty to submit materials such as tutorials, cases (PBL, SP, OSCE, etc), lab manuals, assessment instruments, faculty development materials, web sites, computer-based materials, etc. These products will undergo a rigorous peer review process comparable to that used by established print-based journals. Reviewers will assess each submission using accepted standards of educational scholarship.

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Publishing within MedEdPORTAL has several benefits for faculty including recognition of peer-reviewed work that may be considered by promotion & tenure committees, useful feedback for enhancement or expansion of the resource, and expanding the audience of potential users.

SESSION ABSTRACTS

Students and the Electronic Health Record

Heidi Chumley, MD, Madelyn Pollock MD, and Michael Karr
Kansas University School of Medicine
Saturday, 3:15 - 4:45 pm

Many academic health centers are implementing electronic health records (EHR), and our medical students will increasingly train in environments with EHRs. An EHR alters the educational environment, particularly in the outpatient setting, which creates operational and educational challenges for medical educators. We implemented an EHR in our faculty and resident ambulatory primary care practice in May, 2005, a practice which has 4-8 third-year medical students and frequent first, second, and fourth year students each day. During this complex process, we identified many challenges for medical students. The purpose of this symposium is to outline and discuss the challenges and solutions when incorporating students into outpatient settings with EHRs. During this symposium, presenters will outline challenges and solutions from three different perspectives. First, a clinician educator who was responsible for the implementation of the EHR in our ambulatory practice will describe our outpatient clinical operation and student involvement, and outline the EHR implementation process and clinic-based operational challenges that impacted learners. Second, a senior coordinator for technology will describe our technology support systems and outline the technology-based operational challenges that impacted learners. Third, a family medicine clerkship director will describe the clerkship and educational challenges, including preliminary survey data on the impact on student learning. Following these short sections, the presenters will lead the audience in a discussion of common educational and operational challenges and solutions for learners in ambulatory settings with EHRs.

A Multi-faceted Outcome-Oriented Faculty Development Program to Enhance Precepting Effectiveness in the Outpatient Setting

Karen Connell, MS, Memoona Hasnain MD, PhD, and Patrick Tranmer MD, MPH
University of Illinois at Chicago
Friday, 3:15 - 4:45 pm

The challenge of making precepting encounters in outpatient settings meaningful learning experiences for residents and students is widely recognized. Numerous reports in the literature suggest strategies for structuring the clinical environment for instructional efficiency as well as strategies that preceptors can use to enhance their teaching effectiveness. There are, however, few reports of faculty development models that actually result in behavioral change. Wilkerson and Irby (1998), in a comprehensive review of the literature regarding strategies for improving teaching practices, conclude that, to improve teaching, faculty development programs should include intensive courses or workshops, coupled with a teaching assessment system and individual consultation. This workshop will introduce participants to the key elements and processes of such a program, which was funded in part by a CGEA grant and involved eleven faculty representing three Chicago-area residency programs. The program spanned a four-month period and consisted of a) three half-day workshops, b) self-assessment of audiotaped precepting encounters between workshops, using a seven-item preceptor effectiveness checklist developed for the project, and c) three 90-minute individual consultations with a program faculty member, based on review of participants' self-assessed, audio-taped precepting encounters. The program was evaluated by comparing pre, post and four-month follow-up videotaped samples of each preceptor's behavior, as well as by pre and post program assessment of each participant by residents, using a psychometrically refined clinical assessment tool reflect 13 competencies in Patient Care, Medical Knowledge, and Practice-Based Learning and Improvement. Workshop participants will "taste" key aspects of the program and discuss its outcomes and implications.

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The Leadership Smorgasbord: Advancing Medical Education Goals through Unusual Partnerships

Laura Dast, BA, UW-Madison, School of Medicine and Public Health

Erika L. Severson MS, UW-Madison, Ebling Library

Friday, 1:30 - 3:00 pm

Rationale: There are times when traditional forms of leadership and committee work can advance a unit, departmental, or school goal to a certain degree, then lose momentum. In many cases, the task is picked up, not by someone in a traditional leadership or instructional position, but by someone who is passionate about the goal or who can approach the goal from a unique perspective. Though there can be difficulties in fostering these unique connections, the partnerships that arise from such opportunities can be invaluable to advancing medical education goals. Objectives: Participants will share experiences of success in creating innovative partnerships and will develop creative strategies for forging partnerships in unlikely places. Topic Outline: Introductions and review of session objectives-5 min. Case study: a description of an unusual partnership at a midwestern university-how it came about, who is involved. -15 min. Group exercise and discussion-60 min. Conclusion-10 min. Methods/Session Format: An example of a partnership between the health sciences library team and a recently graduated MD to better integrate evidence-based practice and informatics into the undergraduate medical curriculum will be presented. Small groups will be formed to share ideas and to develop scenarios-and solutions-relevant to participants' own institutions. Participants are encouraged to bring cases from their home institutions to explore in a group format. Questions: 1. What conditions have to be in place for a new partnership to thrive? What are the barriers to success? 2. What unusual partnerships have you seen at your own institution? 3. Do you have stalled objectives that would benefit from the energy of a new partnership? 4. Who are the non-traditional players at your institution? How would your objectives benefit from their involvement?

Integrating Readily Available (CAM) Modules

Gautam Desai, DO, Kansas City University of Medicine and Biosciences

Friday, 1:30 - 2:15 pm

Complementary and Alternative Medicine (CAM) coursework had not been required at KCUMB COM prior to 2004 (excepting Osteopathic Manual Medicine, considered CAM by the National Institutes of Health). 95% of 446 students surveyed by the author felt CAM should be taught during medical school, and studies reveal that roughly 10% of the U.S. population uses some form of CAM regularly, with many patients uncomfortable telling physicians about CAM use. It is important students be familiar with some of the most prevalent CAM modalities their patients will be using, especially as OMM is considered CAM. The Educational Development for Complementary and Alternative Medicine (EDCAM) Grant was applied for and received from the American Medical Student Association Foundation/NIH. Goals are to improve students' familiarity with various CAM modalities and effectiveness, and being able to converse with patients about CAM. In 2004, CAM coursework became required, and in 2005, the topics covered included: 1. Ayurvedic 2. Herbals 3. Yoga 4. Acupuncture 5. Traditional Chinese Medicine 6. Massage Therapy 7. Chiropractic 8. Stress reduction and 9. T'ai Chi. Below are some challenges and solutions: (Challenge/solution) Large class size/repeat activities in smaller groups Skeptical students/credible speakers and evidence based CAM; Reinforcing material/testing subject matter/using CAM in standardized pt cases /The EDCAM curriculum was successfully integrated, and feedback from learners has been utilized to continue to improve the curriculum. Assessment will be in the form of a survey, testing basic knowledge of common CAM therapies, using the same survey previously administered to students prior to the EDCAM curriculum.

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Does Providing Oral Exam Topics Prior To The Exam Improve Educational Outcomes?

Alfred Fleming, MD, Kathryn Huggett, PhD, and Amanda Lofgreen, MS
Creighton University School of Medicine
Saturday, 10:15 - 11:45 am

Purpose: The purpose of this pilot study was to determine whether providing students with oral exam topics prior to the exam resulted in a greater number of students receiving a grade of Honors in the obstetrics and gynecology clerkship. Because students who earn Honors in a clerkship must also achieve an NBME subject examination score that equals or exceeds the 90th percentile, we also compared NBME subject examination scores for the pre- and post-intervention groups.

Methods: We compared the percentage of students who achieved a grade of Honors in the clerkship in the graduating classes of 2005 (topics were not provided in advance) and 2006 (topics were provided in advance) using the student's t-test for independent samples. We also compared NBME subject examination mean scores for both graduating classes.

Results: 17. 48% of all students in the class of 2005 received Honors, compared to 17. 24% of students in the class of 2006. These results were not statistically significant ($p = .96$). Likewise, we did not detect a significant difference ($p = .55$) in NBME subject examination scores between the two classes.

Conclusions: The results demonstrate that informing students of the topics prior to administering the exam did not significantly improve the educational outcomes examined here. Future study should explore how individual students use the information to review and prepare for the examinations, and identify any value added by the advance notice but not reflected in final scores (e. g. , reduced exam anxiety or increased collaboration among students).

Faculty Development Programs from Soup to Nuts

Victoria Fleming, PhD, and Eric Boberg PhD
Northwestern University Feinberg School of Medicine
Saturday, 10:15 - 11:45 am

Faculty Development Programs are an essential component to faculty development efforts. Departments who do not have professional educators on staff need people able to coordinate program efforts. Even professional educators may not be trained to put on programs. A poorly received program can set such programming back significantly at the local level. Therefore, it is important to 'get it right' the first time. This session is for anyone new to the process, or interested in improving the process, of developing programs for faculty. In this workshop, participants will learn eight steps to successful program offering, see a case-in-point example of a program that was conceptualized and successfully offered, and practice the process of offering a workshop using a mock faculty development program. The content of the workshop is organized in three sections: Section A: The steps to successful Faculty Development Programs Section B: A Case Example of the Development of a New Program Section C: A Mock Program Development Activity for Workshop Participants Rather than working through the sections sequentially, we will walk through each step, drawing from the case example and when appropriate, having small groups work through the mock program development activity. This framework will ensure on-task participation throughout the go-minute workshop.

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Making the Case for a Cooperative Multidisciplinary Clinical Simulation Center

Paul Gauger, M. D., Pamela B. Andreatta Ed. D. , M. F. A. , M. A. Stanley J. Hamstra PhD, James O. Woolliscroft M. D., and Larry D. Gruppen PhD / University of Michigan
Saturday, 3:15 - 4:00 pm

Clinical simulation has a secure and expanding role in clinical training and assessment of competence. Many programs have grown out of efforts housed administratively and financially within a single clinical department. For the reasons of finances and organizational culture, the scale of what can be accomplished is limited. The potential impact of clinical simulation has now spread across professions (physicians, nurses, allied health personnel) and the continuum of training (students, residents, and practicing physicians). As more medical schools consider the substantial investment required for a state of the art clinical simulation center, cooperative models that share the risks and benefits among stakeholder entities throughout the medical center can increase the capabilities and the scope of the center substantially. Participants will understand an actual example sequence of developments which successfully led to the inception of a multidisciplinary clinical simulation center within an academic health system. The specific issues to be discussed include performing an institutional needs assessment; identifying and leveraging existing simulation efforts; identifying potential stakeholders; developing a funding model; working with medical and surgical industry; developing a business plan; personnel decisions; simulator purchasing decisions; integrating with the CME mission; and promotion and development efforts. Attendees will be able to assess and potentially adapt these experiences to their own particular medical school environment should they intend to start a similar program.

"A review of the best evidence in faculty development: exploring ways to better measure outcomes"

Mark Gelula, PhD, University of Illinois at Chicago
Ernie Yoder, MD, PhD, FACP, Providence Hospital & Medical Centers
Karen Marcdante, MD, Medical College of Wisconsin
Marcy Rosenbaum, PhD, University of Iowa Carver College of Medicine
Friday, 10:15 - 11:45 am

Developing effective medical teachers is an increasingly important component of medical education. Various and diverse activities, designed to improve teacher effectiveness at all levels of the educational continuum, are offered to health care professionals in different settings. The Best Evidence in Medical Education (BEME) Collaboration recently completed a systematic review of the impact of faculty development initiatives on teaching effectiveness in medical education. In this workshop we will present a summary of this review and focus on identifying desired, measurable outcomes that have not been well documented in many faculty development efforts. Interactive dialogues will delineate rigorous measures of faculty development outcomes which must be developed and implemented. Participants will have an opportunity to examine the feasibility of applying these ideas to faculty development programming at their home institutions.

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A Model for Resident Competence

Mary Gleason Heffron, PhD, and Deborah J. Simpson PhD
Medical College of Wisconsin
Saturday, 10:15 - 11:00 am

Purpose: To meet the objectives for Phase III of the ACGME Outcome Project (beginning July 2006), residency programs must integrate the ACGME Competencies and their assessments into learning and patient care. However, programs must first define their standards of competence in each area, and how standards change each year or level in the program. This session will test Bloom's Taxonomy as a model for setting criterion and assessing competence for two of the six ACGME Competencies (Professionalism and Systems-based Practice). Further, this model will be used to describe different levels of competence based on the level of the resident (PGY). It is hypothesized that the taxonomy as a model of competence will assist programs with the Phase III requirements for integrating the General Competencies into education and clinical care. Methods: 1. Lecture on competencies and Bloom's Taxonomy; 2. Small group discussions to use the taxonomy to define standards and levels of competence in Professionalism and Systems-based Practice competencies; and 3. Large group discussion of the value of the taxonomy as a model for assessing competence. Results/Conclusions: Attendees will learn a new way to frame the competencies, in terms of the criterion for competence and the levels of competence for each program year. Attendees will evaluate the utility of Bloom's Taxonomy as a framework for creating assessments of competency and helping programs to integrate the competencies and assessments into programs.

GME Medical Educator Resource Exchange (MERE) Session: Sharing Best Practices in Teaching and Assessing Systems-based Practice

Ilene Harris, PhD, University of Illinois-Chicago
Michele Raible, MD, PharmD, University of Illinois-Chicago
Saturday, 1:30 - 3:00 pm

The ACGME general competency domain of Systems-Based Practice (SBP) is often considered the most difficult area for residencies to include in curricular and assessment activities. A GME focus group during the November 2005 AAMC Annual Meeting specifically concentrated on SBP, discussing points raised by a recent IIME report (from the Ad Hoc Committee of Deans). Representatives from institutions and from individual programs discussed how they had developed effective teaching strategies to address the general competency of SBP, as well as effective assessment strategies to measure the effectiveness of those teaching strategies. The focus group demonstrated that many thoughtful and innovative programs are being created to address this educational realm. Nevertheless, relatively little literature has been published in this area. Individuals attending this Medical Education Resources Exchange (MERE) will be asked to bring short handouts or summaries of their experiences and/or innovations in SBP to share with the group. New or novel activities or programs still in development are welcome. Attendees also will discuss how their residencies or institutions have addressed SBP.

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So You Are Thinking About Starting a Learning Community: The Nuts and Bolts from 3 Schools Who Have Done It

Joel Gordon, MD, Carver College of Medicine, University of Iowa

David Wooldridge, MD, University of Missouri-Kansas City

Sandra Osborn, MD, University of Wisconsin

Friday, 10:15 - 11:45 am

Learning Communities having become an increasingly popular way to organize student affairs, curriculum, or both in a variety of medical schools throughout the country. Three member institutions in the CGEA have Learning Communities and would like to share their experiences with other member institutions. Representatives from the University of Missouri-Kansas City, the University of Wisconsin, and the University of Iowa propose to host this small group discussion to discuss their varying experiences with the Learning Community format with other CGEA members who might be contemplating the initiation of Learning Communities at their respective institutions. The small group discussion will begin with a brief introduction of each of the participants and their experience with Learning Communities. Three sequential breakout sessions will be held with each of these 3 institutions to allow for each of these schools to describe their own experiences with Learning Communities, sharing both their successes and challenges and to discover experiences at other CGEA schools that also have Learning Communities. The small group discussion will conclude with all of the participants coming together for a large group discussion session where each of the facilitators will have a chance to interact with the all of the attendees and facilitate a general discussion about Learning Communities for medical students in today's medical school environment. Participants should leave the small group discussion with a better understanding about what a Learning Community is and what benefits and challenges await them should they decide to embark on this format at their respective institutions.

LCME Best Practices -- Self Study Process

Heather Hageman, MBA, Washington University School of Medicine

Dana Levinson, University of Chicago Pritzker School of Medicine

John X Thomas, Jr PhD, Feinberg School of Medicine at Northwestern University

Saturday, 10:15 - 11:45 am

Liaison Committee on Medical Education self study cycles at individual medical schools occur every eight years. In that time institutional memory has often waned and staff are left to reconstruct the process from scratch. Further, while a successful site visit is no doubt a goal, schools should use the opportunity to gain other tangible benefits from their efforts. Careful organization of the self study process is critical to a successful self study and site visit. The process can operationally be divided into database management, staff/participant organization and the site visit. Schools undergoing a self study in the near future should attend to learn what other schools have found helpful to their processes. The objectives of this workshop are to identify best practices employed in the management of an LCME self study to most efficiently conduct the process while achieving internal goals. Areas to be discussed are:

1) Database management, 2) Participant organization and committee formation, and 3) Site visit planning and conduct. Workshop presenters will share their different perspectives in these areas and then divide participants into small groups for further discussion and identification of best practices employed in the self study process.

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Using AAMC Data Resources

Heather Hageman, MBA, Washington University School of Medicine
Brian Mavis, PhD, Michigan State University College of Human Medicine
Rajeev K Sabharwal, MPH, AAMC
Saturday, 3:15 - 4:45 pm

An increasing number of medical schools are building outcomes assessment databases to analyze the impact of curricular initiatives, track their graduates progress through the medical educational continuum and to address the LCME requirement to assess the extent to which educational objectives have been met. However, medical school faculty and administrative staff may not be fully aware of the extent of resources/data available through the Association of American Medical Colleges (AAMC), including the ability to benchmark individual institutions against others and over long time periods. By working through research questions using blinded AAMC data, participants will 1) understand how to access, and develop a working knowledge of the wide array of data resources available from the AAMC; the American Medical College Application Service (AMCAS), GME Track and Faculty Roster databases; and the AAMC Data Book and Minorities in Medical Education Facts and Figures Report; 2) recognize important issues to consider when using these data, such as response rates to questionnaires (who responds), value of programmatic vs. individualized data; what additional types of data the AAMC can provide by request; and 3) develop an approach for identifying and incorporating relevant AAMC-based data and resources of value in addressing specific questions pertaining to educational outcomes for their schools.

Selection Bias In Completing The AAMC Graduation Questionnaire With Identifiers

Heather L. Hageman, Dorothy A. Andriole, Alison J. Whelan, Donna B. Jeffe
Washington University School of Medicine, St. Louis, MO
Saturday, 10:15 - 11:45 am

PURPOSE OF STUDY: Students can complete the AAMC Graduation Questionnaire (GQ) anonymously or with identifiers. Anonymous data provides valuable programmatic information, but precludes linkage of GQ responses with other individualized-student data or with parallel items on post-graduate surveys. We explored GQ-completion selection bias by analyzing student-specific variables for associations with identified-GQ completion.

METHODOLOGY: With IRB approval, we grouped 2001-2003 graduates as completing the GQ with identifiers versus either not completing the GQ or completing it anonymously. Identified-GQ completion was analyzed in association with student gender, residency-training specialty, USMLE Step 1 and 2 scores, third-year-clerkships' grade-point average (GPA), Alpha Omega Alpha election, and MD/PhD graduation using two-tailed chi-square or Fisher's exact tests for categorical variables and one-way analysis of variance for continuous variables. Multiple logistic regression identified independent predictors of identified-GQ completion.

RESULTS: Of 341 graduates, 263 (77%) completed the GQ. Of these, 200 (76%) completed the GQ with identifiers, comparable to the 2001-2003 national rate of 77%. In bivariate tests, identified-GQ completion was associated with higher GPA ($p=.001$), female gender (64% vs. 53%, $p=.041$), residency-training specialty selection (60% vs. 20%, $p=.019$) and non- MD/PhD graduation ($p=.044$). In logistic regression analysis, GPA independently predicted identified-GQ completion (OR: 2.131, 95% confidence interval: 1.203-3.773).

CONCLUSION: Selection bias in identified- GQ completion was evident, with more academically accomplished graduates twice as likely to complete the GQ with identifiers; lower-performing students either did not complete the GQ or completed it anonymously.

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Selection Bias In Educational Outcomes Assessment

Heather L. Hageman, Dorothy A. Andriole, Alison J. Whelan, Donna B. Jeffe
Washington University School of Medicine, St. Louis, MO
Saturday, 10:15 - 11:45 am

PURPOSE OF STUDY: The use of multiple outcomes-assessment measures from a variety of sources should enhance the number and scope of graduates for whom outcomes data are available. We identified student variables associated with the number of outcomes assessments available.

METHODOLOGY: With IRB approval, we analyzed availability of each of three post-graduate outcomes assessments [program-director survey, first post-graduate year (PGY-I) survey, and USMLE Step 3 score] for associations with gender, residency-training specialty, MD/PhD graduation, and medical-school academic achievement (mean composite of standardized USMLE Step 1 and Step 2 scores and third-year-clerkships' grade-point average) for our classes of 2001-2003 graduates. Chi-square tests measured associations between categorical variables; one-way analysis of variance tested between-groups differences in academic achievement. P-values are 2-sided.

RESULTS: At least one assessment was available for 96% (327 /341) of our graduates; 49% (167/341) had data from all three sources. Academic achievement was higher among graduates completing the PGY-I graduate survey ($p = .004$), among those whose program directors completed PGY-1 performance evaluations ($p = .029$); and among those with Step 3 scores available ($p = .004$). Composite academic-achievement scores increased with successively greater numbers of assessments available ($F_{[3,340]} = 6.732$; $p < .001$); gender, MD/PhD graduation, and specialty were not associated with the number available.

CONCLUSION: More academically accomplished graduates were represented in our outcomes assessment program, even utilizing multiple sources for data collection. Extra efforts to gather information about less academically accomplished graduates are warranted to assure inclusion of data for a broad range of medical graduates.

Finding Efficiency, Effectiveness, and Creativity in Med Ed Leadership

Kimberly Hoffman, PhD, Linda Headrick MD, and Michael Hosokawa Ed. D.
University of Missouri-Columbia
Friday, 10:15 - 11:45 am

The LCCME, ACGME, and recent IOM reports have brought an increasing awareness of the importance of assessing the results of one's professional practice, analyzing the literature to determine best practice and taking action to close the gap between the two. As medical education leaders we must model continuous improvement in our educational programs for our learners. Further, in times of fiscal limitations, medical education leaders must find ways to improve results, remove waste and promote the most effective use of resources by working as part of an interdependent system. The improvement literature provides a useful framework to continuously enhance our work as medical educators. We will share one school's experience with continuous quality improvement in medical education. The goals of this workshop are to: 1) Identify principles and methods of continuous improvement useful to leaders in medical education; 2) Explore examples in which medical education leaders have used these methods to make their work more effective, efficient, creative and fun; and 3) Share lessons learned, and efficiencies gained from the application of continuous improvement principles to medical education.

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Sustaining Curriculum Renewal: Leadership and Scholarship Lessons Learned

Michael Hosokawa, EdD, University of Missouri-Columbia

William B. Jeffries, PhD, Creighton University School of Medicine

Nehad I. El-Sawi, PhD, Kansas City University of Medicine and Biosciences

Friday, 1:30 – 3:00 p.m.

This session addresses issues and strategies for reform in medical education and lessons learned from three medical schools. The discussants provide an overview and present qualitative reflections of their respective experiences in reinforcing three newly adopted curricular models: Problem-Based (University of Missouri-Columbia); Hybrid (Creighton University) and Clinical Presentation Curricula (Kansas City University of Medicine and Biosciences).

The discussants set the context and give a short history of their programs. They comment on issues of leadership, governance, communication, faculty development, integration, instructional methods, student assessment and program evaluation. The session concludes with summary of lessons learned from the success and challenges of sustaining curriculum renewal and how it affects educational scholarship at the three institutions; providing opportunity for audience to share their institutional experience.

Using Interclerkships To Fill Gaps In The Clinical Curriculum

Bruce Houghton, MD, and Hank Sakowski MD

Creighton University School of Medicine

Saturday, 1:30 - 3:00 pm

During the third year of medical school, clerkships in the traditional specialties provide essential clinical experiences for students. The clinical clerkships emphasize the knowledge, skills and attitudes related to direct patient care in the specific specialty. However, other areas vital to patient care may be overlooked or only addressed marginally in the curriculum objectives of clerkships. At Creighton University, we implemented a novel course utilizing the interclerkship model to address several of these "orphan" topics (EBM, cultural competency, sexuality, alternative medicine, professionalism). This workshop will describe the interclerkship model and the teaching strategies that have worked well in this setting. Discussions will include the topics addressed, problems identified and lessons learned. In addition, we will brainstorm ideas on how best to utilize this teaching paradigm and other areas where it may be effective. Learning Objectives: After completing this workshop, participants will be able to: 1. Identify curricular topics that may be effectively taught in an interclerkship course; 2. Identify active teaching methods for use in interclerkships; 3. Discuss practical issues to be addressed prior to implementation. Agenda: Introduction/Objectives, Background, Small Group Discussion---curricular topics, Review of Small Group Activities, Course Development, Small Group Discussion---Teaching Strategies, Review of Small Group Activities, Course Review and Wrap Up.

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Investigation Of Students' Attitudes Toward And Confidence In Counseling Patients About Health Promotion Topics

Kathryn N. Huggett and Erica Cichowski
Creighton University School of Medicine
Saturday, 3:15 - 4:45 pm

Purpose: Significant modifications have been made to medical school curricula to ensure adequate coverage of prevention and health promotion topics, but there is limited information about students' perspectives to guide efforts. The purposes of this study were to identify students' attitudes regarding health promotion, assess their confidence in counseling patients about these topics, and investigate differences by year in medical school.

Methods: After IRB approval, second-, third-, and fourth-year students were invited to complete an online questionnaire. Three topics were investigated: exercise, diet, and smoking cessation. The questionnaire included items drawn from the literature and items specific to the school's curriculum.

Results: 181 surveys were obtained (50.14% response rate). Preliminary analysis indicates students in all classes believe they can have a significant impact on patients' future health, and although this attitude diminished between the M2 and M4 classes (95.4% v. 87.5%, the decrease was not significant ($p = .18$). For all topics, each class reported feeling more knowledgeable than the preceding class. All classes reported adequate curricular coverage of the significance of health promotion topics, but indicated inadequate coverage of specific strategies to foster improvement. Experiences outside of the formal curriculum were cited for providing positive learning experiences. Difficult encounters with standardized and actual patients decreased student confidence.

Conclusion: Time devoted to health promotion topics was deemed adequate, but students highlighted a need for instruction about counseling strategies and debriefing following negative patient encounters. Experiences outside the formal curriculum should be examined for their positive effects on student learning.

Computer-Based Assessment: Stories from the Trenches

Larry Hurtubise, MA, The Ohio State University College of Medicine
Darrin Cheney MS, University of Kansas Medical Center
William B. Jeffries PhD, Creighton University School of Medicine
Saturday, 10:15 - 11:45 am

This session will focus on the successes and challenges that medical schools face in planning and implementing computer based testing. The session will provide examples of the approaches used by three medical schools in implementing computer based testing across the curriculum. The session will also highlight the progression of how images and multimedia have been sequentially introduced into the exams and the software has matured to support the use of this material. Questions for Discussion: 1) Why do computer based testing? What are the advantages? What are the disadvantages? 2) What hardware, software and infrastructure are necessary to support computer-based exams? 3) How "secure" are the exams delivered via computer? 4) What are the issues involved in choosing software for computer-based assessment? 5) The great debate: In house developed software or commercially purchased programs: What should my medical school do? How the Discussion will be conducted: The 90-minute session will begin with a 5-minute overview of the issues involved in planning and implementing computer-based assessment, followed by 15-minute presentations by three medical schools regarding the design, development, and implementation of their computer-based assessment systems. A 40-minute discussion among all participants will conclude the session.

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Addressing Reliability and Validity in Standardized Patient Assessments

Maurice Kavanagh, BA, Wayne State University School of Medicine

Linda Morrison MSW, Southern Illinois School of Medicine

Saturday, 11:00 am - 11:45 am

A key task for SP Educators in preparing and supervising standardized patients (SPs) in a testing situation is establishing and maintaining SP reliability for case presentation and checklist/rating scale completion (both H&P and communication/interaction). Maintaining the quality and consistency of SP performance is necessary to ensure that all students receive the same information/impressions, while SP checklist/rating scale accuracy critically impacts students' scores. A thoughtful and carefully-planned Quality Control procedure can help ensure successful results. Monitoring performance is a time-consuming activity, which can translate into extra costs, longer hours, and/or expanded tasks for program staff. This session will include presentation and discussion of strategies that can be used throughout the training and testing process to establish and maintain quality SP performances, with an eye toward using available funds and resources efficiently.

Is Admission to Medical School an Automatic MD? M-1 Remedial Programs Revisited: Is the student attrition rate high enough?

Susan M. Kies, Ed.D., Joseph Goldberg, MD / University of Illinois at Urbana-Champaign

Friday, 10:15 - 11:45 am

Ask any dean of students how they occupy their time and they will tell you they spend it dealing with problem students. Ask the dean how the faculty is involved with problem students and they will tell you they are engaged through their promotions committee and many hours are spent dealing with individual students who are not performing well. Ask the dean what they do to assist students and they will give a long list of programs and resources that are developed to address learning issues, time management, stress levels, study skills and a host of other problems students may encounter during medical school.

Some would blame the admissions standards of medical colleges, but it isn't that simple. Compounding the complexity of the problem, medical schools are faced with many constituencies who bring with them complex societal problems they want considered when selecting the students who will be admitted to medical schools. In response to those considerations, many schools have special programs to encourage, support and train students with a wide-variety of academic, social, geographic and ethnic backgrounds to address medical care deficiencies in various communities.

But in the end, all medical schools must counsel poor-performing students and address their problems to reach the goal of assisting these students in developing into competent physicians and the school must warrant that each student is prepared to enter a residency. And again, we must ask ourselves, "Is the attrition rate in medical school high enough?"

Another important consideration is the projection that in the upcoming decades there will not be enough physicians to implement the ever-increasing technological advances and care for the aging population if current admissions levels remain static. In order for medical schools to responsibly expand their enrollments in the environment of complex social issues, it is imperative that they look closely at the promotion standards for students.

Therefore, the goals of this presentation are to start a dialog to discuss medical school standards and gather information regarding:

- the ways in which medical schools in the central region of the United States deal with M-1 students with academic performance difficulties
- promotions policies standards
- examination pass levels
- availability of makeup examinations; deceleration programs; and repeat programs
- the use of USMLE as a gating mechanism, but have no standard for how many attempts students have at passing this examination.

Method of presentation: After a short presentation and definition of the problem, the group will divide into smaller units and attempt to deal with a student case, based on a selected program's policies. These will be presented to the larger group.

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Curriculum SIG: Student Input into the Design & Evaluation of Medical School Curriculum & New Student Innovations in Medical Education

Floyd Knoop, Ph.D.; Creighton University School of Medicine
Kathryn D. Huggett, Ph.D.; Creighton University School of Medicine
Rebecca Armendariz, Creighton University School of Medicine - MS II
Stephen Sittnick, Kansas City University of Medicine and Biosciences - MS II
Divya Patel, Kansas City University of Medicine and Biosciences - MS IV
Jamie Frey, Creighton University School of Medicine MS-IV
Saturday, 1:30 – 3:00 p.m.

This Curriculum SIG panel presentation and discussion will explore two critical dimensions of student participation and leadership in medical education: 1) the role of medical students in the design and evaluation of the medical curriculum and 2) student-initiated innovations in medical education. The Liaison Committee on Medical Education (LCME) accreditation standard ED-33 states “There must be integrated institutional responsibility for the overall design, management, and evaluation of a coherent and coordinated curriculum” and “an effective central curriculum authority will exhibit faculty, student, and administrative participation.” This session will introduce student representatives from two medical schools who will describe the methods used at their respective institutions to involve students in the administration and evaluation of the curriculum. They will provide specific examples of contributions made by students to improving the educational experience.

In addition to providing valuable insight into the strengths and weaknesses of the curriculum and offering recommendations for change, medical students also enrich the educational experience by developing co-curricular innovations that complement the school’s educational goals. Many of these initiatives require significant student leadership and coordination, address important needs in the larger community, and extend learning beyond the classroom. The activities of medical students in clinically-oriented projects, as Abraham Flexner (1910) stated, play an important role in “learning how.”

This session will offer examples of student-initiated innovations at two medical schools, describe challenges and opportunities of student-led initiatives, and provide ample opportunity for audience discussion of proposed or potential projects.

Generalizability Theory: A Workshop

Clarence D. Kreiter, Ph.D., and Kristi J. Ferguson, Ph.D.
University of Iowa Carver College of Medicine
Friday, 3:15 - 4:45 pm

Rationale: Generalizability Theory can be applied to address several issues in medical education. Goal is to generalize from a sample of behavior to the score the person would receive if observed under all possible conditions. An important advantage is that it allows researchers to determine multiple sources of measurement error in a single analysis. Another benefit is that it allows researchers to tailor measurement conditions to maximize reliability. Examples for its use include determining the number of evaluations needed or the number of cases needed for a standardized patient exam in order to achieve a stable and reliable estimate of performance.

Objectives for the workshop include the following: At the conclusion of the workshop, learners will be able to: (1) Identify advantages and disadvantages of generalizability theory; (2) Identify appropriate uses of generalizability theory in medical education; (3) Understand terminology used in generalizability studies; (4) Work through an example of data generated from a generalizability study; and (5) Identify problems in their own work that might benefit from applying this particular approach.

Methods/Session Format: The session will begin with a brief introduction about the advantages of Generalizability Theory. We will work through a sample case, then group members will be asked to apply the concepts to the case being presented. We will then conclude with an overview of recent studies that have used generalizability theory in medical education.

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Beyond "Cultural Competence:" Critical Consciousness and Multicultural Pedagogy in Medical Education

Arno K. Kumagai, MD, and Monica Lypson, MD
University of Michigan Medical School
Friday, 1:30 - 3:00 pm

To train physicians to meet the needs of a diverse society, medical schools have developed "cultural competency" curricula, i.e., activities to acquire knowledge of attitudes, practices and health beliefs of diverse patient populations and a skill set for working with these populations. While important, these activities often lead to an over-emphasis on "check list" approaches to complex situations without attention to learners' underlying attitudes and biases. In order to begin to address fundamental health care disparities in the U.S. and worldwide, we must couple the acquisition of skills and knowledge with the development of critical consciousness, i.e., an awareness of social injustice in the world in which medicine is practiced, as well as the impact that one's own values, perspectives, and biases have in the delivery of effective, compassionate care.

Pedagogy aimed at the development of critical consciousness has several underlying premises: (1) disparities based on race, gender, sexual orientation, and socioeconomic factors exist; (2) addressing these disparities is of central importance in medical education; and (3) medical students-and faculty-are adult learners developing ever-evolving views of self and society.

This interactive workshop is designed to explore approaches that foster the development of critical consciousness. The format for this type of learning is student-centered, engaged small group discussions of ethics, race, gender, sexual orientation, and socioeconomic status in the context of medical care. The workshop will model small group facilitation and will present key pedagogic theories underlying approaches that stimulate engaged discussions and the development of critical consciousness among adult learners.

Building Clinical Leadership: Something to SMILE About

Paul Lewis, M. S., Rush University Medical Center
C. Kirstin and B.S. Phelps, University of Illinois (Champaign-Urbana)
Paul Jones, MD, Rush University Medical College
Kevin M. Lewis BS, University of Illinois (Champaign-Urbana)
Friday, 2:15 pm - 3:00 pm

The medical education of the 21st century includes an expanding scientific and technical curriculum. This curriculum poses a difficult challenge in fulfilling the growing need to train physicians with the non-technical skills of working in a dynamic, patient-oriented healthcare team. As seen in the literature, many resident programs have designed extra-curricular leadership training experiences to fulfill this need; there is however, a lack of information on such experiences for undergraduate medical education programs. The purpose of this lecture/discussion is to present an elective 3-day leadership program for pre-clinical undergraduate medical students. In doing so, the lecture will review the required staff, preferred timing and facilities to host a leadership program, the philosophy and organization behind a sustained leadership program for medical students, and the steps in creating and maintaining a leadership program. At the end of the lecture, participants will be able to articulate the key concepts of an established leadership training program for medical students (i.e., the logistics), recognize what aspects were most and least beneficial to the student leaders (i.e., content) and discuss what were the basic leadership competencies covered in that program (i.e., general curriculum). Additionally, participants will be able to recognize the likely challenges they will encounter while establishing or maintaining a program at their institution.

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Computer-based Virtual Patient Cases: Multi-institutional Perspectives on Goals, Implementation and Evaluation

Kathryn L. Lovell, PhD, Michigan State University
Scott Elliott, BS, University of Iowa Carver College of Medicine
Heather Hageman, MBA, Washington University School of Medicine
Kelly Noll, BS, Washington University
Friday, 10:15 - 11:45 am

There is increasing interest in the use of computer-based virtual patient cases to meet institutional goals for student learning and assessment in the pre-clinical and clinical curriculum. These goals include teaching and evaluation of clinical reasoning in a cost-effective manner in the context of current constraints on patient encounters and faculty teaching time. As a teaching tool, computer-based virtual patient cases can be used to help medical schools meet LCME requirements for ED-2 ("the objectives for clinical education must include quantified criteria for the types of patients (real or simulated), the level of student responsibility, and the appropriate clinical settings needed for the objectives to be met"). The cases can also be designed to allow assessment of the students' abilities and provision of feedback on their strengths and weaknesses. This session will summarize the development and use of several types of virtual patient cases in undergraduate medical education, both for course/school objectives and to meet LCME requirements. Presentations will include features of effective computer-based virtual patient cases, curricular benefits, the choice of platform, issues in student assessment and feedback, barriers to implementation, and strategies for faculty development. Audience participants will be asked for feedback on their school experiences and to share ideas on the features of effective computer-based virtual patient cases used for specific purposes.

Treating Professionalism Lapses as a Form of Medical Error

Catherine Lucey, MD, Cynthia Ledford, MD, and Carol Hasbrouck
The Ohio State University College of Medicine
Friday, 10:15 - 11:45 am

Participants will: (1) Apply a medical error analysis paradigm to professionalism lapses; (2) Understand how systems contribute to professionalism lapses; (3) Use root cause analysis of a professionalism lapse to develop educational strategies. Despite widespread attention, effective strategies to teach and evaluate sustainable professionalism are elusive. Many medical organizations have responded by re-publicizing existing professionalism tenets. Unfortunately, physicians who exhibit professionalism lapses (PL) often do so in spite of knowledge of the abstract rules. The development of an effective education and evaluation strategy requires a deeper understanding of the nature of professionalism challenges, the causes of PL and the skills needed to respond professionally even when difficult. Many similarities exist between PL and medical errors. Both can occur in even the most diligent physician. Both can negatively impact patient health, doctor-patient relationships and physician well being. Both can be facilitated or mitigated by the systems in which we work. Both have frequently been blamed on irremediable character flaws. Drawing on the study of medical errors, this workshop will teach educators to apply the tool of root cause analysis to observed PL. After an initial didactic presentation, participants will break into small groups to review and analyze challenging professionalism scenarios. Discussion will focus on identifying conflicts, professionalism 'near-misses' and professionalism errors. Participants will use the analysis to identify the skills needed to face the challenges professionally. Strategies from medical education, psychology and business will be introduced to help participants move from this needs assessment to a professionalism curriculum.

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Meeting the ACGME Competencies: Not more work, A Shift in Perspective.

Monica Lypson, MD, Scott D. Gitlin MD, and Stanley J. Hamstra PhD

University of Michigan

Saturday, 3:15 - 4:45 pm

Residency program directors and faculty involved in resident education have been charged with assessing and developing educational tools that measure the ACGME competencies. Programs have struggled with various ways to implement this "unfunded mandate" within their programs. We will provide an experiential workshop for interested faculty to bring their evaluation and assessment tools. The format for this type of workshop will be interactive. We will spend 5-10 minutes on each tool presented to the group. Our intention is to provide a model for residency program directors & administrators to facilitate internal review procedures and interactions. Intended Audience: This workshop is intended for educators involved in resident teaching & evaluation. With the skills and consultation gained from this workshop, participants will be better able to develop, share and understand the fundamental aspects of creating a residency outcome program that meets various RRC requirements and require minimal additional effort. Learning Objectives: 1. Explore the aims of the ACGME's Outcome program 2. Review & share various assessment tools amongst workshop participants 3. Discuss obstacles and possible solutions facing the implementation of competency based assessment 4. Explore a novel approach to the institution's internal review process. Format/Methods: The workshop is designed to provide consultation and review of faculty and program directors evaluation tools. We will facilitate a discussion directed to residency educators and meeting their immediate needs. If participants would like consultation, they should bring one overhead transparency of their tool and 20 copies.

Clinical Skills Curriculum - Development

Anna Maio, M. D.

Creighton University

Friday, 3:15 - 4:45 pm

The approach to teaching clinical skills varies across medical schools. There appears to be little standardization regarding the acquisition, evaluation and remediation of skills. Society wants to be confident that as a profession we can all perform certain tasks. AAMC has initiated this discussion and this workshop would add to that effort. Discussion needs to initially center on what constitutes a clinical skills curriculum and a review of the literature regarding the development of a clinical skills curriculum. Educators need to carefully examine what skills a graduating senior should be able to perform and understand. Innovation of the curriculum needs to begin without fear of boundaries. Teaching of skills may need to be placed in different parts of the curriculum or reinforced frequently. Simulators or OSCEs could be used to supplement skills obtained from patients. Evaluation and remediation are also a critical part of the curriculum. We would hope this format would allow the participants to go back with some new and innovative ideas for revision of their clinical skills curriculum.

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Designing a Patient Safety and Quality Outcomes Medical Curriculum

David Mayer, MD, Deb Klamen MD, MHPE, and Reed Williams PhD

Southern Illinois University Medical School

Friday, 3:15 - 4:45 pm

Patient safety and quality care have emerged as major concerns in society and major drivers for improving the United States' well being. The Institute of Medicine's (IOM) report entitled, "To Err is Human; Building a Safer Health System," led to considerable discussion in both the public and private sectors on the need to align the current medical education system to meet these growing concerns. This past summer, experts in the fields of patient safety, quality care, curriculum innovation, informatics, risk management, legal, and simulator science met to begin discussions on the planning and implementation of patient safety education into UGME and GME. The multidisciplinary roundtable had representation from nursing, pharmacy, medical, public health and patient advocacy groups. We would like to share the outcomes of this roundtable with CGEA members and pose a series of questions for small group discussion and breakout work that help generate curricular design, toolkits and modules that can be made available to other educational leaders looking to incorporate patient safety into UGME and GME. Curricular areas that small group breakout work will focus on interdisciplinary training, teamwork, interpersonal communication and team-based simulation and will incorporate elements used by other safety-conscious industries including aviation and nuclear energy.

Evolution of a Large and Longstanding Service Learning Project

M. Eileen Mehl, BS, Firuzan Sharp MA, and Cedric Pritchett BS,PA-C

The Ohio State University College of Medicine

Saturday, 1:30 - 3:00 pm

Community Service has been a requirement for our first year medical students since 1988. Our Community Project has evolved over time from an "extra" part of the Medical Humanities curriculum to a core component of the current Patient Centered Medicine course. Students were originally randomly assigned to agencies to learn about (1) the psychosocial aspects of health care and (2) the economics and context of community health care and social services delivery. Changes to the Community Project over the years include moving from assigning students to agencies to student choice of project; instituting a Community Fair to facilitate choice; receiving a \$5000 grant to examine our connections with Community Agencies; adding Web Based Learning for reflection and assessment and having a "student Community Project committee" as part of our Project Professionalism. First year medical students contributed almost 4000 hours of service in 2003-2004 and received top university honors for the last 2 years for individual hours volunteered (9 students: over 100 hours each). Dr. Franklin Banks, PhD., Community Project Director, received the 2003-2004 University Faculty Award for Excellence in Community-Based Teaching. Working in community agencies develops the professional attributes of a physician in training. Clearly, altruism, responsibility, respect, integrity, excellence and compassion are components of service. Through service students develop those attributes, shaping professional characteristics that are difficult to teach but essential to the practice of medicine. The unique evolution of service learning at our institution has components that could be adapted to many other medical schools.

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Teaching Population Health from a Health Disparity Perspective: Curricular Resources and Tools

Karen Peters, DrPH, University of Illinois College of Medicine, Rockford

Margaret Gadon, MD MPH, American Medical Association

Carol Krohm, MD MPH, Illinois Foundation for Health Care Quality

Genevieve Werner, MS, and Eric Henley, MD MPH

University of Illinois College of Medicine, Rockford

Saturday, 3:15 - 4:45 pm

The topic of health disparity has become an increasingly important focus in the areas of public health, health care provision and health policy. Each of these areas rely on a population health perspective. Likewise, the issues involved in understanding and addressing health disparity also can be approached from a population health perspective. The purpose of this session is to present and discuss some strategies for teaching and learning about population health from the perspective of the societal imperative to address health disparity. Curricular resources and tools will be shared from the interdisciplinary panel. Implications and recommendations for how to include a population health perspective into medical education will be discussed with an expectation for active audience participation.

The Human Patient Simulator In Medical School Orientation

D. Peterson, D. PhD, Margaret Wilson D. O., and David D. Patterson B. S.

A. T. Still University

Saturday, 10:15 - 11:00 am

Objective. Human Patient Simulators were used during orientation for the Class of 2009 to generate excitement and anticipation about the education that they were about to undertake. **Methodology.** Students were required to dress professionally and to treat the simulator as a real patient. Five different commonly encountered disease scenarios were developed from actual patient cases. Students, in groups of five or six were given a 5 minute history of their case by 3rd and 4th year students in a conference room. They then were escorted to consult at the "patient's" bedside where they joined a clinician and basic scientist to identify the disease condition. They were asked to get vital signs, to read monitored traces and to keep a patient chart. The expectation was not to be diagnostically successful but rather that they appreciate the process. After 15 minutes at the bedside they returned to the conference room where the experience was discussed with basic science faculty. **Results.** Student feedback indicated that 97% felt the exercise was a positive motivator for medical school. Written comments indicated they felt overwhelmed and unprepared to care for the needs of their patient but were excited about beginning the process whereby they would become prepared. **Conclusion.** Students were excited by the opportunity to function in a physician role at the bedside of an ill patient. Still, they also recognized that there will be an important educational process before they are ready to adequately fulfill that role.

Educational Implications of Electronic Health Records

David Resch, MD, Regina Kovach, MD, and Terri Cameron MA
Southern Illinois University School of Medicine
Stuart Speedie PhD
University of Minnesota Medical School
Michael Zaroukin MD, PhD
Michigan State University
Friday, 1:30 - 3:00 pm

While much has been written about the impact of electronic health records on patient care and the implications for practicing physicians and graduate medical education programs, little information has been provided regarding the impact that EHRs have on the education of medical students or the development of clinical reasoning processes. In its policy statement regarding the value of the EHR and information technology in the future of healthcare, the AAMC made no mention of medical education. Also, the Foundation for eHealth Initiative has no working group on medical education among its five groups. None of the goals of the strategic framework identified by the National Coordinator for Health Information Technology identify medical education as an issue in implementation of EHRs. (<http://www.os.dhhs.gov/healthit/goals.html>). In addition, the reminder systems built into many EHRs are dependent upon maintaining currency in medical knowledge and continually updating the evidence-based rules that support patient safety initiatives and the reminder systems. Many practitioners, residents and students are not aware of the processes involved in this system. This session will allow participants to begin a dialogue and establish networking contacts to address the opportunities and challenges the implementation of EHRs brings to medical education.

Developing Faculty Development Activities that Respond to the Needs of Community-based Preceptors

Jane Riddle, MD, University of Illinois at Chicago College of Medicine
Marcy Rosenbaum PhD, University of Iowa College of Medicine
James H. Shropshire MD, University of Wisconsin Medical School
Friday, 1:30 - 3:00 pm

Community-based health care settings are important sites for learners to practice key clinical skills and to become exposed to settings in which they are likely to work in the future. Community-based preceptors are often volunteers, who enjoy interacting with learners and find fulfillment in teaching. These preceptors are typically geographically dispersed. They may have little training in effective precepting skills and often face increasing clinical and non-clinical workloads. In order to provide support for volunteer community-based preceptors, faculty developers need to have strategies to assess and meet the needs of those preceptors. In this small group discussion, participants will discuss preceptor needs assessments using preceptor surveys and interviews. Other sources of needs assessment data will be considered including student course evaluations, preceptor evaluations of students, faculty development program evaluations and the curricular goals of community-based clerkships. Participants will apply the PRECEDE (predisposing-enabling-reinforcing) planning model to discussion and critique of preceptor development programs. Examples of activities typically included in preceptor development programs - handbooks, office visits (academic detailing), websites, workshops, reminders - will be presented with attention to the use of those materials by community-based preceptors and evidence for the effectiveness of those activities.

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Using Human Patient Simulators and Standardized Patients to Integrate Professional Behavior Assessment within a Medical School Basic Science Course

Neil Sargentini, PhD, Julia E. McNabb DO, FAAFP, Dena Higbee BA
David Patterson B. S. E., and Neal R. Chamberlain PhD
A. T. Still University - Kirksville College of Osteopathic Medicine
Friday, 3:15 - 4:00 pm

Objective/Purpose: In an effort to integrate basic science and professional objectives in a clinical scenario, we developed a medical school infectious diseases laboratory exercise to integrate and assess patient centered care, interpersonal and communication skills, professionalism, leadership, and teamwork along with standard medical knowledge objectives in a basic sciences course. **Methods/Materials:** We developed 16 unique pneumonia cases (predisposing conditions, agents, etc) for 175, 2nd year medical students in four-member teams to perform assigned roles of Standardized Patient (SP) Examiner, Human Patient Simulator (HPS) Leader, Subject Objective Assessment Plan (SOAP) Note Writer and Microbiology Person. Student contact time was 1 hour for the team aspects of this exercise. Several days were allowed for development and writing of the SOAP note and microbiology report. **Results:** Data was analyzed for 175 students and include SP feedback to students, comments on leadership and teamwork, comments on SOAP notes, assessment of video tapes of SP and HPS encounters, microbiology reports, student surveys and self-reflection statements. Student self reflections indicate that immediate oral feedback from the SP, peer observation and support, working as a team, and thinking within a realistic situation were strong aspects of this exercise. **Conclusions:** Overall student feedback was positive during this first attempt at this exercise. All objectives were realized, although improvements are being considered. A plan is being developed for a series of similar exercises to assess and coordinate professional development and include pathology objectives during our next two-course sequence (medical microbiology and infectious diseases).

Using a Curriculum Database to provide longitudinal integration in medical education

Haraldine Stafford, PhD, MD, Kathryn Skhal M. S.
Kristi Ferguson, PhD, and Helen Damon-Moore PhD
University of Iowa Carver College of Medicine
Friday, 2:15 - 3:30 pm

The University of Iowa Medical Curriculum Database contains the content of course syllabi of the medical curriculum, including PowerPoint presentations and handouts, in a single, searchable resource. While searching by individual words and keywords provides flexibility, it can be a time-consuming process. The original purpose of the database was to allow faculty to review what had been taught about their topic in earlier courses, but it has also become an important study resource for students. The course director of the Foundations of Clinical Practice (FCP) IV course initiated a project to make this database more accessible and usable for both faculty and students. Hardin library staff members have created curriculum database link pages for all FCP IV lectures. The link pages are arranged by discipline and provide a history of relevant lecture material. To generate links, keywords are chosen from FCP IV PowerPoint presentations from the previous year. They are used to generate searches of the medical school curriculum database. A link page is generated that lists curriculum content relevant to each lecture. The sources of these reference lectures, as well as the lecturers' names and departments, are listed on the link page. Faculty liaisons and the course director provide quality control by reviewing link pages prior to their posting. Link pages are password-protected but are accessible to all faculty and students. The success of this tool will be assessed by measuring the number of times each site is accessed. Desired outcomes include better articulation between lectures within and between disciplines and more transparency of the medical curriculum for all students.

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Association of American Medical Colleges / Central Group on Educational Affairs
Leadership & Scholarship Across the Medical Education Continuum March 9-11, 2006

Structural Knowledge and Clinical Skill

R. Brent Stansfield, PhD, University of Michigan
George Bergus, MD, University of Iowa Carver College of Medicine
Saturday, 10:15 - 11:45 am

Purpose: To explore the relationship between clinicians' diagnostic reasoning and their performance on a simulated patient (SP) case.

Methods: 41 M4s and first-year residents examined a SP (graded) and completed a questionnaire about the case (ungraded). The questionnaire involved likelihood judgments about six disorders given 22 hypothetical symptoms. Factor analysis and multidimensional scaling (MDS) yielded interpretable individual differences in clinical reasoning. These were compared to clinical and communication scores on the simulated patient case.

Results: Participants clustered into 4 types based on likelihood of six disorders. Types differed in clinical but not communication SP scores. MDS results show qualitative differences between the 4 types in their clinical judgments of the relative likelihood of the disorders.

Conclusions: Clinical skills as measured by the SP exam are related to a clinician's understanding of how various symptoms and situations affect the likelihood of disorders. Some understandings are better than others and can be modelled using pen and paper measures.

Enhancing Empathy in Medical Students using Flex Care Training

Carla Stebbins, PhD, Des Moines University
Saturday, 1:30 - 3:00 pm

There are numerous benefits to patients, the health care system, and even to physicians themselves when physicians are equipped with the ability to empathize with their patients. Four specific areas most impacted by a physician's ability to communicate empathically are addressed in the literature: patient compliance, patient satisfaction, patient autonomy or shared decision making, and physician career satisfaction. Overall, the ability of a physician to develop an empathic relationship with patients enables more efficient and effective interactions between patients and their physicians, providing relief to many of the problems confronting the U. S. health care system. Various oversight, credentialing, and accrediting bodies (i.e., Association of American Medical Colleges, Institute of Medicine, Accreditation Council for Graduate Medical Education, Association of American Colleges of Osteopathic Medicine, etc.), as well as the administration and faculty from medical schools around the world, have called for increased research in the development (and testing) of curricular interventions that enhance empathy and interpersonal communication skills among today's medical students. In 2004, a research study was launched to determine if the Flex Care communication training, a program based on psychological type theory, could enhance medical student empathy scores. Results of the study suggest that the training program did produce a significant result in the enhancement of the behavioral domain of clinical empathy. This workshop will expose participants to key experiences of the Flex Care training program while also sharing the effects of the program on study participants. Current plans to integrate this innovative program into the formal medical school curricula will also be provided.

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The Impact of Librarian/Faculty Partnerships on Medical Education

Gerri R. Wanserski, MLS, University of Wisconsin-Madison
Gurpreet K. Rana, MLIS, Taubman Medical Library, University of Michigan
Larry Gruppen, PhD, University of Michigan Medical School
Cindy Gruwell, MLS, University of Minnesota Bio-Medical Library
Bradley J. Benson, MD, University of Minnesota Medical School
Saturday, 3:15 - 4:45 pm

Librarian/faculty collaborations from undergraduate to graduate medical education are becoming increasingly successful as faculty recognize that the specific skills sets of librarians are an integral part of building professional expertise. Today, the skills required to become a successful physician include information management, critical appraisal (including evidence based medicine), and the use of information technologies. These trends create a specific niche for medical librarians in medical education and have the potential to play a significant role in modeling future physicians as lifelong learners.

The University of Michigan and University of Minnesota medical schools represent institutions where significant partnerships between faculty and librarians have developed at all levels of medical education. These partnerships have resulted in a spectrum of educational initiatives, including: orientation of first-year medical students to medical information resources; course electives for second-year medical students; informatics seminars with first-year residents; an EBM journal club, morning report consultations, and development of active learning curriculums to assist in primary care clerkships, residencies and fellowship scholarly activities.

This facilitated panel session will invite audience participation as attendees discuss models of librarian/faculty partnerships from both the faculty and librarian perspectives. Emphasis will be placed on best practices for fostering librarian/faculty partnerships, methods to evaluate their success, the evolving role of librarians in medical education and active approaches for exploring collaborative efforts with medical faculty. Time for questions, discussion and shared ideas will be provided during the session to solicit ideas for the role the SIG and librarians can play in medical education.

Perception Of The Impact Of Sleep Deprivation On Performance By Surgical Residents

S.I. Woodrow and J. Park, University of Toronto
B.J. Murray, Sunnybrook and Women's College Health Sciences Centre.
C. Wang, M. Bernstein and R.K. Reznick, University of Toronto
S.J. Hamstra, University of Michigan
Saturday, 3:15 - 4:45 pm

Purpose. Duty hour restrictions have been mandated largely out of concerns that sleep deprivation compromises physician performance and patient care. However, individuals' ability to recognize the effects of sleep deprivation has not been well studied and may have important clinical and educational implications for the medical profession. This study examined the perceived impact of sleep deprivation on performance amongst different groups of medical trainees.

Methodology. A survey investigating work hours, sleepiness, and daily functioning was mailed to all medical, surgical and psychiatry residents at a large urban medical school. The mailing also included a previously-validated instrument of sleepiness (the Epworth Sleepiness Scale), and a new Sleep Deprivation Impact (SDI) scale, a 12-item Likert-type scale designed to measure self-perceived performance impairment resulting from sleep deprivation.

Summary of Results:

Overall, 95/152 (62. 2%) surgical and 194/326 (59. 6%) non-surgical residents completed the survey. Surgery residents reported (1) working longer hours per week (83. 1 versus 61. 9, $p < 0. 01$), (2) scored higher on the Epworth sleepiness scale (12. 8 versus 9. 2, $p < 0. 01$), and (3) scored significantly lower than others on the SDI scale (45. 1 versus 51. 5, $p < 0. 01$). Internal consistency of the 12-item SDI scale was 0. 89.

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Conclusions. Surgery residents reported working significantly more hours per week than those in other specialties. Despite valid evidence of greater sleepiness, self-perceived impairment due to sleep deprivation was lower amongst surgery residents than non-surgical trainees. We are currently investigating whether these findings represent actual resilience to sleep deprivation or misperception within a self-selected group.

SESSION ABSTRACTS

Using Task-Trainer Models for Instruction and Assessment

Rachel Yudkowsky, MD, MHPE

University of Illinois at Chicago College of Medicine

Sandy Cook, PhD, and Kris Slawinski MA

The University of Chicago Pritzker School of Medicine

Dena Higbee, A. T. Still University of Health Sciences/Kirksville College of Osteopathic Medicine

Saturday, 1:30 - 3:00 pm

Task-trainer models are low-to-medium-tech simulators for performing isolated tasks such as suturing, drawing blood or inserting an IV. As task-trainer models become more available, and students' access to patients more restricted, Health Science educators are increasingly incorporating task-trainers in their instruction and assessment toolbox. Task-trainers offer many advantages for both learners and patients. The experience of performing a procedure for the first time can be stressful and error-prone; task-trainers allow students to learn procedures in a safe, controlled and low-stress environment. Students may have limited opportunities for practicing skills in the clinical setting; task-trainers provide multiple opportunities for perfecting skills. Finally, task-trainers afford the assessment and documentation of competency, consistent with the requirements of the LCME, ACGME and AOA. This symposium/panel discussion will present a conceptual model and several practical approaches to teaching, learning and assessing with task-trainers, as exemplified by the University of Illinois at Chicago, the University of Chicago Pritzker School of Medicine, and the A. T. Still University of Health Sciences/Kirksville College of Osteopathic Medicine. In particular, we will address appropriate uses for task-trainer as opposed to bio-simulator models; how to design successful learning experiences and effective assessments using task-trainer models; how to set up a task-trainer lab that works efficiently for instructors and learners; and ways to combine task-trainers and standardized patients. There will be plenty of time for discussion.

Communicating Evidence: the Final Frontier

Laura Zakowski, MD, University of Wisconsin

Shobhina Chheda, MD, MPH, University of Wisconsin

Saturday, 10:15 - 11:45 am

Since Evidence Based Medicine came on the scene, there has been significant emphasis on the steps of EBM that include framing an evidence-based question, retrieving and appraising the evidence, and understanding the results. However, the real challenge may lie in the clinician's ability to communicate research evidence to patients to help patients make informed decisions. Unfortunately, there is little known about how to most effectively communicate evidence to patients. In 2004, Epstein and colleagues published a systematic review that identified original research in this area but their search yielded only a few potentially relevant articles (1). Though research in evidence-based communication is at an early stage, some medical schools are teaching evidence-based communication skills as part of their larger curriculum efforts in EBM. A new emphasis on teaching students the skills required to explore patient values and translate research evidence to patients is critical. This workshop will focus on innovative methods to teach and evaluate students EBM communication skills. These activities were developed and implemented for second year medical students. Workshop attendees will observe and discuss videos of students performing a recently implemented EBM communication OSCE assessment station. (1) Epstein RM. Alper BS. Quill TE. Communicating evidence for participatory decision making. JAMA. 2004;291:2359-66.

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Sustaining Curriculum Renewal: Leadership and Scholarship Lessons Learned

Michael Hosokawa, EdD, University of Missouri-Columbia

William B. Jeffries, PhD, Creighton University School of Medicine

Nehad I. El-Sawi, PhD, Kansas City University of Medicine and Biosciences

This session addresses issues and strategies for reform in medical education and lessons learned from three medical schools. The discussants provide an overview and present qualitative reflections of their respective experiences in reinforcing three newly adopted curricular models: Problem-Based (University of Missouri-Columbia); Hybrid (Creighton University) and Clinical Presentation Curricula (Kansas City University of Medicine and Biosciences).

The discussants set the context and give a short history of their programs. They comment on issues of leadership, governance, communication, faculty development, integration, instructional methods, student assessment and program evaluation. The session concludes with summary of lessons learned from the success and challenges of sustaining curriculum renewal and how it affects educational scholarship at the three institutions; providing opportunity for audience to share their institutional experience.