The Pediatric Educator
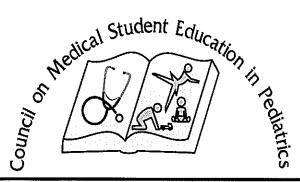
Editor:
Gary Freed, D.O.
Emory University School of Medicine

The following Task Forces submitted Reports:

Curriculum Task Force: Update

The Curriculum Task Force has been fairly quiet since the APA SIG meeting in May 2006. We are still working on a survey that will assess how the curriculum is being used. The new leaders for the CTF will be Sandy Sanguino and Lyuba Konapasek.

Submitted by Bill Raszka

Evaluation Task Force (ETF) brief report, 12/06

This year is a time of transition in ETF leadership as Lindsey Lane completed her term of service following the 2006 meeting in Salt Lake City. ETF members have been fortunate recipients of Lindsey's highly effective leadership, extensive knowledge about evaluation which she shared so generously, and her pioneering work on structured clinical observation (SCO) that sets the standard for meaningful observations of clinical skills. Paula Algranati is staying on for another year (a glutton for punishment). Scott Davis and Starla Martinez have started their terms of service as ETF leaders. We are excited about how much the ETF has accomplished to this point and are looking forward to some upcoming projects with interest.

We have been working on the tasks set forth after the 2006 meeting and will shortly be e-mailing ETF members requesting input in preparation for the 2007 meeting in San Antonio. We have chosen 4 skill areas from the ETF list of core-competencies in the COMSEP Curriculum (newborn, growth, development and nutrition), and have begun working on describing what defines minimum competency for a third-year medical student. This initial document will be used as a starting point for the ETF group at the 2007 meeting as we begin to flesh out minimum competency in each of the specific skill areas contained in the Curriculum.

A second focus of the ETF is to identify evaluation forms or tools that are currently being used to evaluate the various skills and to identify which tools need to be further developed (or perhaps created). We plan to begin this process via e-mail prior to the 2007 meeting, with further discussion at and

following the meeting. We envision the 2007 ETF sessions as hands-on and collaborative with lots of opportunities to network and share ideas with each other. If you're new to COMSEP or just new to the ETF, please join us in San Antonio!

Submitted by: Starla Martinez, Scott Davis and Paula Algranati

Research and Scholarship Task Force Update:

Since the last COMSEP meeting we have been busy. We have developed and submitted a workshop on the scholarship of teaching to COMSEP. (Hope to see you there!) The systematic review paper about the effectiveness of different methods used to teach doctor patient communication skills to medical students was accepted in the journal Evaluation for the Health Professionals and will be published in March 2007. The survey of ED-2 by pediatric clerkship directors is approach under consideration at TLM. A sub group is reviewing the literature to develop or identify a method for systematically reviewing and synthesizing non randomized research in the medical education literature. We have also reviewed and selected the poster presentations and oral presentations for the COMSEP meeting in March.

Items we plan to discuss in the task force at the upcoming COMSEP meeting: (1) ideas for collaborative research among COMSEP members (such as members establishing the reliability and generalizability of evaluation tools developed by COMSEP members) (2) collaboration with APPD to assess the effects of students receiving training in their 4th year on writing individual

learning plans during residency (3)collaboration with other task forces to do a journal club in pediatric education for TLM, (4)planning for future workshops (along the scholarship themes of integration, application and discovery.

Looking forward to seeing you all in San Antonio

Submitted by: Sherilyn Smith and Cindy Christy

<u>**Committee Reports**</u>

ACE - the Alliance for Clinical Education

ACE is the organization of clerkship director organizations. Its web site can be found at http://www.allianceforclinicaleducation.org/. ACE has been heavily influenced by COMSEP over its 12-year history. Of the 3 presidents, 2 have been from COMSEP - O.J. Sahler and Fred McCurdy. The current Executive Director is Gary Beck, a long-standing Pediatric clerkship coordinator, and a great advocate for the clerkship coordinators.

2006 was a busy year for ACE. ACE published the 3rd edition of the Guidebook for Clerkship Directors. On line PDF files, or the mechanism to order a bound copy, are available at http://www.allianceforclinicaleducation.org/guidebook.htm. This is a group-edited, multi-authored text, to which many COMSEP members made significant contributions.

ACE, through its president, Lou Pangaro, spent much time and effort lobbying the LCME regarding ED-2. If you need, we can provide you with a copy of the outcomes of those conversations (you may not need it, as the LCME is modifying ED-2 – check out their web site).

ACE is also conducting a survey of clerkship

directors to determine what resources are available to clerkship directors and what challenges they face. This survey can be completed in about 20 minutes and is IRB approved. Please take time to complete the survey at this link: http://ocrme2.medicine.uiowa.edu/cgi-bin/rws3.pl?FORM=ace. Chris White, who led the COMSEP survey team last year, was our representative to this survey's development.

For those of you with a strong organizational bent, you'll be pleased to know that ACE also revised (OK, we created) by-laws in 2006. This group was led by Fred McCurdy and assisted, among others, by Gary Beck and me. The by-laws are designed to maximize participation in ACE business by each member organization. Part of this process was for ACE to develop standing committees, three to start: Communication, Publication, and Research. COMSEP will have representatives on each committee.

ACE has put on a discussion session at the AAMC meeting for the past 3-4 years. This year the topic was "Implementing Longitudinal Themes in Clinical Medical Education." The session was held on Tuesday, October 31, 2006 at the AAMC meeting in Seattle, Washington. The slide presentation may be downloaded off the ACE web site. Robin Deterding ably represented COMSEP on the panel.

ACE plans in 2007 to get its new structure up and running, to continue to work to position itself as "the" go to organization when issues affecting the clinical education of medical students arise, and to develop more collaborative research projects.
Submitted By Bruce Morgenstern

COPE- Committee on Pediatric Education
The Committee on Pediatric Education (COPE)

is a subcommittee of the American Academy of Pediatrics (AAP) whose purpose is to "act as a think tank within the AAP for discussion, consensus building and collaboration on emerging issues facing pediatric education." The committee meets yearly to discuss issues facing pediatric education. This year, 4 major topics were discussed at length: 1) International Pediatric Education: Models for Training Residents and Pediatricians, 2) Graduate Medical Education Flexibility: How Do We Plan for the Future, 3) Physician Re-entry into Clinical Practice, and 4) Implementing Culturally Effective Pediatric Care.

From these discussions, subcommittees were established to further discuss each topic in detail and to make recommendations to the executive committee of COPE to act upon and forward to the Board of the American Academy of Pediatrics.
Submitted by Gary Freed

Journal Club

The rest of this issue will be devoted to the Journal Club. Once again I would like to thank all of those individuals who participated in this most worthwhile project. And in particular the editorial staff of Bruce Morgenstern, Bill Raszka, and Leslie Fall

Turner, MK, Simon, SR, Facemyer, KC, Newhall, LM, Veach, TL, **"Web-Based Learning Versus Standardized Patients for Teaching Clinical Diagnosis: A Randomized, Controlled, Crossover Trial."** *Teaching and Learning in Medicine.* 2006:18(3), 208-215.

There is a paucity of studies looking at how students develop clinical skills and what are the best methods for assisting students in their development. This study is an attempt to

compare two methods that are growing in utilization – standardized patients sessions (SP in the study) and Internet-based Web-based cases (WB in the study). The authors pose the following questions: "Which format demonstrates a greater ability to improve clinical reasoning? How robust is this influence? How do the costs of each method compare? Also, how do students respond to them?"

The study was done to begin to investigate optimal methods for learning and retention of clinical skills. They were looking at best methodologies as well as the cost and acceptance of each method, to assist schools and programs in educational planning. The planning is, of course, stimulated by the requirement for students to pass USMLE Step 2 CS in order to eventually obtain licensure. What are the best, most acceptable and cost-effective methods to stimulate the development of clinical skills?

Study group was the 54 2nd year students at the University Of Nevada School Of Medicine. An interesting problem occurred in the study. They had originally applied for and obtained IRB exemption. However, a student in the class contacted the IRB and they re-evaluated the protocol and recommended a consent form be added. This turmoil and changing rules explained why of the 54 students eligible, only 30 actually consented to have their information released and available for data analysis, unfortunately weakening the study power. The students who consented and who did not consent did not differ statistically, but the Journal did not allow them to publish this data.

The study was a single blind (to the investigator) randomized cross-over study. The 30 students who continued were randomized to 16 in the WB group and 14 in the SP group. They received similar cases via these methodologies. The first case was abdominal pain and the second was headache. The SP group had a case about abdominal pain and the WB group used the DxR case on abdominal pain. Then for the second case, the groups switched so that the 16 in the WB group for the first case were then in the SP group for the headache case. (DxR cases have been around for several years and while novel and interesting to use, I personally was never very impressed by the accuracy of the method used to generate diagnostic hypotheses. The product was excellent for its time, but the cases took a very long time, were very expensive (I paid 900 for two cases about 5 years ago), and technically are not web-based cases, they are CD-ROM cases!). The authors did document that they worked hard to get the SP case to go along the same lines as the WB/DxR cases. The evaluation of the study was threefold.

1. Performance on an SP exam 4 weeks after the intervention – two cases on abdominal pain and headache, with variations to reduce perceived redundancy. They had a checklist that and a SOAP note in similar (though not identical) form as the USMLE Step 2 CS.

2. Student evaluation of effectiveness using a 5 point Likert scale of seven issues related to satisfaction

3. Analysis of start up and continuation costs between the two methodologies

Findings

- WB and SP resulted in similar scores on the Abdominal Pain checklist and the Headache checklist. WB training produced a higher score on the Abdominal Pain SOAP note ($P=0.006$), but no difference on the Headache SOAP note. This was an unexpected finding to me. I expected that students

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who were taught using SPs would test better using SPs, but at least for the Headache SOAP note this was the opposite.

- Students on 7/7 items scored the SP experience as significantly better than the WB experience. These numbers were actually quite significant given the small number of students who ended up participating. Also, as a member of the CLIPP Editorial Board, I have seen the typical evaluations by students on a Likert scale. Most students rate the experiences highly, almost in an inflated fashion and the difference between a case that works well and one that doesn't is actually quite small, and this is on thousands of case sessions. These differences were significant at the p<0.001 level for all but one at the p=0.004 level. A typical difference on the 5 point Likert scale was 3.94 on the SP case and 2.57 on the WB case.

- Start up for the SP cases was $2190, for the WB teaching was $2250; ongoing costs were $45 per case per student for the SP cases and $30 per case per student for the WB cases. (Remember, in contrast, CLIPP, due to its initial grant funding and created structure costs at present $50 per student for 31 cases and this number should decrease with increased utilization).

Discussion and Limitations

- Authors conjecture that the subject matter of abdominal pain might be better suited to web-based teaching than headache as an explanation of the sole difference noted.

- Authors mention prior work that showed conflicted and/or confusing results when comparing paper and WB cases, but the prior work clearly showed equivalent learning outcomes with less study time using WB cases.

- Authors think the superiority of the SP method on student evaluation part is due to preceptorship with faculty directly after the SP case, with instant feedback, based on qualitative comments of the students.

- Start up costs similar but ongoing costs are significantly less expensive for the WB cases; however, the cost mentioned in the study is still quite excessive compared to our CLIPP model.

- Authors acknowledged their difficulties in getting consent from the students after the study began and acknowledged their numbers were small and therefore the power of the study suffered.

- Students were not blinded to the intervention, used only two cases with limited problems, and at one medical school, so they concede the results may not be generalizable.

- "Durability" of the acquired information or skills in time (will the information stick?) is not examined – evaluation was 8 weeks after the abdominal pain session and 4 weeks after the headache session. However, perhaps the better performance on WB cases on abdominal pain might then be more durable in time, but this is conjecture only.

Reviewed by David Levine, MD; Morehouse School of Medicine

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Mounsey, AL, Bovbjerg, V, White, L and Gazewood, J. **Do students develop better motivational interviewing skills through role-play with standardized patients or with student colleagues?** *Medical Education* 2006; 40: 775-750

How often do we hear students report "The parent was counseled about car seat use/childproofing/proper feeding...."? When I observe students, I find that "counseling" usually means lecturing, admonishing or even badgering. Hence I was intrigued by this article on developing better motivational interviewing skills, since motivational interviewing is a well developed, well accepted clinical technique for promoting behavior change. Standardized patients are the gold standard—both in terms of reliability and unfortunately, also cost—for teaching and assessing communication skills. If role-plays with student colleagues are just as effective as exercises with standardized patients, then we (my school/most schools) could offer more training than we now do in this critical set of communication skills.

This study comparing standardized patient or student role-plays for the formative assessments in a unit on motivational interviewing is meticulously done. It is a randomized controlled trail using a previously validated instrument, the MITI (Motivational Interviewing Treatment Integrity) scoring system, in which faculty scorers of the final taped interviews were extensively trained. The subjects were third year students on a family practice clerkship, who had already had extensive exposure to motivational interviewing as first years.

The finding of "no difference" between students who practiced with each other and students who practiced with standardized patients is heartening for money-strapped schools that want to expand their teaching and assessment of communication skills.

I have one reservation about the study's results. As the authors mention, they did not do a pre-intervention assessment of these students' skills. Hence we cannot tell if this particular third year intervention did anything to increase the skills of either group—(and did their skills reach a minimal level known to be clinically useful?)
Reviewed by Margaret Golden MD MPH SUNY Downstate

What is the problem and what is known about it so far?

As clerkship directors, many of us are responsible for faculty development. What are the key elements of effective faculty development? Little is known about the various methods we employ and few of these methods have been tested. The relative effectiveness of one method over another has not been measured.

Why did the researchers do this particular study?

The authors, from a diverse group of global academic institutions, reviewed the literature from 1980 to 2002 to determine the impact of faculty development programs, isolating the most effective methods that led to improved teaching. The researchers sought commonalities among the effective programs.

Who was studied?

Faculty at medical schools were studied via a review of published literature. Three databases were reviewed: Medline, ERIC, and EMBASE using key words searches as well as manual searches. Studies focused on faculty development programs designed to improve the teaching effectiveness of basic and clinical scientists were included. The researchers sought studies that measured more than just survey data.

How was the study done?

Using a scoring system, studies were coded by 6 readers, two reading each study.

What did the researchers find?

Faculty satisfaction with programs designed to improve teaching skills is high. Participants value these programs. Faculty report a change in their behavior following programs and that this change is perceived by their students. Participants in programs increased their knowledge of educational principles. The key features of successful programs included: experiential learning, feedback, well-designed interventions, and the use of diverse educational methods.

What were the limitations of the study?

Many of the studies reviewed were flawed. Rigorous research methods were not typically used. Few studies measured changes in behavior. In those that did, changes in behaviors were measured at single points, rarely over time. The complex interactions in the various studies are difficult to compare. Few of the studies were randomized, controlled studies. Few of the studies had firm outcome measures and most did not involve large numbers.

What were the implications of the study?

Faculty development works! The faculty want it, enjoy it, perceive value from it, and recognize change as a result of it. Some methods are more effective than others. The most successful programs deliberately use the theories of adult education, acknowledge the context of the program (e.g.: organizational culture), extend over time, allow cumulative learning, promote independent assessment, and

are required of faculty (not voluntary).
Review by Keith Boyd, MD, Rush University

Editorial comment: *We all want faculty development to work. This study shows that faculty members do value faculty development programs. The big issue is whether behavior actually changes over time. Stay tuned. WVR* Boehler M, Rogers DA, Schwind CJ et al., **An investigation of medical student reactions to feedback: a randomized controlled trial.** *Medical Education,* August 2006; 40(8):pp. 746-749.

What is the problem and what is known about it so far?

As pediatric clerkship directors, we all have "hawks" and the "doves" among our faculty and we spend much of our time trying to convince both of the value of feedback to students. We all recognize the value of feedback, but most of us struggle with the question: What is the best format for that feedback?

Why did the researchers do this particular study?

In this simple but well-designed study, the authors measured the differences in student performance and satisfaction in two randomized groups: one group received specific feedback directed at deficiencies while the other experienced non-specific praise.

Who was studied?

Thirty-three M1 and M2 students participated.

How was the study done?

The study focused on a simple motor task: the two-handed surgical square knot. All student attempts were videotaped. Study participants were first videotaped tying a knot with no prior instruction (the pre-test). An academic surgeon then demonstrated how to correctly tie the knot. Students were then taped a second time (post-instruction, pre-intervention). Half the students were then assigned to the generic compliments group. During their third knot-tying exercise, these students heard scripted praise such as "great job" or "outstanding." The other students were assigned to the performance-based feedback group. These students were given 2 specific instructions addressing their deficiencies while tying the third knot. Students were then taped tying a 4th knot. At the conclusion of the session, students were asked to rate their satisfaction with the experience. All videos were reviewed in random order by 3 blinded reviewers who rated performance using a validated instrument.

What did the researchers find?

The feedback group performed better but students were was less satisfied with the experience. The generic compliment group did not improve their performance but were more satisfied with the experience.

What were the limitations of the study?

The study looked at a simple motor task and included a very small number of only M2 and M3 students at a single medical school. Feedback sessions were very brief; this might have contributed to student dissatisfaction with the feedback.

What were the implications of the study?

Individualized feedback improves performance. When evaluating education systems or programs, performance improvement is a better measure of the effectiveness of feedback than

learner satisfaction. Praise does not improve performance, but it does lead to more satisfied learners. This study lends credibility to the "sandwich" technique of giving feedback: praise / constructive criticism / praise.
Review by Keith Boyd, MD, Rush University

Editorial comment: *This is a fascinating small study that confirms what many have felt for a long time; students crave specific formative feedback but also don't like bad news. Educators have to take solace in fact that while the faculty or teaching session student evaluation could take a hit, specific feedback will improve student performance- which is the ultimate goal. WVR*

Weissmann, P F, Branch, William T,; Gracey, C F, Haidet, P,Frankel, RM. **Role Modeling Humanistic Behavior: Learning Bedside Manner from the Experts**. *Academic Medicine* 2006. 81: 661-667

This well designed qualitative study describes the behaviors humanistic physicians use during patient care as a method to identify best practices to teach this core topic in medicine. The researchers audio taped 12 faculty members from three institutions. These physicians were selected from nomination derived from a web based survey. Researchers used qualitative methods (audiotaped bedside teaching sessions, transcript reviews, field notes and structured interviews) to derive a structured abstract describing a best practice. These abstracts were then reviewed by the authors to generate a consensus.

The researchers found that the physicians taught humanism almost exclusively by role modeling. The faculty assumed that learners would recognize, learn and emulate what they saw. Occasionally there were reflective discussions followed by role modeling. The

most commonly used humanistic techniques (and there was a wide variety of tools used) included nonverbal behaviors such as listening closely to the patient, demonstrating respect for patients (such as using appropriate introductions or including the patient within the discussion) and eliciting / addressing the patient's emotional response to the illness. The study is limited by the setting (inpatient hospital services) and may not be generalizable to specialties other than internal medicine (although I expect it is generalizable). Finally, there was no comparison group to determine if the behaviors identified in the humanistic physicians were also present in other physicians. However, this was a hypothesis generating study that others could build on and address the questions about what are the most effective techniques to use to teach these concepts.

This study provides specific observations about humanistic teaching that can become the foundation of faculty and learner development in this area. Many techniques are simple to recognize and emulate. The technique of role modeling (perhaps coupled with learner reflection) may be the most powerful manner of instilling these positive values without sounding "preachy". The effects of the "hidden curriculum" have been well established through similar qualitative studies.
Reviewed by: Sherilyn Smith, University of Washington

Editorial Comment: *"Don't it always seem to go that you don't know what you've got till it's gone?" The faculty "assumed that learners would recognize..."? Here's a positive demonstration of the power of the hidden curriculum. Why not take that curriculum out of hiding and male it explicit? Like other teaching issues – especially feedback – there's also a faculty development issue. When*

*someone is modeling humanistic practices, they
need to be encouraged to highlight that activity,
so the learners see it in action. BZM*

Szauter, Karen M.; Ainsworth, Michael A.;
Holden, Mark D.; Mercado, Anita C.; **Do
Students Do What they Write and Write
What they Do?** *Academic Medicine* October
2006. 81:10

Written documentation of the patient encounter
is an essential clinical skill. Many clerkships
require students to submit their write-ups of
their clinical encounters. One assumes that the
data in the write-up is accurate and represents
what actually took place in the student-patient
interaction. There have been limited studies that
have compared information obtained during the
patient encounter and the corresponding notes.

This study was designed to provide a direct
comparison between the student interaction
with the patient and the subsequent note. This
study focused on the physical examination
(PE). The goal was to directly compare the
physical exam maneuvers that were performed
and the documentation of the PE in the patient
note.

Information obtained from the senior medical
student standardized patient-based clinical
skills assessment at the University of Texas-
Galveston was used for this study. For this
study, three standardized-patient based
scenarios were selected. Each encounter was
video-recorded. For each of these encounters
students were instructed to perform a focused
medical interview and physical examination.
Following the encounter, students were given
10 minutes to complete a patient note. The
principle author reviewed each patient
encounter-note pair along with one other
investigator. The reviewers watched the PE
portion of the encounter. Details of all PE

maneuvers performed were transcribed then
compared with the student's description of the
PE in the corresponding note. There were five
scoring categories: 1) all PE maneuvers
recorded correctly 2) PE maneuver performed
but not recorded 3) PE maneuver not performed
but recorded 4) PE maneuver performed
incorrectly 5) inaccurate documentation
(inclusion of an abnormal physical exam
finding that was not present. Reviews were
done independently and scoring categories were
compared. If the categories were different,
transcribed details of the encounter were
compared and consensus was reached through
discussion.

A total of 207 encounter-note pairs were
reviewed. 96% revealed some sort of mismatch
between students did during the PE and what
students recorded during the note. The most
concerning things the authors found was that
the majority of notes included documentation
of findings from maneuvers that were either not
performed during the PE or performed
incorrectly such that the information could not
have been reliably obtained. Of the 207
encounter-note pairs reviewed 82% were found
to include information from exam maneuvers
not performed or performed incorrectly.
Documentation of PE abnormalities that were
not actually present included findings relevant
to the case content most of the time.

The limitations of this study include the
restricted sample size and the setting from
which the data were obtained, which may limit
the generalizability of this study.

This study has several implications. It is
essential that physical exam skills be reinforced
during clinical training. Students also need to
be able to correctly identify and document
physical exam findings. Equally important is
that students need to be reminded of the

importance of the medical record and of the student's responsibility to document only what occurs during the patient encounter. This will become even more important as the use of the electronic medical record becomes more widespread.

Reviewed by Sandy Sanguino

Editorial comment: *Despite repeated pleas to record only what they find, students far too often record what they should find or what others find. It may be the fear of "missing" something or the potential "penalty" for an incomplete record drives this phenomena but this study raises interesting issues about professionalism in medical school. WVR*
Kogan, J.R., Pinto-Powell R., Brown, L.A., Hemmer, P., Bellini, L.M., Peltier, D.

The Impact of Resident Duty Hours Reform on the Internal Medicine Core Clerkship: Results from the Clerkship Directors in Internal Medicine Survey.

Academic Medicine 2006 81(12):1038-44.

1. What is the problem and what is known about it so far? Residents serve as important role models and teachers for students on core clerkships. With ACGME mandated work hour restrictions, it is conceivable that residents may cut back on the amount of teaching they offer to students. The impact of duty hours on the residents themselves has been studied, with mixed results. Little data are available concerning the impact of duty hours on the teaching offered by the residents to students.

2. Why did the researchers do this particular study? To add to the body of knowledge concerning the impact of duty hours restrictions on medical student education, specifically with a focus on the impact on student clerkships from the perspective of clerkship directors.

3. Who was studied? Clerkship directors in Internal Medicine

4. How was the study done? The Clerkship Directors in Internal Medicine (CDIM) circulates an annual questionnaire to its membership; investigators are invited to submit potential topics/questions to be surveyed with the annual instrument in addition to standard demographic questions. The 2004 survey addressed the issue of the impact of resident duty hours reform on teaching, feedback and evaluation, patient care and student attitudes during the IM clerkship, using 5-point Likert scale items and 4 open-ended items. The survey was distributed to 114 members.

5. What did the researchers find? The response rate on the survey was 84%. Overall, 69.7% of the queried clerkship directors disagreed or strongly disagreed that duty hours reform had a positive impact on the educational experience of clerkship students. This general attitude was reflected in the responses to individual questions concerning resident time and attitudes for teaching, feedback and evaluation of students, and the impact on the patient care experiences for students. Responses to the Likert-scale items and open ended questions revealed special concern that students were learning "shift-work mentality" with subsequent erosion of professionalism, and that students' continuity with the team or patients was being compromised. When asked to name the most positive effect of duty hours reform on student education, 25% said there was no positive effect, with others noting that having more rested residents might improve the students' experience. The survey also asked whether changes had been made in the clerkship in response to resident duty hours restrictions, and other than some decrease in the requirement for overnight call, few programs made substantive changes.

6. What were the limitations of the study? This survey provides the perspective of

clerkship directors, not the actual students or residents involved in the teaching interaction being studied. Although the opinions of clerkship directors are obviously important and may provide a broader perspective over time, this may not tell the whole story. Whether these data apply to other types of clerkships besides Internal Medicine is unknown.

7. What were the implications of the study? Yet one more study that points out that resident duty hours restrictions may have unintended consequences. We need to keep looking at this issue, especially as new staffing models are implemented. We also need to plan ahead for the likely institution of such duty hours restrictions for the students -- we should have "before and after" studies ready to go and learn from what has gone on during the institution of restrictions for residents. Some prophylactic attempts to shore up altruism and the other components of professionalism against the onslaught of "shift work mentality" should be designed.

Reviewed by Judith L. Rowen, M.D.

Editorial comment: *It is not altogether surprising that Clerkship Directors in IM are pessimistic about the effect of resident duty hours on medical student teaching. It is intriguing that the Directors felt that modeling "shift-work" was one of the major issues rather than say time for feedback or direct observation. Regardless, whether in the inpatient or outpatient setting, there are enormous pressures on teaching time and clerkships and educators will need to explore different models of teaching. WVR*

Kerfoot, Price B.; Conli, Paul R.; McMahon, Graham T. **Health systems knowledge and its determinants in medical trainees**
Medical Education November 2006; 40 (11)

What is the problem (issue) and what is known about it so far?

The Accreditation Committee for Graduate Medical Education (ACGME) requires residencies to teach six competencies to its trainees, one of which is systems-based practice. Some U.S. medical schools are beginning to adopt similar frameworks for curriculum design. Little is known about the baseline knowledge of medical students and residents in systems-based practice and how this knowledge changes with training.

Why did the researchers do this particular study?

The researchers wanted to examine the baseline knowledge of health systems in residents and medical students and to examine the factors that predicted a good knowledge base.

Who was studied?

693 learners were studied—two medical school classes and seven residency programs from three hospital systems.

How was the study done?

Curricular content was constructed around knowledge of Medicaid, Medicare, the new prescription drug benefit and women's health issues. After validating the content, learners were asked to complete twelve questions to test their knowledge in these areas. They were also asked to rate their own knowledge on the US health care system.

What did the researchers find?

92% of learners completed the test. Mean score on the test was 46.7% (SD 14.0). There was no correlation between trainee level and test score.

There was some correlation between self-assessed knowledge and test score but it accounted for a small level of the variance. Women scored higher than men by a small margin. Residents who had trained at a primary care medical school scored higher than those who did not, again by a small margin. Internal medicine residents scored higher than OB-GYN residents.

What were the limitations of the study?

The study was done in only a few settings. No information is provided about previous curriculum in systems-based practice at either the medical school or residency programs. No information is provided about the birthplace or citizenship of the trainees. The study looked only at knowledge rather than skills or attitudes. No information is provided about the difficulty level of the questions. No information is included about the type of residency programs included.

What were the implications of the study?

Knowledge of the U.S. health care system is not extensive among U.S. medical students and residents. Knowledge does not increase with level of training. Trainees have only a limited ability to assess their own knowledge. Curricula to address this knowledge deficit are needed at all levels.
Reviewed by Margaret Golden MD MPH
SUNY Downstate

Editorial comment: *It is always striking that we train women and men to practice medicine yet rarely do we teach them about the finances of medical practice. There was a big push a few years back to incorporate more education on this topic into medical school curricula but it is unclear how much impact this has made. Although this is a small study with many*

methodological issues, it seem pretty clear that unless more time (including assessment) is dedicated to this issue during medical school or residency (and there will be arguments about where this should take place) the first year of practice will continue to be an unsupervised ambulatory fellowship in medical system financing. WVR

Lurie SJ, Nofziger AC, Meldrum S et al. **Effects of rater selection on peer assessment among medical students.** *Medical Education* 2006; 40(11):1088-1097.

What is the issue, and what is known about it so far?

The LCME, among others, is calling for education in and assessment of various professionalism-related qualities of students such as integrity, teamwork, etc. The use of peer assessment is an attractive idea for evaluating students longitudinally, reasoning that students' peers see students "in action" whereas many preceptors, especially attendings, may only see students for brief snapshots of their training, some of which may be in artificial settings such as with standardized patients. Peer assessment among physicians is a growing area of research but there are limited data thus far among medical students.

Why did the researchers do this particular study?

These researchers have previously shown that medical students can assess reliably the interpersonal attributes of their peers but it is not known whether the interpersonal attributes of students themselves affects their perception or scoring of their colleagues. The authors' hypothesis was that students who were rated by their peers as low on the interpersonal-attribute scale would themselves rate other students low

on the scale (before they saw their own results). The researchers did this study to look at whether the students' own biases affect how they rate their peers, and whether the method of assigning student raters has any effect on overall scores.

Who was studied?

296 second and third year medical students from three different class years (2004, 2005 and 2006) at the University of Rochester NY.

How was the study done?

As part of a larger study, students anonymously rated 6-10 other students using a standardized instrument geared toward evaluating interpersonal skills and work habits. The study included two different methods of assigning raters: 1) "School-assigned:" A portion of the students were assigned raters based on the amount of time they had spent with students in small group learning in the first two years of medical school. 2) "Self-assigned:" A portion of the students were asked to list 6-10 students they believed could give them constructive feedback and also to list 6 students to whom they felt they themselves could give constructive feedback.

All students performed their peer assessments using a 15-item web-based instrument with a 5 point scale for each item and provision for submitting narrative feedback. Within 1 week all students received their scores and narrative feedback as well as the class means, and then met with their advisors to discuss the results.

The researchers used various statistical methods to interpret the results comparing the school-assigned and self-assigned groups and looking at each year compared to the others. They compared the lowest quartile scores with the

upper three quartile scores.

What did the researchers find?

Medical students who are rated low (in the lowest quartile) by their classmates on interpersonal skills are significantly more likely simultaneously to assign low (in the lowest quartile) scores to their classmates. Also, the low-scoring students were more likely to choose other low-scoring students to rate and be rated by.

The method of assigning students whom to rate or be rated by had no significant effect on the scores for most students. In other words, the researchers found that even when students chose whom they wanted to be rated by, the final score for most students wasn't significantly different than when the student was assigned raters by the school. They suggest that therefore schools may "...feel confident choosing a method of peer selection based on logistics and convenience, including students' views on the process."

What were the limitations of the study?

It seems to me that the authors' conclusion about assignment method making no difference in scores would only be true if the lowest quartile is the only way "low" is defined. If a low score were defined empirically, such as ≤2 on a 5-point scale, it could make a great deal of difference if assignment methods differed. I think one of the conclusions perhaps ought to be that, if a school plans to allow students to choose their own raters, the school needs to insure that the low score is defined using the lowest quartile rather than a particular score.

What were the implications of the study?

This study confirms the hypothesis that students

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who are rated in the lowest quartile in interpersonal attributes by their peers are themselves likely to rate other students as low on the interpersonal attributes score. This study was not designed to look into why this is the case, but it's a very interesting finding to ponder. The authors speculate that perhaps students who have low interpersonal scores have tended to choose low-scoring students to spend time with over the course of training. *Reviewed by Starla Martinez MD*

Editorial Comment: *The really hard stuff follows. What are the elements of these low scores? Are they likely to interfere with performance as a physician in the 21*st *century? If so, 1) are any of them identifiable before acceptance to medical school? 2) Are any of them able to be modified? Changing an adult's behavior is no small task. BZM*

Elms SA, Chumley H: **Nursing faculty teaching basic skills to medical students.** *Medical Teacher* 2006: 28 (4): 341-344.

One of the first principles of medical practice that a medical student learns--at least they had better learn it--is that when a nurse says "jump" the proper response is to ask "how high?" This study from the University of Texas Health Science Center in the city of our next COMSEP meeting, San Antonio, is inspired by the fact that many nursing school faculty become experts in teaching basic clinical skills such as inserting intravenous catheters. The authors contrast the traditional "see one, do one, teach one" approach to teaching clinical skills that is commonly used in medical education with the more intense competency based approach used in nursing education. The authors also note that while preclinical students are expected to learn history and physical examination skills, they have little exposure to physical skills like nasogastric tube insertion and few opportunities to work with the equipment used on a day-to-day basis in clinical settings. This study was done to evaluate medical student skills training by nursing faculty.

The Class of 2006, 176 students, participated in a four hour skills laboratory taught by nursing school faculty who routinely teach those skills to nursing school students. The four hour session included one hour sessions devoted to 1) intravenous catheter insertion, 2) placement of a nasogastric tube, 3) management of respiratory equipment, and 4) an introduction to the equipment commonly encountered in clinical settings. The evaluation strategy consisted of student satisfaction ratings and self-assessments of how prepared they felt pre and post-laboratory and in comparison to the Class of 2005 which had not experienced the laboratory.

Not surprisingly, the student satisfaction with the skills laboratory was very high. They also felt significantly more prepared to perform the skills after the laboratory than before, The Class of 2006 students felt more prepared to perform the skills than the Class of 2005. Although students were satisfied with the laboratory and felt more prepared to perform the skills, there was no measure of their actual ability to perform them. Also, there was no assessment of long-term outcomes. One important finding was that more time for nursing faculty instruction and less time for actual practice was needed than anticipated. Students would have liked more opportunity for hands-on practice than the sessions afforded.

This study makes the point that real skills training akin to that used by nursing faculty in nursing schools would be useful for the preparation of medical students' entry into the real world of clinical medicine. An additional benefit of the skills laboratory, mentioned but

not measured, was that it provided an opportunity for real collaboration between nursing and medicine and gave the medical students exposure to nurses as experts.
Reviewed by Randy Rockney

Editorial comment: *So much to learn, so little time. Clearly, students need to be familiar with certain technical skills, and perhaps even have* *attempted them. What skills should they absolutely master prior to graduation? Attempts to limit these lists of skills have been quite difficult to generate, and often lack consensus. As an aside, this paper is an interesting jumping off point for discussions about the differences between training and education.* *BZM*

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