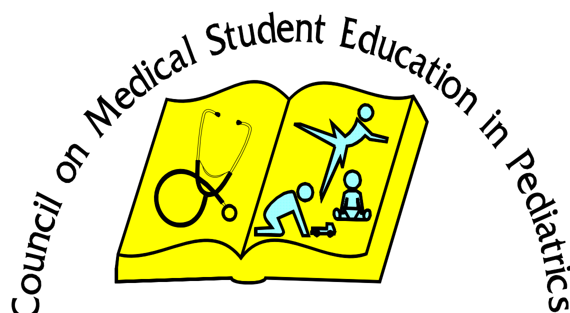
The Pediatric Educator



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Comments from the President
Bill Raszka

Greetings; I hope all is well with you and that you are enjoying the summer. It seems we were together just yesterday but three months have already passed since our meeting in Atlanta, Georgia. We owe David Levine and the entire Georgia Group (Ed Clark, Gary Freed, Chris White, and Lisa Leggio) and the Meeting Committee heartfelt thanks for the wonderful job they did. Words cannot adequately describe the Herculean task that Lisa Elliott and Jean Bartholomew pulled off in making this a successful meeting. Very few, if any, meeting planners could have accomplished what they did. We had a fantastic meeting despite having to change our hotel and meeting space less than two weeks before the projected start date. Wow.

The quality of the workshops, abstracts, and presentations were terrific. Thanks to David Levine for inviting Dr. Satcher to speak. Not only was the talk terrific, we managed to catch David sporting a necktie.

Thanks so much to Dottye Law Currin for investing so much time in developing a program for the Clerkship Coordinators. We really enjoyed their input, vision, and energy and look to continue to build on the success of this collaborative effort.

Dinner at the Carter Center was terrific and Ed Clark and his band were tremendous. The jazz was cool and later, hot (even in the Carter Center).

The Executive Committee (EC) had some long sessions. Congratulations to Lyuba Konapasek and Jimmie Stallworth on their election to the EC and Michael Barone and Robin English to the Nominating Committee. Many, many thanks go to David Levine and Angela Sharkey for the time, dedication, and insight they have provided the EC over the past three years.

The EC agreed to move ahead on several issues. The CTF under the leadership of Sandy Sanguino and Lyuba Konapasek will continue to work with the APPD and AMPSDC designing a sub-internship curriculum in Pediatrics and address the fourth year curriculum in general.

The EC tentatively agreed to support an APPD/APA/COMSEP sponsored educational conference targeting "in the trenches" teachers, whether inpatient or ambulatory, who may not necessarily be clerkship or residency directors. That meeting, which is not at all designed to compete with the current APPD, APA, or COMSEP meetings, is tentatively scheduled for the fall of 2009.

The EC enthusiastically supported continued collaboration with the Clerkship Coordinators. Unfortunately, due to tremendous space constraints at the combined 2009 meeting, few workshop opportunities will be available at that time. In 2010, however, we look to expand the meeting space and collaborative activities.

Expanded meeting space will be important not only because of collaboration with the Coordinators but also because of the growth in the size of COMSEP. We have offered 7 workshop slots for each workshop session but for a meeting of our size (greater than 250 registrants), that number is probably too small. We hope to increase the number of workshops offered in each session for the 2010 session. COMSEP was fortunate in that we had so many wonderful applications to host the 2010 meeting. We are very pleased that the meeting will be hosted by Annalisa Behnken and the University of New Mexico and held in Albuquerque, New Mexico.

The EC welcomes the continued collaboration with the APPD. Rob McGregor, President of the APPD, has really been fantastic working with the COMSEP EC to further joint efforts and collaboration to include curricular projects

as well as the joint meeting scheduled for 2009. Please note that as we have a combined meeting for 2009 some of our traditional deadlines will be different. **The call for abstracts and workshops will go out September 3, 2008 with a deadline of October 22, 2008 and notification in December of 2008**. The abstracts and workshops will be submitted electronically using a Web-based interface. You will be able to submit workshops for the COMSEP only portion of the meeting or the combined portion of the meeting (or both). We have room for a total of 14 workshops for the combined meeting. We hope that these will be collaborative across institutions and between undergraduate and graduate medical educators. Our meeting hosts will be Michael Barone and Linda Lewin.

As COMSEP grows and matures, our members also change. We have occasionally collected data on our membership but not systematically. The EC agreed to pursue using an annual or bi-annual survey similar to the one used by the Clerkship Directors in Internal Medicine. In this way, we can identify who our members are, issues of importance to the membership, and act on trend changes. Sherilyn Smith and Mitch Harris will help spearhead this effort.

The COMSEP Web Page remains critical to the mission of the organization. David Levine has done a marvelous job as Web Master but we still need to address how to make best use of the Web site. We may need to re-organize the Web page in the future but for now, we need to make sure that the information posted is accurate and current. Please take a few minutes to review the site and send any documents for posting to David.

The EC enthusiastically supported meeting with the Chairs (AMSPDC) at the next available meeting time (2011).

The EC recognized that currently Lisa Elliot hand enters all registration information. The EC voted to support switching to a Web-based meeting registration system that would allow use of credit cards. Other votes included support for the following: only conference call charges relating to official COMSEP business should be charged to COMSEP; and COMSEP members attending a meeting on behalf of COMSEP should request funds from the EC if not otherwise scheduled to attend the meeting.

The central mission of COMSEP remains mentoring of our members, scholarship, and professional development. Robin Deterding has been instrumental in securing funding for the scholarship program and leading the review process. We want to thank her for terrific work on this project. Janet Fischel and Roger Berkow will now lead that effort. Please remember that grant applications are due December 15, 2008.

Finally, many thanks to Gary Freed for the many years he edited the *Pediatric Educator*. Congratulations to Paola Palma Sisto for her first issue!

Please remember that the deadline for abstracts and workshops for the 2009 meeting is quite early this year (October 22, 2008).

As always, I look forward to seeing you soon. Take care.

Bill

Coordinators Group
Dottye Law Currin, MPH

The inaugural meeting of Pediatric Undergraduate Medical Education Coordinators (PUMEC) at the COMSEP meeting this spring was a resounding success! More than 35 energetic and enthusiastic participants met in a four-hour general session to officially establish a working group of administrators/coordinators within the COMSEP organization. It was exciting to realize that medical schools from across the country were represented at this session, demonstrating their broad support and critical contributions to planning efforts. Additionally, there were two workshops offered specifically for administrators and coordinators; these were well attended and received excellent evaluations. This effort was sponsored, and is continuing, with the full support and encouragement of the COMSEP Executive Committee and membership. The goal of the PUMEC is to provide a venue for education, professional development, and networking in a national forum for the primary support staff in pediatric undergraduate medical education.

During the April 2008 general session for coordinators, the participants identified a "to-do" list for the year and created three committees who are continuing work on specific topics during this year:

<u>Committee 1: Define formal organizational structure for clerkship coordinators with COMSEP</u>
(Contact: Ginny Cleppe, Medical College of Wisconsin)
This group will focus on exploring existing structures in place for various subspecialties (e.g. internal medicine, surgery), gather ideas and suggestions from medical educators (particularly the COMSEP Executive Board) as well as sources outside the medical field, and bring suggestions to the COMSEP coordinators group as a whole for further consideration.

<u>Committee 2: Plan a certification workshop for interested participants to be offered during 2009</u>
(Contact: Joyce Salter, Cincinnati Children's Hospital Medical Center)
To date, three possibilities have been discussed regarding a certification workshop for 2009. 1) Offering certification workshop during March 2009 meeting of the Central Group on Educational Affairs in Rochester, MI; 2) Offering workshop at another time and location just for pediatrics (UNC-Chapel Hill has offered); or 3) Trying to offer the workshop in Baltimore at the 2009 COMSEP meeting. This group will soon be polling administrators and coordinators to determine interest and preferences for the three possibilities.

<u>Committee 3: Planning of Coordinator Programs, Workshops, Posters and Events for COMSEP 2010</u>
(Contact: Donnita Huffman, University of Kansas Medical Center)
The committee will develop a survey to determine preferences of topics for additional education and professional development at the 2010 meeting. Some of the ideas to be suggested include:

- Education research in collaboration with clerkship directors
- LCME guidelines
- Changes the NBME is looking to implement with the Gateway exam
- Management of student records and documentation
- Understanding the COMSEP competencies and how they are important to clerkships
- How CLIPP cases are being used at various medical schools
- Certification versus licensing versus informal designations for coordinators and administrators
- Brainstorming on similarities and differences in member clerkships and developing resource guides

Task Force Reports

Curriculum Task Force

Lyuba Konopasek and Sandy Sanguino, Co-chairs

We continue to focus our work on developing a 4th year pediatrics sub-internship curriculum. We have participated on an AMSPDC Task Force to discuss the 4th year curriculum for students choosing to pursue a career in pediatrics. The work on the sub-internship curriculum that we had begun at the 2007 COMSEP and PAS meetings, as well as the APPD meeting, was well received by the chairs in this group. A consensus statement outlining issues for further discussion, as well as some preliminary recommendations, came out of these meetings and is now being circulated. We have also been working with Susan Bostwick and Karin Hillenbrand, APPD Curriculum Task Force co-chairs, to further define competency domains of the sub-I curriculum. We had a very productive Task Force meeting at the COMSEP meeting in Atlanta and continued the work at the APPD and APA Medical Student SIG (meetings) in Honolulu. We now have a working document of objectives for all of the competency domains for the sub-I curriculum. Our plans for the year are to:

1) Conduct a survey to better assess current 4th year and sub-I issues and to validate the learning objectives we have developed to date.

2) Continue our working groups in collaboration with the APPD Curriculum Task Force to further define objectives, learning strategies, and assessment methods

3) Collaborate with the COMSEP Research Task Force to develop an evaluation plan for this new curriculum.

Faculty Development Task Force

Submitted by Julie Byerley

The FDTF had very productive and enjoyable meetings in Atlanta. Angela Sharkey and Leslie Fall, who enthusiastically and skillfully led the task force over the past several years, turned over leadership to Julie Byerley and Bob Swantz. Following the task force re-organization at the 2007 meeting, the task force activities are now embedded in the following work groups with identified sub-group leaders:

Mentoring – Bill Wilson
The mentoring program, which matches new clerkship directors with a "seasoned" COMSEP member, continues to be very successful and expanded to meet the needs of a record number of new members this year. The work group is looking to develop a program focusing on student mentoring (career choice, residency placement, etc.) and a program in career enhancement, for current and former COMSEP members whose careers in education have expanded outside the role of clerkship director.

Community Faculty – Harold Bland
This group is in the process of developing a needs assessment tool for clerkship directors to gather information from community preceptors. This needs assessment will gather demographic information and solicit preferences regarding presentation methods for educational materials, time frame for educational sessions (weekly, half day), preferences for communication regarding the clerkship, etc. The work group will be exploring opportunities to collaborate with the clerkship coordinators group.

Educator Portfolio/Individual Learning Plan – Rashimi Srivastana
These two work groups have consolidated their efforts and held a very successful workshop at this year's meeting. The work group is planning to submit the workshop to MedEdPORTAL, and will place Educator

Portfolio, ILP and CV examples on the COMSEP webpage for the general membership to view.

Workshop Planning – Mike Barone
The Workshop Planning work group continues to be actively involved in organizing workshops for the annual meeting. This past year an assessment tool was developed and utilized for grading workshop submissions. This assessment tool will be posted in the members' section of the COMSEP web page for review by those submitting workshop proposals. Based on the success of this tool, it will continue to be used in future meetings and has been adopted by the APPD for assessing their workshop submissions. The workgroup will be integrating their efforts with APPD to plan the combined meeting in April 2009. The deadline for workshop and research abstract submissions will be 10/22/08.

Resources – Jenny Christner
Jenny Christner assumed leadership of this work group and their efforts are directed in several areas, including: providing MedEdPORTAL submission support to the membership, creating a "thank you"/acknowledgment template for members to use when utilizing resources from other members, creating a survey of COMSEP membership regarding faculty development needs, developing a list of programs for advanced training in education/leadership, and compiling a speaker's bureau list.
In May 2008, Julie Byerley attended the Faculty Development Task Force Meeting at APPD, representing the COMSEP task force. She was warmly welcomed and shared information about the activities of our work groups. The APPD FDTF has many common interests with our COMSEP task force (i.e. mentoring, career planning, portfolios, resources). There should be great opportunities to integrate our two groups at the combined meeting in April 2009.

Learning and Technology Task Force

Submitted by Anton Alerte

The Learning and Technology Task Force continued its work at utilizing technology in both the support of the COMSEP membership and the advancement of medical student pediatric education. The annual meeting in Atlanta was an opportunity to unify the pursuits of the committee and identify issues that speak to the general COMSEP membership.

Proposed Workshops for Baltimore 2009
The task force will strive to sanction and support approximately three workshops for next year's meeting. Numerous potential topics were discussed and the following three major topics were chosen to have workshops designed.

1. Electronic Medical Records
The EMR discussion proved to be the hot button issue at the Atlanta meeting and several important issues were raised. A major concern was the potential negative effects that drop down menus and templates could have on student clinical reasoning and documentation skills. Concerns and questions were raised about how medical student notes and data entry are supervised by educators. Another question raised was about what types of EMRs work best in teaching institutions, the major concern being that the decision to implement an EMR system and what that system is capable of is a decision that is usually not left to educators at a particular institution.

The rough outline of a prospective workshop would include answers to the following questions:

- Overview of the different medical record systems
- Will EMRs destroy education? Will a student be able to do a history vs. a check-off list?
- Concerns that these programs are mostly

for billing documentation and not to teaching good documentation skills

- How do/should we provide oversight for student notes? How do we supervise? Do we block student access altogether?
- Will the government establish a universal EMR-or establish a standard for EMRs to communicate and what will that mean for medical student education?
- How do you advocate for a good EMR product and what defines a good EMR product in terms of educational potential?

Sean McKenna, Michael Pelzner, Rosemary Shy, and Anton Alerte will be putting together a survey of COMSEP membership to answer some background questions to help steer the content of this workshop.

2. Audience Response Systems-Bob Drucker

The next potential topic for a workshop was an exploration of the potential of audience response systems in medical education and would answer such questions as:

- How do you use it effectively?
- How is integration achieved during a teaching session?
- How it is going to be used in the CLIPP cases incorporating polling questions tentatively scheduled for July of 2008

3. Tracking Systems and PDAs

The third topic discussed as a potential workshop topic was the use of PDAs or personal digital assistants. PDAs have become widespread for both students and faculty alike and there are a large and growing number of medical software applications available. Topics to be covered in a workshop would include the following:

- What is out there? Are PDAs dead? Are Smartphones and iPhones replacing them?
- How effective is the available patient tracking software
- Where are we now with PDAs and what will be available soon?
- How do I incorporate a PDA into my practice/my teaching?
- How do I choose a PDA/smart phone?
- Can you have a phone in the hospital and other issues of technology and infrastructure
- Using PDAs to track education and modify it on the fly to achieve goals (numbers and kinds)

Demonstrations of new technology with applications to medical education

The Atlanta meting was also an opportunity to share (i.e. show off) new technology that is available on the open market that may be useful for our needs as medical educators.

Wikis

The first demonstration was **Chris White's** demo of the potential of Wikis or web-based communal document editors. Wikis allow several distant users to generate an edit documents essentially together (No more sending a marked up Word document amongst a large group of editors via e-mail and hoping all the edits don't get jumbled!) Wikis allow you to produce a unified document as if you were all in the same room. Sites like Google docs offer wikis and are easy to use.

YouTube Discussion

David Levine led the discussion about on-line video media repositories such as YouTube. YouTube videos and FLV players can potentially access 5 million video files with potential educational material for both students and families. David also recently converted the camcorder obtained video from the Miller-Sarkin Lecture into a more portable video format, with mp4 files, uploaded to video.google.com. A report on the process was sent to the membership via listserv and will be posted under the Atlanta materials and also on the LTTF community webpage

University of Pittsburgh further refinements in products developed and disseminated
Pittsburgh Delegate **(Phil Kaleida)** updated us on the on-line educational material being generated at Pittsburgh including:

- http://Pedsed.pitt.edu
- ePROM -- -updated recently; designed for otitis media simulation
- Pediatric dermatology tool
- Continuity clinic curriculum-not yet available to public

Website Maintenance and Supporting the COMSEP membership

The COMSEP webpage
The major objective over the next year is the support of the COMSEP webpage. We will be addressing two major issues. The first one is the website itself and which vendor will be responsible for the publishing of the page to the web. We are currently exploring this issue and investigating potential bidders. The second website issue is the content. The task force evaluated every single aspect of the current website looking for redundancies and evaluating each individual pages' value. We will continue to rely on the individual task forces input to maintain their pages and we will continue to edit and streamline the other major pages to keep the site useful for students and faculty alike.

On-line registration for COMSEP 2009 Meeting
Next year we will use AMSPDC's machinery for registration since there is membership overlap but the overall idea has been green-lighted by the executive committee so we are actively looking into the process. We have already identified two potential vendors and will be exploring this topic in the coming year. **Brian Vandersall,** Clerkship Coordinator of Akron Children's Hospital has volunteered to help with this endeavor. With review by Brian and assistance from Norm Berman, we have settled on the product RegOnLine. Lisa Elliott had the opportunity to preview the product. With excellent functionality and relatively low cost, this seemed the best vendor.

Miller-Sarkin Lecture posted to the Internet.
Plenary presentations from this meeting were uploaded to http://video.google.com. You may get the exact links from the document that was sent to the membership in early May, also posted under the April meeting materials and in the LTTF page on the community site. You may also go directly to http://video.google.com and search for Miller-Sarkin and you will find the presentation.

Online submission to the Pediatric Educator
LTTF has offered assistance to the new Editor, Paola Palma-Sisto, and will discuss further, to streamline the submissions.

Syllabi for next year's meeting
The 2009 meeting in Baltimore will be overlapping with a day with the Association of Pediatric Program Directors and will then run into the Pediatric Academic Societies meeting. At the 2009 meeting we will have a trial of distributing meeting syllabi and handouts in electronic version. We will not have a printed syllabus instead creating an electronic format. The most popular format in our discussions would be to put the materials on a flash drive to distribute. Of course CD-ROM would be an appropriate back up medium.

Leadership
Chris White's replacement on the Task Force as he assumes the COMSEP Presidency is **Pradip Patel.** Anton and David are quite pleased that Pradip brings a wealth of experience integrating technology into courses, especially related to PDAs in medicine, but also using myriad other technologic innovations.

Research and Scholarship Task Force

Submitted by Janice Hanson

The Research and Scholarship Task Force planned and presented two workshops at the COMSEP meeting in April, a pre-conference workshop on writing grant proposals and a workshop on the scholarship of application. Both of these workshops are part of the task force goal to develop and present a series of core workshops that will help equip COMSEP members to complete educational research and scholarship activities. We also presented a workshop on qualitative research at the Pediatric Academic Societies meeting in May. This workshop originated in the Research and Scholarship Task Force in 2004/2005.

At the task force meetings in April, we also reviewed, edited and piloted a new version of the abstract review form for COMSEP poster and platform presentations, creating a form that integrates criteria that apply to both research and educational scholarship presentations. We hope this form will help COMSEP members construct abstracts that describe how their projects address the criteria of high quality scholarship. At next year's combined meeting with APPD, we will have room for more posters than we had this year, so we're hoping many people are already planning abstracts for this meeting.

Plans for the coming year include preparing the plans for the Scholarship of Application workshop for submission to MedEdPortal as a teaching resource, then developing two new workshops for next year's meeting. One workshop will provide technical assistance for writing abstracts. The second workshop will either provide an overview of educational scholarship (what is it and how do you get started?) or equip participants to prepare submissions to MedEdPortal (adapting a workshop led by Karen Wendelberger-Marcdante and Deb Simpson at PAS, for which some us served as small group facilitators). Anyone who would like to participate in planning and presenting one of these workshops is welcome to join us. If you send one of us an email message, we'll add you to the planning calls.

Evaluation Task Force (ETF)

Scott Davis and Starla Martinez, co-chairs

We want to thank all those who attended the ETF working sessions at the Atlanta meeting—your efforts made it a very productive meeting! We accomplished the primary goal we had set for the group for the meeting, which was to reach consensus on defining minimal acceptable achievement for the skills portions of the following sections of the COMSEP Curriculum: Growth and Development; Nutrition; Newborn Physical Exam and Newborn Anticipatory Guidance. We also made great inroads into the task of defining the minimal acceptable achievement for the Fluid and Electrolyte Management and Child Abuse skills portions of the Curriculum. Working groups were developed to begin the process for the remaining nine portions of the Curriculum and will continue to work over the course of the next several months. We anticipate that the ETF will finish this project at the 2009 COMSEP meeting.

In addition to spending the bulk of the sessions working on the project above, we discussed the results of the 2006 ETF survey of COMSEP members regarding evaluation practices at member schools. The results sparked lively discussion about evaluation topics and generated ideas about future directions for the ETF. We discussed continuing the project by including information about specific evaluation and assessment tools, and we hope to include input from the wider COMSEP community regarding tools that members either use from other sources or have developed and would be willing to share. One thing is clear—the ETF

is in no danger of running out of tasks to pursue!

Book Club/Journal Review

Legend: WVR = Bill Raszka
SB = Susan Bannister

Article: Rouf E, Chumley HS, Dobbie AE. "Electronic health records in outpatient clinics: Perspectives of third year medical students." *BMC Medical Education,* 2008, 8:13 http://www.biomedcentral.com/1472-6920/8/13

Reviewer: Chris White, MD

What is the problem and what is known about it so far?
Electronic medical records (EMRs) are becoming much more widely used in academic health centers. There are many advantages to using EMRs including increased delivery of preventive care, better legibility, ease of access to medical data, and fewer medical errors. Most of the medical education literature about EMRs involves residents and inpatient hospital settings. There is much less written about the impact of EMRs on medical student education.

Why did the researchers do this particular study?
The authors performed this study to discover medical students' attitudes towards their clinical learning using an EMR in two different ambulatory clinic settings.

Who was studied?
A group of third year medical students during academic year 2005-6 from the University of Kansas Medical Center were surveyed. They were chosen because they all had experience using the Centricity® EMR during their 12-week Ambulatory Medicine/Family Medicine clerkship. Sixty students were invited, 53 consented to participate, and 33 (62%) actually completed the survey.

How was the study done?
The authors conducted a focus group of third year students who had already completed their Ambulatory Medicine/Family Medicine clerkship. Five themes emerged from the focus group: organization of information, access to online resources, prompts and templates from the electronic health record, personal performance (charting, presenting), and communication with patients and preceptors. A sixth theme was added: impact on student and patient follow-up. The authors then created a 21-item survey based around these themes. Nineteen of 21 questions used a 5-point Likert scale, and two questions were open-ended. The survey request was emailed to students immediately following their Family Medicine clerkship, and non-responders were re-sent the survey 1-2 weeks later.

What did the researchers find?
Most students liked the EMR's ability to organize and find information. Most students also reported that they asked more history questions due to the EMR prompts, and they felt that the system improved their documentation. However, almost half of the students felt that the EMR adversely affected the organization of their presentations. The students felt that they spent less time talking with their patient and almost half the students felt that they spent less time looking at the patient because of the EMR. Most students did not take advantage of accessing online information about their patients or their medications despite UpToDate® being built into the system.

What were the limitations of the study?
There are many limitations to this study. First of all, the size is quite small – only 33/60 students on the rotation participated, all from a single institution. The small size prevented any thematic analysis to be done on the free text questions. The impact of the preceptor on the student's perception of the EMR was not

assessed. Most significantly, this is self-reported data without external validation. Thus the actual impact of the EMR on student education and performance is unknown.

Final comments by reviewer:
Although this is a small, self-reported study of student perceptions of the EMR on their educational experience, it brings up themes that can be the basis for future studies. Additionally, I hope that this will encourage more educators to investigate how the EMR is impacting medical student learning. Will the "pop-ups" and built-in prompts associated with the EMR prevent or delay the students' development of their history-taking or clinical reasoning skills? How will the technology affect patient-doctor communication? How will this affect the student-preceptor relationship?

Ed Note: Coming to a computer near you-EMR! Not once but twice President George Bush called for EMR during his State of the Union address. This is what he said in 2005: "Within 10 years, every American must have a personal electronic medical record. That's a good goal for the country to achieve." Of course, EMR means a lot of different things to different people. For medical educators, however, one of the key issues is medical student access. Many hospitals implementing EMR specifically exclude students. Regardless of your views on EMR and productively, all parties interested in medical student education should get involved with design and implementation teams and advocate for student access, use, and portfolio building. (WVR)

Article: Fahrenkopf, AM, Sectish, TC, Barger, LK, Sharek, PJ, Lewin D., Chiang, VW, Edwards, S, Wiedermann, B., Landrigan, C. "Rates of medication errors among depressed and burnt out residents: prospective cohort study". *British Medical Journal,* 2008;336:488-491

Reviewer: Catalina Kersten

What is the problem and what is known about it so far?
An estimated 44 000 to 98 000 patients die yearly in the US as a result of medical errors. Working conditions of healthcare providers have been shown to contribute substantially to this problem. Less is known about the effects of the mental health of healthcare providers on the incidence of medical errors. The reported rate of depression in residents ranges from 7% to 56% and these rates are even higher for burnout. Several studies have found a relation between resident burnout and self reported medical errors. However, it is unclear whether burnout is truly associated with more medical errors or whether burnt out residents perceive themselves to be making more errors. The relation between depression and medical errors has not been quantified systematically.

Why did the researchers do this particular study?
Researchers wished to determine the prevalence of depression and burnout and study the relation between these disorders and the incidence of medical errors.

Who was studied?
Pediatric and medicine-pediatric residents from three academic centers were studied.

How was the study done?
Data were collected as part of a larger study to measure the effects of the ACGME duty hour standards on the work hours, safety, health, and educational experiences of residents. All residents in pediatrics and medicine- pediatrics doing clinical work during the study time were eligible to participate. Participants were aware that data was collected on their health, safety, and performance during the study. Precautions were taken to secure confidentiality. Participants logged their daily work and hours of sleep for 1 ½ month in 2003. Participants

also completed a validated questionnaire on their health, quality of life, and self reported medical errors and completed a depression scale and burnout inventory.

Data on medication errors on pediatric wards were collected prospectively through daily review of charts and medication orders for all patients as well as a review of solicited and voluntary error reports by staff. Errors collected were linked to participants who could subsequently be classified as being depressed or burnt out.

What did the researchers find?
Among the 123 participants (50% of eligible residents) the incidence of depression was 20% and the incidence of burnout was 75%. No association was found between depression or burnout and age, sex, year of residency, ethnicity, marital status or logged sleep and work hours. Although error rates were low, depressed residents were six times more likely than non-depressed residents to make a medical error. The rate of errors between burnt out and non-burnt out residents did not differ significantly. However, burnt out residents were significantly more likely to report having made a "significant" error over the previous three months as a result of sleep deprivation.

What were the limitations of the study?
This well done study adds to an increasing body of literature showing significant prevalence of mental health disorders among healthcare providers and the substantial relation between working conditions and health of healthcare providers and the safety of patients and residents. Unfortunately, only 50% of residents responded so some selection bias may be involved. Only pediatric residents at a limited number of academic centers were included. Not all errors may have been recorded. Finally, the data was collected before the implementation of any work hour limits for residents in the US and the prevalence of mental health disorders (in particular burnout) may have been affected by this intervention.

Ed Note: Burnout, or emotional exhaustion, and depression, a clinical diagnosis with multiple symptoms, can affect both patients (e.g. the recipient of the medical error) and the physician (guilt, remorse over the error). Despite some limitations, the message is clear: high rates of depression and burnout are seen in residents. We need to address systems (e.g. the 80 work week) to avert either from occurring in residents and pro-actively work with medical students to identify warning signs and prevent these from occurring. (WVR)

Article: Mazor KM, Zanetti ML, Alper EJ et al. "Assessing professionalism in the context of an objective structured clinical examination: an in-depth study of the rating process" *Medical Education,* 2007; 41: 331-340.

Reviewer: Margaret Golden MD

What is the problem and what is known so far?
Professionalism and its assessment have been receiving a lot of attention from medical educators in recent years. For instance, in December 2005, the Associated Medical Schools of New York hosted a statewide conference entitled "Professionalism: I know it when I don't see it." No one doubts its importance, but thoughtful commentators struggle to define it and measure it. This paper shows solidly why it is so hard to establish that our students have met our expectations in this domain.

Why did the researchers do this particular study?
Important aspects of professionalism should be observable in patient-physician encounters; hence objective structured clinical examinations (OSCEs) with standardized patients could be a useful tool for studying how professionalism is assessed.

Who was studied?
Investigators from the University of Massachusetts studied three different types of raters: experienced physician preceptors, standardized patients (who often do the rating in OSCEs), and “naïve lay people” (to capture the patient’s point of view.)

How was the study done?
The investigators selected tapes of SP encounters by 5 different students who represented the full range of scores on the professionalism items for one medical school’s end of 3rd year clinical skills assessment. The same 4 scenarios were available on each student, for a total of 20 student-patient encounters. Three of each type of raters were instructed to view the tapes, complete the professionalism checklist, and “think aloud” into a tape recorder about how they rated each encounter. The raters were not given any formal training in completing the checklist.

The audiotapes were then transcribed and analyzed by creating coding categories according to “standard qualitative analysis procedures.” In particular, the researchers looked at which student behaviors triggered comments from the raters, and whether those behaviors received positive or negative comments.

What did the researchers find?
The 174 usable audio-transcripts yielded 834 comments.
Thirty-three behaviors were commented on by at least 5 of the 9 raters—which means that the vast majority of comments were about behaviors noted by a minority of the raters. The lay raters made more comments about how the student presented himself (attire and mannerisms), and about the student’s explanations; the SPs and the physician raters made more comments about whether the introduction was complete. Beyond those broad trends, there was as much variation within rater groups as there was between the groups.

In 19/20 of the encounters, discrepant ratings for a behavior were recorded, e.g. one rater made a positive comment about a behavior and another rater made a negative comment about the same behavior. Such discrepancies were noted an average of 4 times/encounter.

The sample size is too small (9 raters) to draw firm conclusions, but there is a suggestion that rating of information giving has the strongest correlation with the rater’s global assessment of the student’s professionalism; this was true for raters from all three groups.

What were the limitations of this study?
The number of raters was small, although it was very interesting to see the suggestions that lay people “read” an encounter differently than physicians do. I would like to know how “lay” the lay raters actually were; I would hope that they were neither friends, family nor coworkers of anyone involved with the SP program. Still, I think every project to define and assess physician professionalism should include the layperson’s perspective.

When all is said and done, this study tells us something we probably already know: reasonable people, witnessing the same scenario, see different events. How often have I asked myself, after meeting with a student about an evaluation, whether Dr. So-and-so and I are talking about the same person?

Ed note: I was struck by the similarity to a common movie-making device (e.g. *Vantage Point* or even *A Very Long Engagement*) in which several protagonists describe the same event but totally differently. This small study highlights the complexity of assessing professionalism in patient encounters. Unfortunately, no easy solution seems to exit as viewers tend to different events and ascribe different weights to specific events. It would appear that more work is needed before we can adequately (reliably) assess professionalism. (WVR)

Article: Keith N. Williams, MD, MSME, EdM, Subha Ramani, MBBS, MMEd, MPH, Bruce Fraser, PhD, and Jay D. Orlander, MD, MPH. "Improving Bedside Teaching: Findings from a Focus Group Study of Learners." *Academic Medicine* 2008, 83 (3): 257-64.

Reviewed by: Michael A. Barone, MD

What is the problem and what is known about it so far?
As an educational method, bedside teaching has rarely been subjected to rigorous evaluation. Regardless, who among us can't recall a time when the physical finding of an actual patient or a certain communication technique demonstrated by the attending helped to create durable learning? Bedside teaching aligns perfectly with one of the basic tenets of adult learning theory, that of contextual learning. Literature shows that the proportion of clinical teaching at the bedside ranges from 8-19%. As many as 65% of learners feel they receive inadequate bedside teaching during training. Past efforts to examine this relative lack of bedside teaching have focused on studying educators

Why did the researchers do this particular study?
In this paper, members of the Department of Internal Medicine (IM) at Boston University collected the learners' perspectives on the value of bedside teaching and explored potential barriers to increasing its frequency and effectiveness.

Who was studied?
The authors recruited 6 focus groups consisting of 4th year medical students and first and second year IM residents.

How was the study done?
Bedside teaching was defined as teaching in the presence of a patient. Major themes were identified and the answers from the 33 participants were grouped into four categories: value of Bedside Teaching, quantity and quality of bedside teaching, barriers to bedside teaching, and strategies to increase and improve bedside teaching.

What did the researchers find?
Learners valued bedside teaching but felt it was underutilized. Most felt that all types of clinical skills could be learned effectively at the bedside. Barriers were classified as personal, interpersonal or environmental. Examples of personal barriers included a physician's lack of initiative to teach and inadequate faculty skills for bedside teaching. Interpersonal factors included lack of patient cooperation, and learner/patient fear of embarrassment. Most agreed that a poorly executed bedside teaching effort can adversely affect learning and patient care. Residents were concerned that bedside teaching may decrease their credibility and autonomy. Finally, environmental factors included lack of resident and faculty time, the devaluation of clinical skills for technology, and deficient expectations for teaching. Resident views focused more on "pragmatic" issues than students. Residents were influenced by the desire to balance daily tasks and quality of life. Intern respondents reported dreading "attending rounds" due to the need to meet other responsibilities. Students, however, focused on the acquisition of core clinical skills.

Numerous strategies were identified to increase and improve bedside teaching. The authors provide an extensive list and I suspect similar lists have already crossed your desk. These strategies include increased institutional recognition for teaching, reducing competing demands on faculty and resident time, and creating a supportive learning environment in which admitting limitations is acceptable. Many of the other suggestions were also very useful, particularly those pertaining to family centered care. These included orienting the patient to the dual purpose of bedside rounds (patient care and teaching), and including and

informing the patient during the discussion.

What were the limitations of this study?
While this study is limited to a single institution and department, the findings seem generalizable and relevant to those trying to increase the frequency and quality of bedside teaching in their program, particularly for mixed groups of learners. While there are still no good educational outcomes on bedside teaching (perhaps a good COMSEP collaborative project?), I know many of you are not ready to give up on it.

Ed Note: "Bedside rounds' means lots of different things in different institutions. During some "rounds" the patients are talked about in their presence while in on some rounds, everyone on the team auscultates the chest. In examining the role of bedside rounds, perhaps we should take small steps, e.g. do one patient on rounds and focus on one specific competency at a time. I certainly would hope that these exercises would be the highlight rather than the bane of the day. (WVR)

Article: Poncelet A, O'Brien B. "Preparing Medical Students for Clerkships: A Descriptive Analysis of Transition Courses." *Acad Med.* 2008; 83(5): 444-451.

Reviewer: Robert Dudas MD

What is the problem and what is known so far?
The transition from pre-clinical study to clerkship clerkships can be stressful. In addition, many students and clerkship directors report that medical students are not sufficiently prepared in a broad array of clinical practice skills prior to entering the clerkships.

Why did the researchers do this particular study?
In an attempt to describe the educational approaches used to help transition students from pre-clinical study to clerkship education, researchers at UCSF collected data on existing curricula.

Who was studied?
How was the study done?
An open-ended survey was e-mailed to the curriculum deans at 125 US medical schools in 2003. Of the 45% who responded, 30 schools had transition curricula that met the following criteria: course length more than one day but less than 12 weeks; the course occurred immediately before the clerkships; course content focused on the transition to clerkships; and sufficient information was presented to allow coding of the responses.

What did the researchers find?
Three curricular themes emerged in their analysis. All courses presented new information such as hospital policies or safety topics and all provided instruction in new skills such as prescription writing or suturing. Half of the courses provided instruction in previously taught skills such as history taking with an emphasis on application through practice. Two-thirds of the courses gave instruction specific to student well being and self-care.

Active learning through hands-on activities and standardized patients occurred in 21 of 30 programs. Lectures and didactic sessions were utilized at 18 of 30 sites. Small group instruction and peer-to-peer learning were slightly less commonly employed.

The authors conclude that more needs to be done to prepare medical students for clerkship training. They propose three principles upon which to build a curriculum. Courses should address aspects identified as problematic by students and faculty. Courses should have specific and measurable objectives. And finally, courses should align instructional methods appropriate to the objectives and have methods for evaluating student outcomes. They suggest that one week is a minimum length to

accomplish this.

What were the limitations of this study?
This study is limited by a response rate of only 45% and information from programs that is now 5 years old. Furthermore, the selection criteria likely overlooked other curricula that address preparation for the clerkships. Nevertheless, this study represents the first attempt to describe courses that prepare students for the clerkships and offers some guidance on how to proceed.

This paper represents a significant step towards describing the current approaches toward preparing medical students for the transition to clinical practice. The authors suggest that transition courses need to be structured and experiential with the opportunity for observed practice with feedback. This demands significant faculty time and institutional support. Ideally, transition courses would offer discipline specific preparation. This may best be accomplished by offering specific teaching at the beginning of each clerkship. Further studies will need to demonstrate that increased preparation for the clerkships results in better clinical performance in the clerkships.

Ed note: Most grizzled observers of medical education have stated that the most challenging times in medicine occur at times of transition, e.g. the first year of medical school, the first year of residency, and the first year of practice. The transition from pre-clinical to clinical training can be challenging although most students eagerly anticipate this particular passage. While with the advent of horizontally and vertically integrated curricula, the transition to clinical training may not be so clear. Nonetheless courses that prepare students for the practical application of their knowledge seem reasonable. (WVR)

Article: Sutkin G, Wagner E, Harris I, Schiffer R. What makes a good clinical teacher in medicine? A review of the literature. Acad Med. 2008 May;83(5):452-66.

Reviewed by: Julie Byerley

What is the problem and what is known about it so far?
Clearly we all would like to know what makes a good clinical teacher. The authors note that only two reviews on the topic have been published and both focused on teaching in the ambulatory setting and on articles published after 1980.

Why did the researchers do this particular study?
The authors wanted a more comprehensive view of what makes a good teacher. They used the following definition of clinical teaching from Stritter and Baker in 1982: “the teaching/learning interaction between instructor (attending physician) and student (resident) that normally occurs in the proximity of a patient and focuses on either the patient or a clinical phenomenon.” The researchers believed that better understanding the specific characteristics that make a good clinical teacher could have implications for faculty development of effective educators.

Who was studied?
Previously published writings were reviewed.

How was the study done?
After a systematic review of the literature from 1909 to the present, 4,914 titles were reviewed and 68 articles selected for qualitative analysis. Twenty-six of the articles were published before 1966. Only writings that included specific characteristics of excellent teaching were included. From review of the full text of the 68 articles, 49 themes were identified. Identified characteristics were divided into categories of physician, teacher, and human and then divided as cognitive or non-cognitive.

What did the researchers find?
Non-cognitive characteristics dominated the descriptions and themes. The most common themes cited were Medical/Clinical Knowledge, Clinical and Technical Skills/Competence, Clinical Reasoning followed by Positive Relationships with students and Supportive Learning Environment, Communication Skills, and Enthusiasm for medicine, teaching, and enthusiasm in general. No articles mentioned the terms aggressive, challenging, or demanding, words which the authors hypothesize may have negative connotations, leading writers and survey responders to avoid those terms when describing great teaching in surveys or writings, though in other conversations these terms might be described as strengths of some effective teachers.

The authors conclude, "*Perhaps what makes a clinical educator truly great depends less on the acquisition of cognitive skills such as medical knowledge and formulating learning objectives, and more on inherent, relationship-based, noncognitive attributes. Whereas cognitive abilities generally involve skills that may be taught and learned, albeit with difficulty, noncognitive abilities represent personal attributes, such as relationship skills, personality types, and emotional states, which are more difficulty to develop and teach.*"

The authors suggest that the outcome of their review should influence faculty development programs. They conjecture that many faculty development programs currently in place focus on the cognitive aspects of teaching, (curriculum design, assessment of learners, delivering feedback, etc). Since much of what defines a clinical teacher as "good" lies in the noncognitive arena, they suggest that faculty development programs attempt to build in skill improvement in noncognitive areas.

What were the limitations of the study?
As in any systematic review, the quality of the review is limited by the quality of the articles reviewed. Clearly there is wide variability in the methodology, quality, and intent of the works selected for this review. Many of the pieces reviewed were opinion pieces, either of single experts or of learner impressions. Learner outcomes were seldom measured. In addition, there were a large number of articles selected as relevant by only one of either of the two authors reviewing titles and abstracts. This illustrates the difficulty in defining the question for review, what makes a good clinical teacher. Both the definition of the question and the outcomes of the works reviewed are subjective by nature.

Ed note: It seems easy to define the "bad teacher" but defining the "good" teacher is a little more challenging and depends on a host of factors including who is doing the evaluating. Excellent clinical teaching, although multifactorial, transcends ordinary teaching and is characterized by inspiring, supporting, actively involving, and communicating with learners. Faculty development programs need to recognize the importance of non-cognitive attributes of clinical teachers and develop methodologies to enhance these attributes. (WVR)

Article: Hatala R, Issenberg SB, Kassen BO, Cole G, Bacchus CM, and Scalese RJ. Assessing the Relationship between Cardiac Physical Examination Technique and Accurate Bedside Diagnosis during an Objective Structured Clinical Examination (OSCE)*Acad Med* 2007;82(Suppl):S26-S29**.**

Reviewed by: Bill Varade

What is the problem and what is known about it so far?
In assessments using standardized patients (SP) without physical findings competence in performing the physical examination is often used as a surrogate for diagnostic skills.

However, studies of medical students and internists assessing exam skills and the ability make an accurate diagnosis have found poor correlation between the 2 skills using real patients with abnormal findings (RP), simulators, and SPs with audio-video simulation of abnormalities.

Why did the researchers do this particular study?
The authors were interested in the use of simulation to assess diagnostic accuracy in addition to exam technique as a measure of overall examination competence. They asked, "In an OSCE, what is the relationship between internists' cardiac physical examination technique, bedside diagnostic acumen, and global competence in cardiac physical examination as assessed using RPs, SPs, and a cardiac patient simulator (CPS)?"

Who was studied?
Internists who had passed the Royal College of Physicians and Surgeons of Canada's Comprehensive Objective Examination in Internal Medicine (RCPSC-IM) between 2003-2005 were eligible and identified from lists provided by 5 Canadian residency training programs. Candidates were recruited by email. 28 volunteered.

How was the study done?
Volunteers participated in an OSCE with RP, SP, and CPS stations testing the same 4 cardiac diagnoses: normal heart sounds, aortic stenosis, mitral regurgitation, and mitral stenosis. Examinees were asked to perform a relevant focused cardiac exam, describe the auscultatory findings and make a cardiac diagnosis for each encounter. They had 7.5 min for RP and SP stations, 5 min for each CPS scenario; 2 scenarios/CPS station. The simulator was programmed to mimic the findings and difficulty of the RPs. At SP stations, an audio-visual recording (developed for the CPS diagnoses) was played according to the precordial area of the SP assessed by the examinee. 20 experienced RCPSC-IM examiners were paired and independently assessed the exam technique, final diagnosis, and global clinical competence of examinees at each station.

What did the researchers find?
Interrater agreement for exam technique were 0.59, 0.66, and 0.75 for the RP, SP, and CPS stations respectively. There was only a modest correlation between exam technique and diagnostic accuracy scores. The size of this correlation was similar for all modalities and to that in previous studies. Examiners considered technique more strongly than diagnostic accuracy in assigning global rating scores for RPs and SPs than they did for the simulator.

What were the limitations of the study?
The participants were essentially self-selected with ~1/3 in cardiology fellowship training which may have influenced the results. None of the examiners had prior experience with the CPS; all were familiar with SPs and about 1/3 with RPs. Less time was provided for each CPS scenario vs RP and SP stations. 2 different diagnoses were tested at CPS as opposed to 1 for each RP and SP. This may have adversely influenced diagnostic accuracy for the simulator. CPS mannequins were less maneuverable and may have affected results.

This study again suggests that exam technique is a poor substitute for diagnostic skills; both need to be assessed separately. The modality employed (RP, SP, simulation) affects the way examiners assess students' skills and needs to be taken into consideration when preparing OSCE-like exams. Results may change as more testers and testees become familiar with simulation.

Ed note: The study's population consists of experts - internists (having passed the RCPSC exam), one third of who are pursuing additional training in cardiology. The literature (studies by Geoff Norman et al) suggests that experts

approach patient problems in a different way than do novices. Experts use pattern recognition to quickly and accurately arrive at a diagnosis. That this study population's exam technique did not correlate well with their diagnostic accuracy is not surprising. It would be interesting to see this study replicated with a group of medical students and to compare the results. (SB)

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