

# Medical Education Day 2006

The Haile T. Debas Academy of Medical Educators and the Office of Medical Education are proud to sponsor UCSF's Fifth Annual Medical Education Day on Monday, April 17, 2006 from 11:00 to 5:30 pm in the Millberry Union Conference Rooms. We are pleased to continue a faculty exchange with the Academy at Harvard Medical School, and extend our welcome to Drs. Elizabeth Gaufberg and David Cardozo.

The Academy of Medical Educators is dedicated to creating an environment that enhances the status of teachers of medical students at UCSF, promotes and rewards teaching excellence, fosters curricular innovation, and encourages scholarship in medical education.

We were pleased to feature 29 abstracts covering a variety of important issues in undergraduate and graduate medical education. Six have been selected for oral presentation.

This year we continue to offer educational workshops as part of Medical Education Day. The workshops are titled:

- Giving a Dynamic Lecture, by Susan Masters, PhD
- The Resident as Teacher, by Maria Wamsley, MD and Kathy Julian, MD
- Tools to Start Your Educational Research Program, by Lee Learman, MD, PhD and Patricia O'Sullivan, EdD
- Teaching Residents and Students About Boundary Issues, by Elizabeth Gaufberg, MD, Harvard Medical School

This book captures some of the creativity and excitement being generated at all levels of medical education at UCSF. We extend thanks and congratulations to our community of medical educators for contributing so generously to this year's Medical Education Day.

Lee Learman, MD, PhD  
Chair, Scholarship Committee

Molly Cooke, MD  
Director  
Academy of Medical Educators

# Workshops in Medical Education

## **Dynamic Lecturing Workshop**

Susan Masters, PhD

Do you ever feel as if your lecture belongs in one of those embarrassing Southwest Airlines "Wanna get away" commercials? Come to this workshop to explore ways to revitalize your teaching. We'll view and critique a short lecture and then work in smaller groups to transform a dull, boring presentation into a dynamic one.

## **How to give effective feedback...moving beyond the feedback sandwich**

Kathy Julian, MD and Maria Wamsley, MD

Although feedback is generally thought of as essential to learning, clinical teachers often avoid giving feedback, and residents and students complain that they do not receive sufficient or appropriate feedback. Resident and junior faculty participants will learn how to create a positive learning climate that allows for effective feedback. Participants will learn a feedback model and practice this model with cases. Senior faculty participants will learn a feedback module that they can take back to their respective programs and trainees. At the end of this workshop participants will understand the difference between feedback and evaluation, be able to describe characteristics of a positive learning climate, and utilize a 5-step model for giving feedback.

## **Tools to Start Your Educational Research Program**

Lee Learman, MD, PhD and Patricia O'Sullivan, EdD

After briefly reviewing the necessary ingredients for success, we will spend the majority of the workshop helping participants identify their individual research themes, study ideas, playmates (potential collaborators), and target audience. Using examples and small group work, participants will develop a personal plan for initiating or expanding their educational research program. Resource materials will be provided to help put the plans into action.

## **"My Boundary Alarm Keeps Going Off!" Teaching Professional Boundaries to Medical Students and Residents**

Elizabeth Gaufberg, MD, MPH (Harvard Medical School)

This interactive workshop will feature 10 brief "trigger tape" scenarios, written and acted by HMS students and faculty, which bring to life common boundary challenges encountered in clinical practice. Topics include: self-disclosure, gift-giving, dual-relationships (social, business), request for care by the non-patient, termination, and dealing with the bigoted patient. The tapes will be used to foster case exploration and role play, and to model teaching strategies to use with medical students and residents. Participants will have the opportunity to share and problem solve around their own professional boundary challenges and those of their trainees.

# Abstracts of Oral Presentations and Posters

Presented at the  
Fifth Annual  
UCSF Medical Education Day

Monday, April 17, 2006  
Millberry Union Conference Rooms



## ORAL PLENARY PRESENTATIONS

3:15	USING EDUCATIONAL PRINCIPLES TO DESIGN AN EFFECTIVE ONE-DAY PROGRAM TO PREPARE MEDICAL STUDENTS FOR THEIR ROLE AS CLINICAL CLERKS Ann Poncelet, MD and Lowell Tong, MD. ....	7
3:30	TEACHING INTERDISCIPLINARY TRANSITIONAL CARE TO MEDICAL AND PHARMACY STUDENTS ON AN INPATIENT CLERKSHIP: AN INTERDISCIPLINARY DISCHARGE CURRICULUM Cindy Lai, MD; Heather Nye, MD, PhD; Thomas Bookwalter, PharmD; Anson Kwan, BA; Karen Hauer, MD .....	8
3:45	BECOMING A MORE EFFECTIVE LEARNER: A COURSE FOR HEALTH PROFESSIONAL STUDENTS Jie Zheng, MS2; Huiju Carrie Chen, MD; Pamela Lyss-Lerman, MD; Helen Loeser, MD; Eva Aagaard, MD .....	9
	LEARNING ABOUT LEARNING ACROSS PROFESSIONS Jie Zheng, MS2; Eva Aagaard, MD; Huiju Carrie Chen, MD; Helen Loeser, MD; Patricia O'Sullivan, EdD .....	10
4:00	INTEGRATING THEMES INTO AN INTEGRATED CURRICULUM: GENETICS AS A MODEL Katherine M. Hyland, PhD and Tai M. Lockspeiser, MS4.....	11
4:15	TUTORIAL REFORM AT HARVARD MEDICAL SCHOOL David Lopes Cardozo, PhD (Harvard Medical School) .....	12
4:30	IMPACT OF THE USMLE STEP 2 CS EXAM ON MEDICAL SCHOOL CLINICAL SKILLS ASSESSMENT Karen E. Hauer, MD; Arianne Teherani, PhD; Kathleen M. Kerr; Patricia S. O'Sullivan, EdD; and David M. Irby, PhD.....	13



## **USING EDUCATIONAL PRINCIPLES TO DESIGN AN EFFECTIVE ONE-DAY PROGRAM TO PREPARE MEDICAL STUDENTS FOR THEIR ROLE AS CLINICAL CLERKS.**

Ann Poncelet, MD, Neurology; Lowell Tong, MD, Psychiatry;  
University of California, San Francisco

**Background:** The transition from pre-clerkship studies to clinical training is particularly anxiety provoking for medical students. Learning principles drove the design of a one-day program to facilitate this transition.

**Description:** Medical students, as part of a pre-clerkship transition course, participate in a 1-day program uniquely designed by the clerkship director(s) in charge of their first rotation. For the neurology/psychiatry students our goal was to increase their level of comfort for starting this first clerkship through previewing the role of a clerk, acquiring tools for effective learning in a clinical environment and practicing previously learned clinical skills. Our program explicitly paired learning objectives with learning principles to create each activity.

**Evaluation:** The efficacy of the program was assessed using an anonymous course evaluation. It included 17 Likert-like scaled items (poor (1) to outstanding (5)) to assess how well course elements allowed students to achieve course objectives.

**Results:** Over a 5-year period 116 students completed evaluations. Overall, students rated the program 4.32 (SD=0.61) and their level of comfort for starting clerkship 4.00 (SD=0.84). The most highly rated activities included a shadowing exercise with seasoned third year students ( $4.1 \pm 0.8$ ), and a case presentation exercise to faculty ( $4.5 \pm 0.7$ ). Family panel ( $3.1 \pm 1.0$ ) and large group presentation/feedback ( $3.4 \pm 0.9$ ) received low scores the first year and were discontinued. The chart review exercise also received lower scores ( $3.3 \pm 1.0$ ). Students indicated that this was a valuable activity, but challenging since it involved finding and reviewing an active inpatient chart.

**Conclusions:** Overall, a carefully designed one-day experience has been successful from the students' perspective. We incorporated numerous, wisely chosen activities into a single day. One discontinued activity was not delivered as designed and the other may have been premature for the learners. The design process and specific learning activities are readily transferable to other departments and medical schools.

## **TEACHING INTERDISCIPLINARY TRANSITIONAL CARE TO MEDICAL AND PHARMACY STUDENTS ON AN INPATIENT CLERKSHIP: AN INTERDISCIPLINARY DISCHARGE CURRICULUM**

Cindy Lai, MD, Medicine; Heather Nye, MD, PhD, Medicine; Thomas Bookwalter, PharmD, Pharmaceutical Services, School of Pharmacy; Anson Kwan, BA, Pharmacy Student; Karen Hauer, MD, Medicine; University of California, San Francisco

**PURPOSE:** We developed an interdisciplinary curriculum in which third-year medical (MS3) and pharmacy students (PS3) conducted joint visits to discharged patients. Student objectives were to (1) learn collaborative skills in coordinating a safe discharge, and (2) learn to identify and prevent barriers to a safe transition.

**METHODS:** Medicine 110 and Pharmacy 148 at Moffitt-Long Hospitals participated in this pilot curriculum. Pre-assigned teams of 1-2 MS3s and 1 PS3 selected one of their patients for whom they would coordinate discharge planning and visit after discharge. The curriculum consisted of: (1) Initial Workshop on interdisciplinary roles in discharge planning; (2) Post-Discharge Visit during which the student team assessed for medication discrepancies, environmental safety, and clinical status using structured data collection; and (3) Final Debriefing and Reports to Primary Care Providers. We conducted pre-post surveys evaluating students' attitudes and self-assessed skills in interdisciplinary collaboration and transitional care, and a 5-point Likert scaled survey evaluating specific curricular components. We conducted a comment count of responses to open-ended curricular questions.

**SUMMARY OF RESULTS:** Sixty students (38 MS3, 22 PS3) completed the program; survey response rate was 87% and 86%, respectively. Students rated knowledge of and confidence in interdisciplinary roles and discharge planning higher after the curriculum. Students highly rated the impact of this curriculum on their (1) approach to interdisciplinary care (mean 4.3, SD 0.74), (2) approach to discharge planning (4.4, SD 0.66), and (3) understanding of patients as individuals (4.3, SD 0.69). Furthermore, 89% agreed or strongly agreed that they learned skills for future patient care. Major themes of written comments included (1) appreciation of patients in their social context/home environment (30 comments) and (2) importance of interdisciplinary collaboration (13 comments).

**CONCLUSIONS:** A clinically-oriented curriculum with interdisciplinary post-discharge visits and direct longitudinal experiences with patients improved students' understanding of interdisciplinary collaboration and discharge planning.

## **BECOMING A MORE EFFECTIVE LEARNER: A COURSE FOR HEALTH PROFESSIONAL STUDENTS**

Jie Zheng MS2; Huiju Carrie Chen, MD, MEd, Pediatrics; Pamela Lyss-Lerman, MD, Medicine; Helen Loeser, MD, Office of Curricular Affairs; Eva Aagaard, MD, Medicine; University of California, San Francisco

**Objective:** To describe and assess a five-session course that provides students with strategies for becoming more effective learners.

**Methods:** In 2004-2005, we piloted a medical education lecture series for preclinical medical students. Feedback revealed that students were most interested in the topic of becoming a better learner. A preclinical medical student redeveloped the course for all health professional students with help from senior students in the Medical Education Area of Concentration. Each session was evaluated using a 5-point Likert scale from strongly disagree (1) to strongly agree (5) to rate session- and course-specific questions.

### **Course Description:**

- “Components of the Mind” focused on educational theory and practice (faculty-led).
- “Learning Styles” identified each student’s style of learning and analyzed its effect on individual learning (faculty-led).
- “Becoming a More Effective Learner in the Outpatient Setting” helped preclinical students understand the differences between classroom and clinical learning (student-led).
- “Memory Techniques” discussed different types of memory and strategies to improve memory (student-led).
- “Inter-professional Student Panel” discussed strategies in transitioning from classroom to clinical learning (student-led).

**Results:** On average 54±8 attended each session excluding the student panel which was poorly attended because of scheduling conflicts. Item ratings were:

	Mind (n=52)	Styles (n=27)	Clinical (n=27)	Memory (n=35)	Panel (n=8)
Met session specific objective #1	4.37±0.69	4.26±0.86	4.11±0.97	4.03±0.66	4.00±0.76
Met session specific objective #2	3.87±0.99	4.37±0.69	3.96±0.76	3.83±0.92	4.00±0.58
Helped me to become a more effective learner	3.41±0.9	3.85±1.02	3.85±0.95	3.51±1.01	3.63±0.74
Applicable to my current education	3.94±1.04	4.11±0.93	3.89±0.89	3.89±0.83	3.75±1.04
Recommend this session to colleagues	4.04±1.08	3.85±0.99	3.85±0.97	3.86±0.91	4.38±0.92

**Conclusions:** We successfully implemented an inter-professional, largely student-led course teaching concrete learning strategies. We plan to expand this course into a quarter-long elective with opportunities for application of their new learning techniques.

## LEARNING ABOUT LEARNING ACROSS PROFESSIONS

Jie Zheng MS2; Eva Aagaard, MD, Medicine; Huiju Carrie Chen, MD, MEd, Pediatrics; Helen Loeser, MD, Office of Curricular Affairs; Patricia O'Sullivan, EdD, Office of Medical Education; University of California, San Francisco

**Purpose:** Medical students interested in education led and developed a course with interactive sessions for students across professions to improve their learning strategies. This abstract assesses the effect of this course on inter-professional relationships of the participants.

**Methodology:** The five-session course covered educational theory, learning styles, memory techniques, and transitions from classroom to clinical learning. Students from medicine, nursing, and dentistry schools attended. Attendees rated four items (5-point Likert scale from strongly disagree (1) to strongly agree (5)) related to the inter-professional nature of each session. Responses were pooled across sessions. We used a Kruskal-Wallis to test for differences across schools for the four items with each p set at 0.05.

**Results:** On average,  $36 \pm 12$  medical,  $10 \pm 1$  nursing, and  $8 \pm 10$  dental students attended each session. There were differences by school for ratings of other professions adding to the experience of the sessions ( $p=.002$ ), value working with other professions ( $p=.04$ ) and recommending inter-professional experiences to fellow students ( $p=.017$ ). Average ratings were positive but nursing students gave the highest ratings and medicine the lowest. Students across schools agreed the sessions were applicable to their current education (median=4.0, inter-quartile range from 3-5,  $p=0.5$ ).

**Conclusions:** Inter-professional educational experiences are difficult to devise. Students used learning as a topic that bridged across professions. Overall, students valued this inter-professional course on learning and saw pertinence to their education. However, medical students rated the inter-professional aspects lower than nursing students which is an issue that requires further exploration.

## **INTEGRATING THEMES INTO AN INTEGRATED CURRICULUM: GENETICS AS A MODEL**

Katherine M. Hyland, PhD, Biochemistry and Biophysics; Tai M. Lockspeiser MS4;  
University of California, San Francisco

**Background:** Topics in genetics and genomics had minimal coverage in the integrated pre-clinical curriculum introduced at UCSF in 2001. The recent explosion of genetic applications in medicine has motivated an effort to integrate new genetics instruction into an already integrated curriculum. We describe this effort and its unique challenges.

**Curriculum Development:** During 2004-05, we undertook a curriculum development process, applying Kern's six-step approach to a theme in an integrated curriculum. Step 1: Problem Identification- We recognized that genetics was underrepresented in the UCSF curriculum. Step 2: Needs Assessment- We compared the current learning objectives to those established by the AAMC (2004) and conducted a focus group with pre-clinical students. Step 3: Goals and Objectives- We solicited internal and external expertise in different areas of genetics and medicine. The consensus from steps 2 and 3 was to highlight basic genetic concepts while teaching the current genetic approach to medicine, use more small groups, and cluster sessions. Step 4: Educational Strategies- We negotiated with course directors and teaching faculty to determine where and how to integrate genetics content. Step 5: Implementation- The first year of the longitudinal curriculum was implemented in 2005-06. Step 6: Evaluation- Student evaluations from the first 6 months indicate high satisfaction with the new sessions.

**Challenges Faced:** Challenges were encountered in Step 3 in determining the appropriate balance of basic concepts and novel applications. As well, in Step 4 it was challenging to find appropriate points of integration while maintaining a logical order of content and to work with multiple course leaders with different areas of expertise and integration ideas

**Conclusion:** Using Kern's curriculum development process revealed a common challenge of balancing basic and applied learning objectives when teaching rapidly expanding fields such as genetics, and the unique challenges of integrating genetics instruction into an established integrated curriculum.

## **TUTORIAL REFORM AT HARVARD MEDICAL SCHOOL**

David Lopes Cardozo, PhD, Department of Neurobiology, Harvard Medical School

## **IMPACT OF THE USMLE STEP 2 CS EXAM ON MEDICAL SCHOOL CLINICAL SKILLS ASSESSMENT**

Karen E. Hauer, MD, Medicine; Arianne Teherani, PhD, Office of Medical Education; Kathleen M. Kerr, Medicine; Patricia S. O'Sullivan, EdD and David M. Irby, PhD, Office of Medical Education; University of California, San Francisco

**Background:** The USMLE Step 2 CS exam constitutes a new requirement designed to standardize clinical skills assessment and ensure minimum competence for those seeking licensure as physicians.

**Method:** We conducted semi-structured interviews with 25 leaders of medical school clinical skills assessments to explore purposes of in-house assessment and the impact of the USMLE exam. Interviews were coded to identify major themes.

**Results:** Competency assessment, student and curricular feedback, and preparation for the licensing exam emerged as major purposes of in-house exams. Most schools believed their in-house exams were more difficult than the national exam. Some schools used internal exams to assess locally valued competencies that were unlikely to be addressed in the national exam. Other schools noted difficulties in conducting internal exams in the absence of faculty-defined competencies. Participants uniformly observed that the USMLE exam motivated students to receive feedback on their clinical skills. Limited resources made balancing formative and summative assessment goals problematic for some schools. Most respondents felt exam data helped with curriculum evaluation, but few described specific, effective feedback mechanisms. All schools, even those that disagreed with aspects of the licensing exam, acknowledged their role in preparing students for the national exam. Overwhelmingly, schools followed the USMLE format when designing new in-house assessments, and those with longstanding exams implemented formatting changes that increased their exams' similarity to the Step 2 CS.

**Conclusions:** The Step 2 CS has motivated schools to view their internal exams as both competency assessments and as preparatory experiences for the licensing exam.



## POSTER PRESENTATIONS

ASSESSING THE IMPACT OF PROBLEM-BASED LEARNING IN MEDICAL STUDENTS .....	17
MEDLINK: A PROGRAM TO FACILITATE MENTORSHIP OF DISADVANTAGED HIGH SCHOOL STUDENTS BY MEDICAL STUDENTS.....	18
ABORTION TRAINING IN FAMILY MEDICINE RESIDENCY PROGRAMS.....	19
CALIFORNIA MEDICAL STUDENT ATTITUDES TOWARD HEALTH POLICY EDUCATION AND UNIVERSAL HEALTH INSURANCE.....	20
TO DESCRIBE OUR EFFORTS TO DEVELOP A CURRICULUM THAT EFFECTIVELY INTEGRATES BASIC SCIENCE KNOWLEDGE INTO THE THIRD YEAR CLINICAL CORE ROTATIONS.....	21
SYSTEM FOR TRACKING OUTPATIENT RESIDENT EDUCATION (STORE), PROPOSAL.....	22
DOES REFLECTIVE ABILITY GROW WITH EXPERIENCE AND VARY BY SKILL? .....	23
FEASIBILITY OF REFLECTIVE ASSESSMENTS IN THE UCSF OBSTETRICS & GYNECOLOGY RESIDENCY PROGRAM: BRIDGING THE GAP FROM DATA TO DISCOVERY .....	24
A PROGRAM FOR IMPROVING PEER-TEACHING CONFIDENCE .....	25
A STUDENT DEVELOPED AND DELIVERED “TEACHING TO TEACH” PROGRAM.....	26
THE STATE OF LANGUAGE BARRIERS IN THE UCSF SOM CURRICULUM A CURRICULUM AMBASSADOR PROJECT .....	27
RE-THINKING NOON CONFERENCE FOR INTERNS: DELIVERING CORE CURRICULUM IN A BEEPER-FREE ENVIRONMENT .....	28
FACULTY DEVELOPMENT FOR SMALL GROUP LEADERS AT UCSF .....	29
WHAT MEDICAL STUDENTS WANT TO KNOW IN THE TRANSITION TO CLERKSHIPS.....	30
TEACHING HOUSESTAFF PRACTICAL BREASTFEEDING MANAGEMENT SKILLS FOR PATIENT CARE .....	31
THE HEALER’S ART: AUTHENTIC COMMUNITY IN THE DEVELOPMENT OF PROFESSIONAL IDENTITY .....	32
PRE-CLINICAL EDUCATION IN A SURGERY SKILLS LAB IMPROVES STUDENTS’ CONFIDENCE IN BASIC SURGICAL PROCEDURES.....	33
TEACHING SURGICAL SKILLS IN THE PRE-CLINICAL YEARS: SUGGESTIONS FOR IMPROVEMENT ON THE UCSF DEPARTMENT OF SURGERY’S “OR ASSIST” ELECTIVE .....	34
OPHALMOLOGIC FUND OF KNOWLEDGE IN U.S. MEDICAL SCHOOL GRADUATES .....	35
THE LIBRARY’S ROLE IN INTEGRATING INFORMATION RETRIEVAL AND MANAGEMENT SKILLS INTO A PROBLEM-BASED LEARNING MEDICAL CURRICULUM.....	36
THE IMPACT OF DECREASED DUTY HOURS ON RESIDENT SELF REPORTS OF ERRORS.....	37
ENHANCING SKILLS IN REPRODUCTIVE HEALTH IN THE UCSF/ SFGH FAMILY MEDICINE RESIDENCY PROGRAM (FMRP) THROUGH TEACH (TRAINING EARLY ABORTION FOR COMPREHENSIVE HEALTHCARE) .....	38
ASSESSMENT OF TEACHER INTERRUPTIONS UPON LEARNERS DURING ORAL CASE PRESENTATIONS IN THE EMERGENCY DEPARTMENT .....	39



## **ASSESSING THE IMPACT OF PROBLEM-BASED LEARNING IN MEDICAL STUDENTS**

Amin Azzam, MD, UC Berkeley Graduate School of Education, Quantitative Methods and Evaluation (QME), UCSF / UC Berkeley Joint Medical Program (JMP); Kevin Mack, MD, UCSF / UC Berkeley Joint Medical Program (JMP)

Medical school in the United States is a four-year endeavor, and usually consists of two classroom-based years followed by two hospital-based years of training. Traditionally, the first two years have largely been structured around discipline-based courses (i.e. anatomy, physiology, histology, etc.), and are mostly comprised of lectures. In contrast, Problem-Based Learning (PBL) is an alternative format that was introduced in the 1960's. The primary innovation was to provide case-based instruction in small groups, rather than large discipline-specific lectures. One challenge in measuring the impact of PBL has been the lack of standardized assessment methods that accurately evaluate the process of learning.

Since the early 1970's, UC Berkeley has had a health sciences and medical education program, housed in the School of Public Health, and named the UCB-UCSF Joint Medical Program (JMP). The program is a 5-year Master of Science / MD curriculum. The students spend the first three years on the Berkeley campus completing the preclinical science curriculum required for MD licensure, as well as elective coursework in support of a health-related master's thesis. Subsequently, students transfer to UCSF where they complete two years of clinical clerkships, alongside UCSF medical students who have completed their first two years of medical school.

In the fall of 2002 the JMP initiated a PBL curriculum, which consists of 80 cases presented serially over three academic years. The curricular administrators are beginning to assess the impact of the new curriculum. We are interested in measuring the pedagogy's effect on students' abilities to integrate content knowledge across various domains (i.e. cardiology, psychiatry, culturally-sensitive care, etc). In this poster, we present the creation of a measurement tool for this purpose, along with initial results from a pilot test of the instrument.

## **MEDLINK: A PROGRAM TO FACILITATE MENTORSHIP OF DISADVANTAGED HIGH SCHOOL STUDENTS BY MEDICAL STUDENTS**

Kelli Barbour, Office of Student Affairs; Damon Francis MS4; Corey Miller MS3; Doris Wang MS3; Sharad Jain, MD, Medicine; University of California, San Francisco

Navigation of the post-secondary educational system has increased in complexity, leaving students from low-performing schools at a disadvantage for understanding ways to pursue higher education and for accessing resources that facilitate the exploration of health fields careers. MedLink was developed to assist those high school students with the following objectives: 1) learn about the post-secondary educational system 2) build and maintain mentoring relationships with medical students 3) obtain hands-on exposure to science, and 4) learn about opportunities within the health field.

Students participating in the UCSF School of Medicine's MedLink program are paired with individual medical student mentors. The high school students attend six Saturday sessions that include college, science, and medicine sessions as well as lunch with mentors. College sessions cover topics such as applying to college and writing personal statements. Science sessions help students discover health-related science topics such as anatomy and microbiology. Students and mentors meet for lunch to facilitate the development of mentoring relationships and to address questions and concerns. In the medicine sessions, students and mentors explore various aspects of the medical field. Mentors are encouraged to keep in contact with students between sessions.

41 high school students are currently enrolled in the 2005-2006 MedLink program. On a 5-point Likert scale, students rated their enjoyment of and learning from the various sessions at scores averaging 4.32 to 4.88 and their likelihood to utilize the mentor as a resource as 4.53.

We are gratified to see that students have enjoyed the activities and are learning important information about college, science, and medicine as indicated by their active participation and by the evaluations completed. The activities provide opportunities to learn more about college and possible future careers, and to build and maintain long-term mentoring relationships with medical students. Future plans involve strengthening our evaluation of the program and developing deeper relationships with local schools.

## **ABORTION TRAINING IN FAMILY MEDICINE RESIDENCY PROGRAMS**

Christine Dehlendorf, MD, Medicine; Dalia Brahmi, MD, Family and Community Medicine; Kevin Grumbach, MD, Family and Community Medicine; Carole Joffe, PhD, Obstetrics, Gynecology and Reproductive Sciences; University of California, San Francisco  
Marji Gold, MD, Montefiore Medical Center  
David Engel, University of Washington

### **Purpose:**

Although within the scope of practice of family physicians, abortion training is not consistently integrated into family medicine residency programs. Family physicians have a potentially important role in increasing abortion access in this country, especially since the introduction of Mifepristone in the United States in 2000. This study was designed to describe the process of developing integrated abortion training in programs known to offer such training, the structure of this training, and the experience of residents participating in these programs.

### **Methodology:**

Email questionnaires were sent to key faculty members and third year residents in nine programs with required abortion training. These faculty members and a sample of residents also completed semi-structured interviews. Qualitative analyses of interviews were performed using NVIVO software.

### **Results:**

Factors which assisted in abortion training development included the support of family medicine faculty members and obstetrician-gynecologist colleagues, as well as the availability of high volume training sites. Residency programs varied in the amount of time dedicated to abortion training, ranging from 2 to 8 days, and in non-procedural aspects of training such as values clarification and didactics. Themes that emerged from interviews with residents included the benefit of training with respect to technical skills and continuity of care. Residents noted the importance of training provided in the primary care clinic setting. In addition, residents valued discussion of the emotional aspects of abortion care and issues relating to post-residency abortion provision.

### **Conclusions:**

Abortion training can be successfully integrated into family medicine residency programs. Collaboration with colleagues inside and outside the family medicine department and with training sites will benefit programs interested in such training. Programs providing this training should incorporate non-procedural as well as technical aspects of training.

## **CALIFORNIA MEDICAL STUDENT ATTITUDES TOWARD HEALTH POLICY EDUCATION AND UNIVERSAL HEALTH INSURANCE**

Bridget Harrison, MS4; Diane Rittenhouse, MD, MPH, Family and Community Medicine; University of California, San Francisco

**Purpose:** Medical students, as future health care providers and leaders, must be well-informed about health policy issues to effect change that will improve patients' lives. The ACGME and AAMC specify competencies in health policy-related areas, yet health policy education at many schools is lacking, and many students remain uninformed. This project assessed California medical students' health policy knowledge, desire for health policy education, and attitudes toward the policy issue of universal health insurance.

**Methods:** We conducted an online survey of all 1<sup>st</sup> - and 4<sup>th</sup> -year medical students at six California medical schools. Responses were weighted to reflect the target population, and results were compared with  $\chi^2$  tests.

**Results:** 536 students completed the survey, for a response rate of 38%. Students demonstrated solid knowledge in some areas of health policy and weaknesses in others. 4<sup>th</sup> -year students scored better than 1<sup>st</sup> -years on fewer than half of the knowledge questions, and both groups' summary knowledge scores were below 70% correct. 86% of students desired more health policy education in medical school. Students expressed strong interest in decreasing the number of uninsured, particularly through government programs, and were willing to make tradeoffs to achieve universal coverage.

**Conclusions:** Health policy education will be critical to answering the IOM's call to train a new generation of physician leaders. California medical schools are providing effective health systems education in some areas, but gaps remain. These results can help schools optimize their health policy curricula to prepare California's future physicians to be innovative, effective leaders in health system reform.

**TO DESCRIBE OUR EFFORTS TO DEVELOP A CURRICULUM THAT EFFECTIVELY INTEGRATES BASIC SCIENCE KNOWLEDGE INTO THE THIRD YEAR CLINICAL CORE ROTATIONS.**

Zachary Holt, MS4; Steve Nishimura MD, Pathology; Israel Charo MD, PhD, Rheumatology; Steve Hamilton MD, PhD, Psychiatry; Eva Aagaard MD, Medicine, University of California, San Francisco

At UCSF, three one-week Intersessions are strategically placed among third year clinical rotations. Each Intersession week has a theme: clinical decision making, ethics, and health policy. During each Intersession week, students in small groups complete two Advances in Medical Sciences (AIMS) modules focusing on basic science papers. Originally, these modules were departmental responsibilities and unrelated to the Intersession theme. Formal student feedback suggested that the sessions were inconsistent across departments and poorly integrated into both the Intersession curriculum and the clinical year.

In 2005-2006, we redesigned the AIMS modules. Departmental affiliations were dropped and leadership was chosen from physician-scientist faculty in three major areas of research at UCSF. Each AIMS module uses a journal club format. Topics are specifically integrated with the Intersession theme. At the end of each session, the article is linked to other issues presented throughout the week in the form of a question for group discussion.

EVALUATION TO DATE: Students rated the Week 1 AIMS modules at  $3.95 \pm 0.93$  and Week 2 at  $3.54 \pm 1.10$  on a 5-point likert scale. Student comments suggest that the first modules, inflammation in cardiovascular disease and mechanisms of adverse effects of COX-2 inhibitors, were well integrated into both the intersession theme (clinical decision making) and the clinical year. However, the second modules, antidepressant effects on neurogenesis and prevention of opiate-induced respiratory depression, were artificially integrated with ethical issues and clinical medicine.

CONCLUSIONS: Integration of basic science into the clinical curriculum is possible, but certain topics, such as clinical decision making, are more amenable to integration than others, such as ethics. Future directions will focus on creative approaches to improve linking basic science with challenging clinical topics.

## **SYSTEM FOR TRACKING OUTPATIENT RESIDENT EDUCATION (STORE), PROPOSAL**

Steven Kator, MD; Alan Cohen, MD; Ivy Darden, MD; Michael Tom, DO; Phat Ngo, MD; Vicente Santiago, MD; Vishal Pall, MD; VA Central California Healthcare System and UCSF-Fresno Internal Medicine Residency Program

**Introduction:** ABIM RRC-IM requires documentation of training in medical knowledge, patient care, professionalism, communication, systems-based practice, and practice-based learning and improvement. RRC-IM also requires “360-degree evaluation” of residents by all clinic staff. Primary care training within the UCSF-Fresno Internal Medicine residency program takes place at three clinic locations with fifteen clinical faculty members.

**Purpose:** In order to improve teaching, evaluations and communication among clinic personnel, we propose an electronic database system (STORE). Our hypotheses are that STORE will result in 1) greater faculty satisfaction, 2) greater sense among residents that teaching and evaluations are of high quality, and 3) improvement in objective examination scores.

**Methods:** Our institutional IRB will approve a pilot study designed as follows: Faculty members and PGY-1 residents will be randomized to use either the STORE system or the existing model. Both faculty and residents will evaluate by questionnaire the two processes at the end of six months and one year. Sequential data regarding resident performance and progress towards fulfillment of learning objectives will be obtained and analyzed for differences between the two groups.

**Results/Conclusions:** Based on the outcome of the pilot study after one year, we will modify the system as needed and deploy it throughout the UCSF-Fresno Internal Medicine primary care clinics for residents at all PGY levels. We will gather longitudinal data for 3 years, and will correlate it with resident evaluations of their educational experience, summative evaluation scores, In-Training Exam scores, ABIM examination passage rates, and resident career choice.

## DOES REFLECTIVE ABILITY GROW WITH EXPERIENCE AND VARY BY SKILL?

Lee A. Learman, MD, PhD, Obstetrics, Gynecology and Reproductive Sciences; Patricia S. O'Sullivan, PhD, Office of Medical Education; University of California, San Francisco

**Purpose:** Reflection is a necessary component of professional development. We asked residents to reflect on cases in order to describe their learning and challenges in communication, critical appraisal, and surgical skills. We hypothesized that ability to reflect differed across the skills and postgraduate year (PGY). We used two different measures of reflective ability.

**Methods:** 32 Ob/Gyn residents completed written reflections about three skills. They received guidelines defining the skills, setting expectations for case selection, and a scoring rubric with levels of reflective skill. We also used the Professional Development of Reflective Ability (PDRA from the University of Dundee). Two raters scored a subset in common and developed a consensus on scoring both rubrics. Raters each scored half of the exercises. We conducted an ANOVA across PGY for average reflection and paired t-tests by skills. We correlated scores from the two measures.

**Results:** 28 residents (87.5%) completed all three exercises. Average scores were significantly higher in surgical skills than communication ( $p=.03$ ) and critical appraisal ( $p=.04$ ) using the rubric they received. While highest, average surgery scores indicated only "superficial reflection." There was no difference by PGY, but there was substantial variation individually. Nearly half (46%) demonstrated elements of deep reflection in at least one skill. There was no difference for the PDRA. The two measures correlated 0.9 overall.

**Conclusions:** Residents' abilities to reflect differ across skills but not across PGY. We need effective instructional techniques to help residents move from description to reflection and improve the depth and consistency of their efforts.

## **FEASIBILITY OF REFLECTIVE ASSESSMENTS IN THE UCSF OBSTETRICS & GYNECOLOGY RESIDENCY PROGRAM: BRIDGING THE GAP FROM DATA TO DISCOVERY**

Lee Learman, MD, PhD, Meg Autry, MD, and Laura Pliska, CD, Obstetrics, Gynecology and Reproductive Sciences; Patricia O'Sullivan, PhD, Office of Medical Education; University of California, San Francisco

**Objective:** In July 2005 we completed implementation of a complex competency assessment system and changed the emphasis of our semi-annual performance feedback meetings to include reflection on the single most educationally valuable experience for each competency. Because our residents lacked familiarity with the reflective exercises for self-assessment, our first goal was to assess the feasibility of this approach.

**Methods:** Competency assessments were conducted on varying schedules, some after each rotation block and others during selected rotations or assessment months. Learning artifacts were archived in web-based, electronic and/or paper form and included data from global assessments, direct observation of performance, 360 evaluations, chart-stimulated recall, critical appraisal exercises, and records of adherence to attendance and data completeness policies. Before the semi-annual meetings, each resident received detailed instructions regarding how to access and review their learning artifacts and associated cases, and how to complete reflective exercises in which they analyzed the single experience in which they learned the most for each competency. Scoring rubrics were provided.

**Results:** The majority of residents (30/32) completed the 3 required reflections prior to the December 2005 review meeting. Each reflective entry ranged in length from a short paragraph to 1 ½ pages and ranged in score from 3-6 out of 6 possible points. All residents followed the instructions for reflections in surgical skills and communication skills. However, most did not understand that the reflections on critical appraisal skills were to focus on what they learned about searching the literature and identifying best evidence and not on what they learned from the evidence itself. Exemplars will be added to avoid such confusion in the future.

**Conclusions:** Our initial experience suggests that reflection on performance is feasible within a busy university-based obstetrics and gynecology training program. Substantial variations in depth suggest that some residents may require more guidance than others to take full advantage of reflective opportunities.

## **A PROGRAM FOR IMPROVING PEER-TEACHING CONFIDENCE**

Tai Lockspeiser, MS4 and Melissa Braveman MS3  
University of California, San Francisco School of Medicine

### **Purpose**

In the Medical Scholars Program, second-year medical students peer-teach first-year students. Focus groups with peer-teachers revealed that their difficulty fielding challenging questions undermined teaching confidence and perceived efficacy. In response, experienced peer-teachers developed a skills workshop followed by two practice teaching sessions for new teachers. This study describes changes in peer-teachers' confidence and its relationship to teaching evaluations.

### **Methodology**

Sixteen new peer-teachers participated in the program and rated their confidence in completing teaching tasks on a 5-point scale (1= Not at all to 5= Very confident). The tasks were collapsed into four skills: organization, student questions, visual aids, teaching principles. Peer-teachers completed ratings prior to the program, after each practice session, and after peer-teaching first-year students for six sessions. We collected first-year student evaluations of their peer-teachers. We conducted repeated measures analysis of variance for the average ratings for each skill. We used Pearson's correlation coefficient to associate confidence at the end of peer-teaching with teaching evaluations.

### **Summary of Results**

88% of new peer-teachers completed all ratings. Confidence significantly improved for each skill ( $p < .001$ ). Post-hoc analysis revealed significant improvement from baseline to after practice teaching and from practice teaching to after peer-teaching. Confidence in organization ( $r = .62$ ) and visual aids ( $r = .51$ ) correlated with teaching evaluations, but teaching principles and questions did not.

### **Conclusions**

A workshop combined with practice teaching significantly improved peer-teacher confidence which was positively associated with teaching evaluations. Although peer-teachers were primarily concerned about answering questions, we found that other skills were more critical to their success.

## **A STUDENT DEVELOPED AND DELIVERED “TEACHING TO TEACH” PROGRAM**

Tai Lockspeiser, MS4 and Melissa Braveman, MS3, University of California, San Francisco  
Peter de Blank, MD, Children’s Hospital of Philadelphia

### **Background**

While medical schools promote peer-teaching, peer-teachers often receive little training. The Medical Scholars Program (MSP) at UCSF is a program in which second-year medical students teach weekly reviews to first-year medical students. Focus groups with former MSP teachers revealed a desire for more training prior to teaching.

### **Purpose**

To describe a student developed and delivered “Teaching to Teach” program.

### **Program Development**

Historically, MSP teachers have practiced teaching in front of peers prior to encountering first-year students but have received little formal training or feedback on their teaching skills. We created a three-hour workshop to occur prior to these practice sessions. Topics for the workshop were derived from anonymous comment cards from newly appointed MSP teachers and included 1) Organization, 2) Visual aids, 3) Student questions, 4) Managing anxiety and nervousness. The workshop was created and led by seven former MSP teachers. Formal oral and written feedback from both peers and former MSP teachers was incorporated into the practice teaching sessions. The program was evaluated by responses to four Likert-scaled items from not at all (1) to highly valuable (5) in improving teaching skills and confidence. After completing 6 teaching sessions for first-year medical students, MSP teachers answered open-ended questions about the process.

### **Results**

All 16 new MSP teachers participated in the program. Fourteen (88%) students completed evaluations. The workshop was rated lowest ( $3.77\pm 0.6$ ) and practice teaching sessions highest ( $4.64\pm 0.6$ ). Watching others teach and receive feedback obtained ratings above 4.0. In the open-ended questions, MSP teachers reported feeling very prepared to teach and that the workshop was useful. Handout design emerged as a topic they felt merited additional attention.

### **Discussion**

We implemented a student-developed “Teaching to Teach” program. A potential explanation for the program’s success is the cognitive congruence between the program leaders and the new MSP teachers.

## **THE STATE OF LANGUAGE BARRIERS IN THE UCSF SOM CURRICULUM A CURRICULUM AMBASSADOR PROJECT**

Karen Milian MS2; Sergio Hernandez MS2; Elisabeth Wilson, MD, MPH; Family and Community Medicine, University of California, San Francisco

Although language barriers in the U.S. health care system have been shown to contribute significantly to adverse health outcomes, curriculum time at U.S. medical schools dedicated to language access and barriers is low. As curriculum ambassadors during the summer of 2005, our goal was to identify at what points in the UCSF School of Medicine's curriculum is language addressed, and ways to improve existing material.

We reviewed the UCSF curriculum using Ilios and iRocket to locate lectures, small groups and other sessions that contain language and communication barriers in their objectives, as well as potential opportunities for inclusion of these issues. We then created a 'map' to show places in the curriculum where language barriers are (or could be) addressed in the curriculum.

We also reviewed the literature on language barriers, related health outcomes and interpreter use. Using the information gathered from these articles, we wrote objectives that could be added to an existing Problem-Based Learning case to give students a better understanding of language barriers in their pre-clinical studies.

We recommend that issues of language access and barriers be further investigated and integrated into the curriculum so that students are better equipped to work in a health care system that addresses the needs of an increasingly diverse and multilingual society.

## **RE-THINKING NOON CONFERENCE FOR INTERNS: DELIVERING CORE CURRICULUM IN A BEEPER-FREE ENVIRONMENT**

Tracy Minichiello, MD; Elizabeth Harleman, MD; Rachael Lucharto, MD; Nicholas Walter, MD; Department of Medicine, University of California, San Francisco

**PROBLEM:** Although noon conference is an integral curricular element in Internal Medicine, it suffers from many shortcomings, including poor attendance and use of passive learning style.

**OBJECTIVES:** The objectives of the “Intern Half Day” (IHD) are 1) provide protected time for interns to learn 2) increase interactive small-group case-based teaching and 3) create a supportive environment for interns to share experiences.

**DESCRIPTION:** The noon conference curriculum was reviewed with key topics for interns identified. Two repeating sessions per month were designed, with interns attending the session that best fits their call schedule. Interns are excused from all ward duties, and beepers are handed off to supervising housestaff. The first three hours of “IHD” are devoted to a single organ system and include one didactic lecture and two case-based discussions. The final hour is devoted to social medicine. Additional topics include an intern humanism retreat, evidence-based medicine, and team-work training.

**FINDINGS:** Attendance was >95% for every session, far greater than previously cited averages of 35%. Participants found these sessions to be clinically relevant: approximately 83% of the sessions were given relevance scores of 8-9 on a nine-point scale, and 100% fell between 7-9. Interns enjoy the small-group format and feel buoyed by the sense of community. For the residency program, the IHD helped to refocus the importance of education and doctor-as-learner.

**EDUCATIONAL SIGNIFICANCE:** In an era of duty hours constraints, protected didactic time, universal expectations for attendance, and reliance on teamwork for ward coverage during become essential. The success of the IHD reaffirms the value of active learning methods. Aside from offering a more effective teaching venue, the IHD has improved morale and the sense of community. The IHD hold promise not only as an innovation in the didactic training, but also a mechanism to foster trainee empathy and well-being.

## **FACULTY DEVELOPMENT FOR SMALL GROUP LEADERS AT UCSF**

Jessica Muller PhD, Family and Community Medicine; David Irby PhD, Office of Medical Education; Kevin Souza, Office of Educational Technology; University of California, San Francisco

**Objectives:** UCSF School of Medicine launched a new integrated curriculum in the fall of 2001. Based on learning theories that propose small groups can facilitate and enrich student learning, a major goal of this curriculum reform was to increase the amount of small group teaching. Fifty percent of teaching in the first two years is now done in small groups. To improve the teaching skills of small group leaders and to reduce small group variability, a faculty development program was developed simultaneously with the new curriculum.

**Methods:** Faculty and staff from the Office of Medical Education, in conjunction with course directors, conduct required 3-4 hour workshops for small group faculty prior to each course. These sessions, which are discipline-specific (e.g. biochemistry), include four components: 1) overview of the new curriculum; 2) introduction to administration and content of the course; 3) skills-training in how to effectively lead small groups; and 4) demonstration of how to use the electronic curriculum.

**Results:** Since 2001 the Office of Medical Education has conducted 8-13 workshops per year for small group facilitators. Approximately 150 small group leaders participate in the workshops each year. Overall ratings of the workshop have improved each year, from 3.9 on a scale of 1-5 in 2001-02 to 4.5 in 2004-05. Student ratings of small group leaders have also improved in this time period.

**Discussion:** The experience at UCSF has demonstrated that a curricular innovation involving greater numbers of small group teachers benefits from an accompanying faculty development program. Offering small group facilitation training where skills are practiced and discussed within the context of discipline-specific groups is an effective model for small group faculty development.

## WHAT MEDICAL STUDENTS WANT TO KNOW IN THE TRANSITION TO CLERKSHIPS

Ann Poncelet, MD, Neurology; Lowell Tong, MD, Psychiatry;  
University of California, San Francisco

**Purpose of Study:** To identify what medical students think they need to know for a successful transition to clerkships.

**Methodology:** As part of a pre-clerkship transition course, students participate in a 1-day program designed by the directors of their first rotation. Students bound for the neurology and psychiatry clerkship anonymously submitted questions about starting clerkships. We retrospectively analyzed questions from four years of the program. The authors independently performed a content-coding and thematic-qualitative analysis and then reached consensus on discrepancies.

**Results:** 102 students (24-30 per year) completed the program and submitted 96 questions (16-35 per year). Questions covered practical and cultural aspects of clerkships, such as “how often do people faint?” “can a shy student get honors?” “can I wear tennis shoes?” “if you could be a third year again, what three things would be most important?” and “what is ‘sick enough,’ if anything, to stay home?” The most common themes were grades and evaluation, clerk role, and attendance expectations. Other themes, which varied yearly, were career planning, clerkship year goals, clinical skills, confidentiality, course director role, course organization, dress, ethical dilemmas, logistics, materials, medical errors, mistreatment, on-call responsibilities, reflection, training sites, well-being, and work-home boundaries.

**Conclusions:** The anonymous question method enables faculty to access what really concerns each cohort of transitioning students. This process allows the transition curriculum to be tailored to the specific needs of each cohort. The themes identified represent practical and clerkship cultural issues of greater depth and implication than clerkship directors can anticipate.

## **TEACHING HOUSESTAFF PRACTICAL BREASTFEEDING MANAGEMENT SKILLS FOR PATIENT CARE**

Genevieve Preer MS4; Alma Martinez, MD, Pediatrics;  
University of California, San Francisco

**Introduction:** Despite the multiple health benefits of breastfeeding, only 14% of babies in the United States are exclusively breastfed for 6 months, significantly less than the Healthy People 2010 goal of 50%. Prior studies have demonstrated that physicians can have a positive impact on breastfeeding initiation, but that they lack necessary knowledge and skills. We sought to evaluate whether a breastfeeding curriculum for housestaff met their educational needs.

**Methods:** We developed a one-hour breastfeeding curriculum for Ob/Gyn, Pediatrics, and Family and Community Medicine residents. Prior to its implementation, we surveyed residents to assess their confidence in providing breastfeeding support. The survey also assessed preferred teaching topics and learning modalities so that the curriculum could be further tailored to meet residents' learning needs.

**Results:** 79 out of 148 residents (49%) completed surveys. 71% felt well informed about breastfeeding and 89% felt comfortable counseling women about the benefits of breastfeeding. Increased confidence in managing common problems was significantly correlated with years of training but not with gender or specialty. Most respondents (66%) did not feel confident providing direct breastfeeding support. Of residents surveyed, 89% wanted to spend more time learning about breastfeeding. 89% also wanted further teaching on commonly encountered breastfeeding problems, while only 58% desired teaching on breastfeeding basics. Bedside instruction with a lactation specialist was ranked first or second for desired teaching method by 70% of residents. Residents desired a median of 5 hours of teaching on breastfeeding during residency.

**Conclusion:** Despite high levels of confidence in breastfeeding knowledge, most house officers want more practical instruction on breastfeeding management. Residents feel they could benefit from innovative approaches to this topic, such as bedside instruction with a lactation specialist.

## **THE HEALER'S ART: AUTHENTIC COMMUNITY IN THE DEVELOPMENT OF PROFESSIONAL IDENTITY**

Michael W. Rabow, MD, Medicine; Judith Wrubel, PhD, Medicine; Rachel Naomi Remen, MD, Family and Community Medicine, University of California, San Francisco

### **Purpose**

The Healer's Art elective is designed to create an authentic community of inquiry into the meaning and values of professionalism. In order to understand participating student values and developing professional identity, we studied responses to open-ended course evaluation questions.

### **Methods**

In 2003-04, Healer's Art students nationally completed an anonymous evaluation. Narrative responses to questions about (1) the meaning of medicine, (2) insights gained in the course, and (3) course utility were analyzed using a team-based qualitative approach. The study received IRB exemption.

### **Results**

During the study year, 25 medical schools offered the course. Complete evaluations were obtained from 467 of 582 students (80.2%) from the 22 schools able to participate in the evaluation. (1) Students offered definitions of medicine that included the importance of emotional commitment, self-reflection, integrity, and vulnerability. In legitimizing the human dimension of medicine, the course validated empathy, compassion and kindness as integral elements of medical practice. (2) Students reported gaining insights from the course about parity in the physician-patient relationship, and the relationship among physicians as that of a community of shared commitment and ideals. (3) Students perceived the learning community created in the Healer's Art as unique, characterized by a greater interactional honesty, respect, and safety than found in other settings. Students from all schools described a curricular gap-- the course enabled them to experience and practice aspects of professional interaction that were ignored or merely mentioned elsewhere in the required curriculum.

### **Conclusions**

In legitimizing humanistic elements of practice and in creating a safe community, the Healer's Art enabled students to uncover the underlying values and meaning of their work-- an opportunity not typically present in their required curricula. Attempts to support or instill professionalism must attend to issues of emotional safety and authentic community as prerequisites to learning and professional affiliation.

## **PRE-CLINICAL EDUCATION IN A SURGERY SKILLS LAB IMPROVES STUDENTS' CONFIDENCE IN BASIC SURGICAL PROCEDURES**

Amanda Sammann, MS2; Derek Ward, MS1; Frank Tendick, PhD, Surgery; John Maa, MD, Surgery; Nancy Ascher, MD, PhD, Surgery, University of California, San Francisco

### **Introduction:**

The 2004 American Surgical Association Blue Ribbon Committee Report on Surgical Education called for greater involvement by surgical departments in the teaching of undergraduate medical students in the first two years. The Committee recommended the use of surgical skills labs as an alternative to the traditional apprenticeship model of teaching. Skills labs provide the opportunity for students to learn necessary surgical skills in an environment that provides immediate feedback and sufficient time for practice without jeopardizing patient care.

### **Methods:**

In the skills lab elective ("OR Assist") at the University of California, San Francisco, first and second year medical students learned knot tying, suturing, and instrument handling and identification. Eighty-six students completed self-report surveys before and after two two-hour training interventions. Data analysis consisted of frequencies, factor analysis, paired t-tests and Pearson correlations.

### **Results:**

The skills lab training significantly improved students' confidence in their ability to tie knots, suture, and identify and handle instruments ( $p < .01$ ). The training also significantly reduced students' concerns about their future performance in the OR ( $p < .01$ ). There were no statistically significant changes in students' concerns about the received professional and personal hardships of surgery.

### **Conclusion:**

The skills lab significantly increases first and second year medical students' confidence in basic surgical procedures and helps alleviate the fears students have before beginning the third-year surgical clerkship.

<sup>i</sup> Debas, H. T., et. al. American Surgical Association Blue Ribbon Committee Report on Surgical Education: 2004; Annals of Surgery 2005; 241: 1-8.

## **TEACHING SURGICAL SKILLS IN THE PRE-CLINICAL YEARS: SUGGESTIONS FOR IMPROVEMENT ON THE UCSF DEPARTMENT OF SURGERY'S "OR ASSIST" ELECTIVE**

Amanda Sammann, MS2; HARRAS Zaid MS,1; Frank Tendick, PhD, Surgery; John Maa, MD, Surgery; Nancy Ascher, MD, PhD, Surgery, University of California, San Francisco

### **Introduction:**

The University of California, San Francisco, Department of Surgery developed the "OR Assist" elective to train first and second year medical students in basic surgical procedures. Staffed by volunteer surgical attendings and residents from UCSF, the elective provided six hours of didactic and skill practice training in OR etiquette, knot tying, suturing, and instrument handling and identification. We report students' recommendations for improving the elective.

### **Methods:**

Students completed anonymous self report surveys after the training and were asked to respond to the questions "How could we have improved this training" and "Do you have any additional comments?" These qualitative responses were entered into a database and reviewed by two different researchers to identify general themes. The qualitative data were then ded and organized within these themes.

### **Results:**

Eighty-nine students participated in the elective and 54 students opted to contribute qualitative feedback. Improvement themes related to course length, teaching organization and review materials/tools. Fifty-two percent of students wanted a longer training course. Forty-three percent wanted better organization and standardization of the teaching. "Standardizing the material taught by the different surgeons would be nice because some people learned a lot more than others..." Thirty percent wanted additional review materials and tools for practice; "Give us the syllabus/knot tying module before our first training session." The theme for additional comments related to the intimate interaction with surgical faculty (31%); Fantastic that so many surgeons were available to help."

### **Conclusion:**

We recommend providing students with review materials and tools early in the course to allow for independent practice. We also suggest faculty development to provide standardization of the teaching. The findings of this study will be used to develop a basic surgical skills curriculum to be integrated with the first year coursework and an optional elective on advanced surgical skills.

## **OPHTHALMOLOGIC FUND OF KNOWLEDGE IN U.S. MEDICAL SCHOOL GRADUATES**

Rachel Sobel MS4; Marsha Kavanagh, MD; Joan O'Brien, MD; Douglas Fredrick, MD;  
Department of Ophthalmology, University of California, San Francisco

**Purpose:** To investigate the ophthalmologic fund of knowledge in U.S. medical graduates

**Design:** Written survey and examination

**Methods:** A sample of 103 interns from pediatrics, internal medicine, general surgery and family practice were assessed at UCSF with regard to knowledge of preventable and emergent causes of blindness. The questionnaire also surveyed comfort level with fundoscopic skills and exposure to ophthalmology during medical school.

**Results:** The majority of respondents (57%) had no clinical exposure to ophthalmology during medical school. Only about a quarter felt comfortable using an ophthalmoscope to evaluate eye problems (27%), and the number of clinical hours spent in ophthalmology clinics was positively correlated with comfort level using an ophthalmoscope to evaluate eye problems ( $p < 0.0001$ ). Most interns (85%) desired more time in the curriculum to learn fundoscopic and other clinical skills related to diagnosing eye disease.

By topic, they demonstrated sound knowledge of anterior segment anatomy (96% answered the question correctly), visual field defects (94%), red reflex (97%), and ocular emergencies (89%). However, the respondents were notably less accurate on the topics of diagnosis and management of glaucoma (20%), papilledema (58%), retinal detachment (47%), and amblyopia (49%). The number of clinical hours spent in ophthalmology clinics was positively correlated with fund of knowledge as assessed by this test. ( $p < 0.14$ , 95% confidence interval  $-0.05$ - $0.33$ )

**Conclusion:** U.S. medical students have inadequate exposure to ophthalmology, which in turn affects their ability to accurately detect basic eye conditions and thus could potentially delay referral to ophthalmologists for definitive diagnosis and treatment.

# **THE LIBRARY'S ROLE IN INTEGRATING INFORMATION RETRIEVAL AND MANAGEMENT SKILLS INTO A PROBLEM-BASED LEARNING MEDICAL CURRICULUM**

Josephine Tan, MLIS, Library; Keir Reavie, MLIS, Library; Jessica Muller, PhD, Family and Community Medicine; Huiju Carrie Chen, MD, MEd, Pediatrics;  
University of California, San Francisco

## **PURPOSE**

Introducing students to information retrieval and management (IRAM) skills is an important goal of the UCSF medical school curriculum. The purpose of this poster is to describe an approach to teaching IRAM skills to preclinical medical students through a problem based learning (PBL) curriculum.

## **METHODOLOGY**

Education librarians and faculty first met to discuss IRAM objectives structured to meet defined student competencies. Discussions addressed the relevancy and timing of introducing and developing students' IRAM skills, such as formulating effective search strategies for medical literature and selecting appropriate resources to help answer health care questions. As a pilot project, a librarian then observed a small group discussion of a two session PBL case. Between sessions the librarian monitored the student online discussion board to identify resources students used to answer PBL learning issues. During the second PBL session, the librarian presented students with recommended strategies and resources specific to their learning issues.

## **RESULTS**

All students (n=6) in the observed PBL group found the IRAM information helpful and timely. They requested that the librarian's notes be posted to the group's discussion board and shared with the rest of their class. Students explained that Library IRAM workshops, traditionally delivered to students in a large group format in the first few weeks of classes, were presented too early. One student suggested that the Library present IRAM skills after students have had opportunity to struggle over their first PBL learning issues; students would then better appreciate the search efficiency and quality of information retrieved using reliable and relevant Library resources.

## **CONCLUSIONS**

Using the PBL process to introduce students to IRAM skills may be an effective way to ensure timely application and retention of IRAM skills. We are exploring ways to expand and integrate this pilot experience into the two-year PBL curriculum.

## **THE IMPACT OF DECREASED DUTY HOURS ON RESIDENT SELF REPORTS OF ERRORS**

Arpana R. Vidyarthi, MD, Department of Medicine, University of California, San Francisco

**Background:** Recent limitations on resident duty hours aim, in part, to reduce medical errors. Residents' perceptions of the impact of decreased hours on errors are unknown.

**Methods:** We surveyed internal medicine residents at the University of California, San Francisco after duty hours were reduced. Residents were asked to report the frequency and causes of sub-optimal care practices and medical errors, and how decreased duty hours impacted these practices and aspects of resident work-life.

**Results:** One hundred twenty-five residents (76%) responded. The most common sub-optimal care practices were working while impaired by fatigue and forgetting to transmit information during signout. In multivariable models, residents who felt overwhelmed with work ( $p=0.02$ ) and who reported spending  $>50\%$  of their time in non-MD tasks ( $p=0.002$ ) were more likely to report engaging in sub-optimal care practices. Residents reported work-stress (defined as a composite of fatigue, excessive workload, distractions, stress, and inadequate time) as the most frequent cause of medical errors. In multivariable models, only reports of engaging in sub-optimal practices were associated with self-reports of medical errors ( $p<0.001$ ); working more than 80 hours per week was not associated with sub-optimal care or errors.

**Conclusion:** In this academic internal medicine training program, administrative load and work stressors were more closely associated with reports of medical errors than the number of hours worked. Efforts to reduce resident duty hours may also need to address the nature of residents' work in order to reduce medical errors.

## **ENHANCING SKILLS IN REPRODUCTIVE HEALTH IN THE UCSF/ SFGH FAMILY MEDICINE RESIDENCY PROGRAM (FMRP) THROUGH TEACH (TRAINING EARLY ABORTION FOR COMPREHENSIVE HEALTHCARE)**

Norma Jo Waxman MD, Family and Community Medicine; Christine Dehlendorf MD, Medicine; Suzan Goodman MD, MPH, Family and Community Medicine; Hali Hammer MD, Family and Community Medicine, University of California, San Francisco

### **Objective:**

Beginning January 2004, the FMRP expanded our reproductive health curriculum through collaboration with the UCSF TEACH Project. The goal is to integrate evidence based and patient centered contraception provision, pregnancy options counseling, and early abortion training into the curriculum.

### **Methods/Techniques:**

This initiative incorporates didactics, off-site higher volume abortion training, and on-site training.

TEACH offers interactive conferences, including values clarification sessions. Residents spend 8 days at Planned Parenthood Golden Gate, where both problem based review and procedural training occurs. Residents become skilled in options counseling, first trimester ultrasound, pelvic exams in early pregnancy, IUD placements, and, to the extent that they wish, first trimester abortion and medication abortion.

During continuity practice at the Family Health Center, residents have more exposure to options counseling and provide early ultrasound dating. We offer first trimester abortion services to our patients at the Women's Options Center. This spring we will provide medication abortion in the Family Health Center.

### **Results:**

19 residents have been trained and 13 evaluated:

- 92% felt prepared to counsel patients on abortion and contraception
- Residents consistently comment on the well-organized training manual and problem based sessions, as well as the role modeling of competent and compassionate care.

Implementation of our on-site training is in the early stages. Organizers and trainers received outstanding evaluations after our recent provider training on Options Counseling.

### **Conclusions:**

As 50% of pregnancies in this country are unplanned and family physicians are a major source of care for women of reproductive age, they should be skilled in pregnancy options counseling, contraception, and pre- and post-abortion care. This initiative is occurring as there is growing recognition and requirement of this educational need in Family Medicine, and serves as a model for other residency programs as they move towards opt-out training in comprehensive reproductive health and abortion care.

## ASSESSMENT OF TEACHER INTERRUPTIONS UPON LEARNERS DURING ORAL CASE PRESENTATIONS IN THE EMERGENCY DEPARTMENT

Glen Yang MS3; Rachel Chin, MD, Emergency Medicine, SFGH;  
University of California, San Francisco

**Purpose:** Studies have only recently begun to investigate interruptions upon physicians in the emergency department (ED). We conducted an observational study to determine the frequency and nature of interruptions upon learning physicians by teacher physicians during oral case presentations (OCPs) in the ED.

**Methods:** Learner OCPs to attending emergency physicians were observed in the ED of an urban Level I trauma center at a major teaching hospital. A single investigator followed blinded attending physicians in a nonrandomized convenience sampling of all eight-hour ED shifts. The investigator recorded interruptions during all new-patient presentations.

**Results:** A total of 196 OCPs, involving 20 attending physicians and 41 learners, were observed. The mean ( $\pm$  SE) duration of OCPs was  $3.30 \pm 0.13$  min, and the mean number of interruptions was  $0.75 \pm 0.04$  per min and  $2.49 \pm 0.14$  per OCP. The frequency of interruption (per min) varied by the learner's level of training: interns were interrupted more frequently than 2<sup>nd</sup>-year residents ( $p=0.05$ ) and 3<sup>rd</sup>-year residents ( $p=0.02$ ). The frequency of interruption (per min) also varied by the time of day, with interruptions occurring less often at night than during the morning ( $p=0.04$ ). In 39.8% of the OCPs, the attending physicians interrupted to give an assessment or plan before the learner had done so, and in 20.9%, the learner was interrupted to repeat information already given.

**Conclusions:** Attending emergency physicians frequently interrupt learners during new-patient OCPs. The frequency of interruptions varies by the learner's level of training and by the time of day.



# Contributors to Medical Education Day

This list is provided to facilitate communication among our community of medical educators.

<b>Author</b>	<b>Page #</b>	<b>Department</b>	<b>Email</b>
Eva M. Aagaard	9 10 21	Medicine	aagaard@itsa.ucsf.edu
Nancy Ascher	33 34	Surgery	aschern@surgery.ucsf.edu
Meg Autry	24	Obstetrics, Gynecology and Repro Sci	autrym@obgyn.ucsf.edu
Amin Azzam	17	UC Berkeley Graduate School of Education, QME, UCSF / UC Berkeley JMP	azzama@itsa.ucsf.edu
Kelli Barbour	18	School of Medicine	Kelli.Barbour@ucsf.edu
Tom Bookwalter	8	School of Pharmacy	thomas.bookwalter@ucsfmedctr.org
Dalia Brahmi	19	Family and Community Medicine	dbrahmi@itsa.ucsf.edu
Melissa Braveman	25 26	Medical Student	Melissa.Braveman@ucsf.edu
David Cardozo	12	Harvard Medical School Department of Neurobiology	David_Cardozo@hms.harvard.edu
Israel Charo	21	Rheumatology	icharo@gladstone.ucsf.edu
H. Carrie Chen	9 10 36	Pediatrics	chenhc@peds.ucsf.edu
Rachel Chin	39	Medicine	rchin@sfgghed.ucsf.edu
Alan Cohen	22	UCSF-Fresno Internal Medicine Residency Program	Alan.Cohen2@med.va.gov
Ivy Darden	22	UCSF-Fresno Internal Medicine Residency Program	Ivy.Darden@fresno.ucsf.edu
Peter de Blank	26	Children's Hospital of Philadelphia	
Christine Dehlendorf	19 38	Medicine	cdehlen@itsa.ucsf.edu
David Engel	19	University of Washington	
Damon Francis	18	Medical Student	Damon.Francis@ucsf.edu
Douglas Fredrick	35	Ophthalmology	FredrickD@vision.ucsf.edu
Elizabeth Gaufer	2	Harvard Medical School / Cambridge Hospital Department of Psychiatry	elizabeth_gaufer@hms.harvard.edu
Marji Gold	19	Montefiore Medical Center	
Suzan Goodman	38	Family and Community Medicine	goodmanmd1@aol.com
Kevin Grumbach	19	Family and Community Medicine	kgrumbach@fcm.ucsf.edu
Steve Hamilton	21	Psychiatry	steveh@lppi.ucsf.edu
Hali Hammer	38	Family and Community Medicine	hhammer@fcm.ucsf.edu
Elizabeth Harleman	28	Medicine	eharlem@medicine.ucsf.edu
Bridget Harrison	20	Medical Student	Bridget.Harrison@ucsf.edu
Karen Hauer	8 13	Medicine	khauer@medicine.ucsf.edu
Sergio Hernandez	27	Medical Student	Sergio.Hernandez@ucsf.edu
Zachary Holt	21	Medical Student	Zachary.Holt@ucsf.edu
Katherine Hyland	11	Biochemistry and Biophysics	khyland@biochem.ucsf.edu
David M. Irby	13 29	Office of Medical Education	irby@medsch.ucsf.edu
Sharad Jain	18	Medicine	sharad.jain@va.gov

Carole Joffe	19	Obstetrics, Gynecology and Repro Sci.	joffec@obgyn.ucsf.edu
Kathy Julian	2	Medicine	kathyj@itsa.ucsf.edu
Steven Kator	22	UCSF-Fresno Internal Medicine Residency Program	Steven.Kator@va.gov
Marsha Kavanagh	35	Ophthalmology	mcheung26@yahoo.com
Kathleen Kerr	13	Medicine	kkerr@medicine.ucsf.edu
Anson Kwan	8	Pharmacy Student	ansonkwan@yahoo.com
Cindy Lai	8	Medicine	clai@medicine.ucsf.edu,
Lee Learman	2 23 24	Obstetrics, Gynecology and Repro Sci	learmanl@obgyn.ucsf.edu
Tai Lockspeiser	11 25 26	Medical Student	Tai.Lockspeiser@ucsf.edu
Helen Loeser	9 10	Office of Curricular Affairs	loeserh@medsch.ucsf.edu
Rachael Lucatorto	28	Medicine	rlucator@itsa.ucsf.edu
Pamela Lyss-Lerman	9	Medicine	Pamela.Lyss@ucsf.edu
John Maa	33 34	Surgery	maaj@surgery.ucsf.edu
Kevin Mack	17	UCSF / UC Berkeley JMP	Kevin.mack@ucsf.edu
Alma Martinez	31	Pediatrics	amartinez@sfgHPeds.ucsf.edu
Susan Masters	2	Cellular & Molecular Pharmacology	masters@cmp.ucsf.edu
Karen Milian	27	Medical Student	Karen.Milian@ucsf.edu
Corey Miller	18	Medical Student	Corey.Miller@ucsf.edu
Tracy Minichiello	28	Medicine	minichie@medicine.ucsf.edu
Jessica Muller	29 36	Family and Community Medicine	mullerj@fcm.ucsf.edu
Phat Ngo	22	UCSF-Fresno Internal Medicine Residency Program	Phat.Ngo@fresno.ucsf.edu
Steve Nishimura	21	Pathology	stephen.nishimura@ucsf.edu
Heather Nye	8	Medicine	hnye@medicine.ucsf.edu
Joan O'Brien	35	Ophthalmology	ObrienJ@vision.ucsf.edu
Patricia O'Sullivan	2 10 13 23 24	Office of Medical Education	patricia.osullivan@ucsf.edu
Vishal Pall	22	UCSF-Fresno Internal Medicine Residency Program	Vishal.Pall@fresno.ucsf.edu
Laura Pliska	24	Ob/Gyn Residency Program	pliskal@obgyn.ucsf.edu
Ann Poncelet	7 30	Neurology	ponce@itsa.ucsf.edu
Genevieve Preer	31	Medical Student	Genevieve.Preer@ucsf.edu
Michael Rabow	32	Medicine	mrabow@medicine.ucsf.edu
Keir Reavie	36	Library	keir.reavie@library.ucsf.edu
Rachel Naomi Remen	32	Family and Community Medicine	dr Rachel@igc.org
Diane Rittenhouse	20	Family and Community Medicine	RittenD@fcm.ucsf.edu
Amanda Sammann	33 34	Medical Student	Amanda.Sammann@ucsf.edu
Vicente Santiago	22	UCSF-Fresno Internal Medicine Residency Program	Vincinte.Santiago@fresno.ucsf.edu
Rachel Sobel	35	Medical Student	Rachel.Sobel@ucsf.edu
Kevin Souza	29	Office of Educational Technology	souzak@medsch.ucsf.edu
Josephine Tan	36	Library	josephine.tan@library.ucsf.edu
Arianne Teherani	13	Office of Medical Education	Teherani@medsch.ucsf.edu
Frank Tendick	33 34	Surgery	frankt@itsa.ucsf.edu
Michael Tom	22	UCSF-Fresno Internal Medicine Residency Program	Michael.Tom@fresno.ucsf.edu
Lowell Tong	7 30	Psychiatry	lowellt@lppi.ucsf.edu

Arpana Vidyarthi	37	Medicine	arpana@medicine.ucsf.edu
Nicholas Walter	28	Medicine	nwalter@itsa.ucsf.edu
Maria Wamsley	2	Medicine	wamsleym@medicine.ucsf.edu
Doris Wang	18	Medical Student	Doris.Wang@ucsf.edu
Derek Ward	33	Medical Student	Derek.Ward@ucsf.edu
Norma Jo Waxman	38	Family and Community Medicine	njwaxman@fcm.ucsf.edu
Elizabeth Wilson	27	Family and Community Medicine	ewilson@fcm.ucsf.edu
Judith Wrubel	32	Medicine	wrubelj@ocim.ucsf.edu
Glen Yang	39	Medical Student	Glen.Yang@ucsf.edu
Harras Zaid	34	Medical Student	Harras.Zaid@ucsf.edu
Jie Zheng	9 10	Medical Student	Jie.Zheng@ucsf.edu