Conference Proceedings

Innovations in Medical Education

Transforming Health Professions Education through Innovation

February 19-20, 2016

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Presented by Division of Medical Education
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Keck School of Medicine of USC
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Friday, February, 19, 2016

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Welcome to Innovations in Medical Education

The USC Registration Desk will be located in the San Gabriel Ballroom foyer. The registration desk is open all day starting at 10:00 AM on Friday, February 19, 2016 and 7:00 AM on Saturday, February 20, 2016. Lunch is provided on Friday, February 19 in the San Gabriel Ballroom Foyer. Continental breakfast is provided on Saturday, February 20 in the San Gabriel Ballroom Foyer. A lunch buffet is also provided on Saturday, February 20 in the San Gabriel Ballroom Foyer.

For those who wish to have verification of attendance, a form is provided that must be completed and validated by USC Registration Desk Staff the last day of your attendance. A course evaluation questionnaire is provided that we would appreciate your completing prior to your departure. This will help plan future meetings.

Please place cell phones and beepers on vibrate and take any calls outside the meeting room. For those participants that are also faculty please note: As this program was approved for CME, the following information must be provided for your review although in most cases, it will be irrelevant to your presentation.

Identifying products and discussing unlabeled uses of products during an accredited CME activity:

- Generic and Trade Names
  Presentations must give a balanced view of therapeutic options. As a speaker, your use of generic names contributes impartiality. If trade names are used, those of several companies should be used rather than that of a single company.
- Unlabeled Use of Products
  When you discuss an unlabeled use of a commercial product, or an investigational use not yet approved for any purpose, during an accredited CME program, ACCME guidelines require that you as a speaker inform the audience that the product is not labeled for the use under discussion, or that the product is still investigational.

Guidebook

2016 Innovation in Medical Education (IME) has a mobile conference guide to help you navigate your schedule on your smart device. The two day live conference mobile guide is accessible through the mobile app Guidebook Inc. Download the Guidebook app through your App Store on your smart device whether you have iOS, Android or Microsoft operating systems. 2016 Innovations in Medical Education (IME) guide is simply viewed by entering 2016IME code in the search box. Once 2016 IME guide is uploaded in your guidebook app, you will have the opportunity to personalize your schedule through the my schedule module. Other features include: inbox messages with other attendees, information on San Gabriel Hilton location, and floorplan to all IME conference rooms, conference schedule and frequently asked questions (FAQ's) such as parking information.

This year you are able to receive your CME credits by using the guide in the FAQ's module. Once you click on the FAQ's module scroll down to CME instructions and a link will sync to the evaluation and all information needed for your CME certificate. We encourage you to engage with your fellow attendees and healthcare community by using the mobile guide and enhance your 2016 IME experience. If there is a question don't hesitate to ask one of us at the registration desk. Registration is open through the day and staff is available to assist you throughout the conference. Thank you!

Keck School of Medicine of USC

CONFLICT OF INTEREST DISCLOSURE AND RESOLUTION

COURSE DATES: **February 19 & 20, 2016**

COURSE TITLE: **Innovations in Medical Education 2016 Conference**

The Keck School of Medicine of USC takes responsibility for the content, quality and scientific integrity of this CME activity.

As part of the new commercial guidelines, we are required to disclose any real or apparent commercial conflict(s) of interest (COI) of all persons in control of educational content for this activity, specifically, but not limited to: faculty/presenters, CME committee members and/or planners. Any disclosed real or apparent commercial conflict(s) of interest (COI) have been resolved through a conflict resolution process prior to the beginning of this activity.

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Course Directors

Faculty Member	Commercial Interest	Conflict/Resolution
Cha-Chi Fung, Ph.D.	I do not have any relevant financial relationships with any commercial interests.	None
Julie G. Nyquist, Ph.D.	I do not have any relevant financial relationships with any commercial interests.	None

Guest Speaker

Hedy Wald, Ph.D.	I do not have any relevant financial relationships with any commercial interests.	None

Faculty Speakers

All faculty speakers do not have any relevant financial relationships with any commercial interests.

	Commercial Interest	Conflict/Resolution
Facilitators/Moderators/Poster Presenters	The facilitators, moderators and poster presenters do not have any relevant financial relationships with any commercial interests.	None
Office of Continuing Medical Education	The planners in the Office of Continuing Medical Education do not have any relevant financial relationships with any commercial interests.	None

Innovations in Medical Education 2016 Conference

Meeting Agenda

Friday, February 19, 2016		
Time	***Session***	***Location***
10:00 am - 12:00 pm	**Pre-Conference Workshop**: Reflective Writing and Professional Formation (fee - $30) Hedy Wald, Ph.D. Warren Albert Medical School of Brown University	San Francisco
12:00 pm - 12:45 pm	**Registration and Lunch**	Foyer & Ballroom A-B1
12:45 pm - 12:55 pm	**Welcome** **Conference Chair**: Julie Nyquist, Ph.D. **Conference Co-Chair**: Cha-Chi Fung, Ph.D.	Ballroom A-B1
1:00 pm - 2:30 pm	**Oral Presentations**: Professionalism & Health Disparities (*Moderator: Maureen Strohm, MD*)	Ballroom A-B1
	Workshop: "I meant do it, but.." Helping Residents Overcome Chronic Procrastination *(McCarthy, John G.; Olson, Holly; Vincent, Dale)*	San Francisco
	FIME: Feed-Forward and Feedback in Clinical Education (*May, Win: Richards, Anita*)	Santa Barbara
	Workshop: The Search is the Thing: Making Your Review Systematic (*Kysh, Lynn; Johnson, Robert E.*)	San Diego
2:45 pm - 4:15 pm	**Oral Presentations**: GME - Quality Improve/Patient Safety (*Moderator: Mojca Konia, MD, PhD, MACM*)	Ballroom A-B1
	Workshop: The New Doctors' Bag: High tech gear for the modern physician (*Wiechmann, Warren; Toohey, Shannon; Wray, Alisa; Youm, Julie*)	San Francisco
	FIME: Orientation: A good start to CLER the pathway towards excellence (*Jubran, Rima; Thompson, Michelle; Oh, Jane; Tierney, Tracey*)	Santa Barbara
	Special Poster Session: Undergraduate Health Professions Education Poster #UME-01 to UME-17 (*Moderators: Donna Elliot, MD, EdM and Sharon Obadia, DO*)	San Diego
4:15 pm - 4:30 pm	**Hor's D'oevres** *(Poster Set Up)*	Ballroom B2-C
4:30 pm - 6:00 pm	**Session One: Poster # 01-50** **Topics:** Accreditation, Curriculum, Assessment, Faculty Development, Careers, Instructional Methods, Clinical Reasoning, Interprofessional/Interdisciplinary, Communication, Leadership, Learning, Patient Education	Ballroom B2-C

Saturday, February 20, 2016		
7:00 am - 8:00 am	**Breakfast and Registration**	Foyer & Ballroom A-B1
8:00 am - 9:30 am	**Oral Presentations**: A Variety of Innovations (*Moderator: Shara Steiner, DO, MACM*)	Ballroom A-B1
	Workshop: Use of Nearpod to engage resident learners on their own devices (*Welniak, TJ*)	San Francisco
	ACIME: Conflict Management Styles (*Nyquist, Julie; Zia, Stephanie; Rahman, Suraiya*)	San Diego
	Workshop: Physician Role Modeling in the First 2 Years of Medical School (*Obadia, Sharon; Pong, Milton*)	San Antonio
9:30 am - 9:45 am	**Break** *(Refreshments)*	
9:45 am - 11:15 am	**UME -** Learning and Performance (*Moderator: Anne Vo, PhD*)	Ballroom A-B1
	Workshop: The Art of 'Inquisition': Using questioning as a teaching tool! (*Butani, Lavjay; Plant, Jennifer*)	San Francisco
	FIME: Turning Teaching Innovations into Scholarship (*Fisher, Dixie; Rice, Gail*)	San Diego
	Workshop: Culturally Responsive Interviewing (*Gonsalves, Wanda; Elder, William*)	San Antonio
11:15 am – 11:30 pm	**Lunch** *(Buffet)*	Foyer & Ballroom A-B1
11:30 am – 12:45 pm	**Keynote**: Reflection, Resilience, Humanism: Interactive Reflective Writing and Professional Identity Formation Hedy Wald, Ph.D. Warren Albert Medical School of Brown University	Ballroom A-B1
1:00 pm - 2:30 pm	**Oral Presentations**: Graduate Medical Education Innovations (*Moderator: Michael Haglund, MD, PhD*)	Ballroom A-B1
	Best of Cool Ideas 1 (*Moderator: Julie Nyquist, PhD*)	San Francisco
	ACIME: Challenges to Professionalism, Lapses, and Working With the Learner in Difficulty (*Zia, Stephanie; Cerza, Dante*)	San Diego
	Workshop: Upgrade Your Teaching: How to Build an Online Learning System *(Christman, Grant; Schrager, Sheree; Trost, Margaret)*	San Antonio
2:30 pm - 2:45 pm	**Break** *(Snack)*	
2:45 pm - 4:15 pm	**Best of Cool Ideas 2** (*Moderator: Julie Nyquist, PhD*)	San Francisco
	ACIME: Small "N", big impact Studies (*Fung, Cha Chi; Vo, Anne*)	San Diego

2:45 pm - 4:15 pm	**Workshop**: Diagnosing and Effectively Engaging the Struggling Learner and Reducing Learner Stress *(Molas-Torreblanca, Kira; Zarrabi, Yassi; Cannon, Jennifer; Essig, Michelle*)	San Antonio
4:15 pm - 4:30 pm	**Hors D'oeuvres** *(Poster Set Up)*	Ballroom B2-C
4:30 - 6:00 pm	**Session Two: Poster # 51-103 and Award Ceremony** **Topics:** Practice Management Pre-Health Training Professionalism, Ethics, Culturally Responsive Health Care Quality Improvement/ Patient Safety Research Resident Teacher Skills Teaching Methods Technology Wellness	Ballroom B2-C

Hedy S. Wald, PhD
Clinical Associate Professor of Family Medicine
Alpert Medical School of Brown University

Friday, February 19, 2016
10:00 am – 12:00 pm Warren

Fostering Reflective Capacity With Interactive Reflective Writing:

"Reflection Apprenticeship" - Learner and Teacher

Dr. Wald's 2-hour workshop includes:

- Using a combination of didactic and interactive learning to explore the concept of fostering reflection in health care professions education and practice.
- Presenting formal analytic frameworks for enhancing the educational value of feedback to students' reflective writing, applied to a student's narrative, and discussed.
- Exploring the development of a reflective, collaborative practitioner with guided reflection supporting the active constructive process of professional identity formation.

Disability education for health professions trainees and professionals – A systematic review

Bell, Catherine; Birkman, Clair; Hodgson, Carol S.

University of Alberta, Faculty of Medicine & Dentistry

Idea/Problem Statement:
Care of people with disabilities is an important health care issue. Understanding of effective training for health professionals is needed.

Rationale/Need:
Without proper training, health professionals may not be able to give adequate care to people with disabilities (PWD). Studies show that practitioners may not have the appropriate knowledge, skills or attitudes to care for people with disabilities.1-3 This is important since according to the 2010 US Census, the percentage of people in the US over the age of 15 with a disability is high (21.3%). The number of children (age <15) with a disability is also high (8.4%) compared to childhood asthma (~10%) and type 1 diabetes (0.25%, under age 20).

Historically, medical schools have not included curricula on people with disabilities and therefore students are unprepared to care for this population.3 This may be a contributing factor for the lack of patient satisfaction with quality of care for people with physical and cognitive disabilities2,3 Health care disparities in this population is also of great concern.

There are a number of literature reviews on issues related to the health care of people with disabilities,1 however, we did not find any systematic reviews that examined the teaching of health care for people with disabilities across the health professions and along the continuum of training. Given the high prevalence of disabilities, knowledge on what is taught in various health professions, where it is taught in the curriculum, and how effective training is could help guide educators at health professions schools in curriculum development on this important topic.

Methods:
BEME recommendations for a systematic review (http://www.bemecollaboration.org) were used, beginning with formation of a review group: a health professions librarian, a research assistant, and a medical educator. Next was the development of research questions. The review uses part of the RE-AIM framework to look at whether appropriate professions were targeted for training (Reach) and if the curricula were effective (efficacy). The review protocol was determined by the review team.

Electronic database searches were conducted with PubMed, CINAHL, Scopus, PsycINFO, ERIC, and EMBASE. Key words were: disability, disabled persons, teaching, education, curriculum, students, therapists, trainees, graduate education, postgraduate education, residency education, nursing. Inclusion criteria for the review are: (1) description, evaluation, or research of a curriculum to teach care of PWD; (2) students or trainees from a health profession or a practitioner; (3) outcomes focusing on attitudes, knowledge, behaviors, clinical skills, or patient outcomes related to people with disabilities; (4) intellectual/cognitive, learning, developmental, or physical disabilities; (5) studies 1960-2015; and (6) studies carried out in any country. An initial review of titles and abstracts was conducted by 1 reviewer. All titles and abstracts will be assessed by 2 reviewers using the review criteria with results compared through discussion to decide through consensus if articles met inclusion criteria.

Results:
Results to date include: the research questions; results of the database searches; and initial review to determine if the titles and abstracts met the inclusion criteria.

Research questions are: (1) What and in which health professions (e.g., medicine, nursing, occupational therapy, physical therapy, psychology, rehab medicine, speech therapy, etc.) and at what level of training (i.e., student, resident, or practitioner) is caring for people with disabilities taught? How effective were the curricula in terms of knowledge, attitudes, and skills gained? How rigorous were the measures of effectiveness?

There were 1524 relevant articles collected from the databases selected. After 259 duplicates were removed, the remaining 1265 articles were reviewed by one author (CB) based on titles and abstracts. So far, the inclusion criteria have been applied to 307 of the 1265 articles with 140 articles meeting the inclusion criteria (45.6%) and 167 articles being rejected.

The next steps after the title and abstract review is complete will be the full review of the remaining articles using exemplar articles from the title and abstract review. Using the criteria outlined above, a BEME-type coding sheet will be

developed, which will include research design, comparative studies, participants, review, and data collection methods. A final review will be conducted to consider and grade study quality. Kirkpatrick's evaluation model will be used to help interpret the results.

Potential Impact/Lessons Learned:
There is a large literature on PWD. The aim of this review is to bring more awareness to disability education across the health professions. The study will provide information on: the current state of training on disabilities and PWD; effective educational methods; and what potential improvements can be made on training in this important area.

References:

1. Iacono T, Bigby C, Unsworth C, Douglas J, Fitzpatrick P. A systematic review of hospital experiences of people with intellectual disability. BMC Health Serv Res. 2014; 14:505. http://www.biomedcentral.com/1472-6963/14/505.
2. Liptak GS, Orlando M, Yingling JT, Theurer-Kaufman KL, Malay DP, Tompkins LA, Flynn JR., J. Satisfaction with primary health care received by families of children with developmental disabilities. Pediatr Health Care. 2006; 20(4):245-252.
3. Sharby N, Martire K, Iversen MD. Decreasing health disparities for people with disabilities through improved communication strategies and awareness. Int J Environ Res Public Health. 2015; 19;12(3):3301-3016

Evaluating Patient Knowledge of Gestational Diabetes in the Greater LA County

Madushka De Zoysa; Jenny Jaque; Doerthe Brueggmann

Keck School of Medicine at University of Southern California

Innovation Idea: Identifying gaps in patient knowledge of diabetes and gestational diabetes can better help with patient counseling during prenatal visits.

RationaleStatement of Need: Diabetes Mellitus (DM) and Gestational Diabetes (GDM) are conditions that are poorly understood by a substantial portion of the general population. This is particularly concerning given that the outcomes of uncontrolled GDM are severe for both mother and fetus during prenatal care and the peripartum setting. Although routine counseling is done during prenatal visits, providers may incorrectly assume that patients possess a certain fund of knowledge. This fund of knowledge can vary from person to person and can be dependent on a patient's socioeconomic background. Prior studies regarding patient knowledge of DM and GDM indicate that although expectant mothers have received counseling about gestational diabetes and are aware of general risks, they are unsure of specific complications. Additionally, it was noted in prior studies that mainly multiparous women were more likely to actively seek out pre-pregnancy planning. The current literature is lacking regarding associations between socioeconomic factors and patient awareness of DM and GDM.

Methods: Women of reproductive age receiving care at LAC+USC Obstetrics, MFM, and FP clinics were approached to take part in the study. The survey of knowledge consisted of 14 TF questions regarding DM and 10 TF questions regarding GDM. TF questions were selected to facilitate survey participation and completion. 170 women were approached. 33 chose not to participate. Of the 137 that did participate, 4 did not complete the survey. An incomplete survey was defined as no response on the patient knowledge portion of the survey regardless of completion of the demographic portion of the survey. Each subject was given three scores: a DM score out of 14, a GDM score out of 10, and a total score out of 24. All scores were reported as percentages to easily assess performance. Given the assumption of a non-normal distribution of data, Kruskall-Wallis and Wilcoxon Rank-Sum tests were used to compare subject scores among the subcategories of the following variables: survey language, age, ethnicity, marital status, employment status, education level, history of smoking, previous diagnosis of DM, friendfamily diagnosed with DM, previous DM counseling, and self-reported knowledge of DM.

Results: DM score differed significantly between primary language spoken ($p=0.0008$) with English speakers scoring significantly higher than Spanish speakers. GDM score ($p=0.01$) and total score ($p=0.0006$) also demonstrated a similar association. DM scores ($p=0.03$) and total scores ($p=0.02$) were found to be statistically different between ethnic groups. No significant differences were seen for median GDM scores between different ethnic groups ($p>0.05$). GDM scores were observed to be significant between marital status ($p=0.03$) and employment status ($p=0.0452$). Previous diagnosis of DM and self-reported knowledge of DM were observed to have a significant association with DM score only ($p=0.03$, $p=0.01$). The mean difference between DM and GDM scores was calculated to be 24.2 (95% CI, 20.9-27.6). With a null hypothesis of $\mu = 0$, the p-value for HA: $\mu \neq 0$ was calculated to be < 0.0001.

A secondary outcome was to determine how patients would prefer to receive diabetic counseling in the future. Overall, patients prefer to receive their counseling during clinic visits (59.5%) and from handouts (20.9%).

Potential Impact: Education and age show no significant association with DM and GDM knowledge. Prior exposure to DM does not guarantee patient knowledge of GDM. Given that the number of survey questions was limited to ensure patient completion, administering longer surveys to better evaluate the full scope of patient knowledge may extend the findings of this study.

References:

1. Collier SA, Mulholland C, Williams J, Mersereau P, Turay K, Prue C. A qualitative study of perceived barriers to management of diabetes among women with a history of diabetes during pregnancy. J Womens Health (Larchmt). 2011;20(9):1333-9.

2. Spence M, Alderdice FA, Harper R, Mccance DR, Holmes VA. An exploration of knowledge and attitudes related to pre-pregnancy care in women with diabetes. Diabet Med. 2010;27(12):1385-91.

A Needs Assessment of the Curriculum Content of Caring for People with Disabilities

Komishke, Bailey; Penner, Stephanie; Hodgson, Carol

Affiliations: *University of Alberta, Faculty of Medicine & Dentistry*

Idea/Problem Statement:
A high prevalence of people with disabilities makes it incumbent upon medical schools to train students about caring for people with disabilities.

Rationale/Need:
In both the US and Canada there is a high prevalence of people with disabilities. Of people age 15 or older in the US, 21.3% and 13.7% in Canada have a disability. When you look at the geriatric population (age > 64), those numbers increase to 49.8% in the US and 33.2% in Canada. A review on quality of health care for people with disabilities found many issues, e.g., lack of access and lack of provider knowledge on disabilities.1 In many studies, clinicians and trainees cited a lack of knowledge to care for disabled patients.1 In contrast, another study showed that when residents met in a non-clinical setting with families with a disabled child, there was improved knowledge and attitudes.2 One study showed that adding a curriculum on disabilities can improve student attitudes.3

There are currently no LCME standards requiring medical student education on disabilities. Hence, medical students may be completing their degrees without any teaching on this topic and without direct exposure to this significant portion of the population. Is this complex and important patient population included in medical education; that is, how much required medical student curricular content on disabilities exists at the University of Alberta (UofA)?

The goal of this study was to initiate a needs assessment to evaluate how much required curricular content is taught and how well subscribed are two optional pre-clerkship programs focusing on the human dimension of people with disabilities.

Methods:
The needs assessment consisted of 3 components: (1) curriculum database search; (2) review of student interest in the two optional programs on people with disabilities; and (3) a literature review.

The UofA curriculum database, MedSIS, contains all scheduled teaching sessions for all 4 years of medical school. The database was searched using the keywords “disability,” ”disabilities,” “autism,” “fetal alcohol,” “developmental,” “cognitive,” “delay,” and “handicap.” Results were filtered for only pre-clerkship courses with a title and/or learning objectives related to the assessment or care of patients with a disability. Sessions were arranged according to type of teaching method (i.e., lecture, small group, or clinical), year in the curriculum, course, and the years(s) taught.

Two optional programs at the UofA include (1) a pre-clerkship pediatric elective, “Developing Skills for Developmental Disabilities” (DSDD) and (2) a speaker series, “Disability Dialogue,” (DD), first conceptualized by 2 medical students at the University of Colorado, Denver. Sign-up sheets for DD were used to assess student interest in the topic. Participation in the DSDD elective was also assessed. Interest in these programs was compared to the available student population to determine the percentage of students that sought out additional opportunities with disabled people.

A literature search with the terms “students, medical” “disability” “curriculum OR teaching” was conducted in PubMed.

Results:
A total of 17 learning sessions were found using the curriculum search that fit our criteria. All of these sessions took place in the second year of medical school. Most of these lectures were during the Neurology and Special Senses block of study. Most (14 of 17) sessions are one-hour lecture-style classes, while three are problem-based five-hour small-group interactive sessions over the span of a week involving self-directed and peer teaching. Interestingly, 13 out of 17 of the sessions had learning objectives related to pediatric disabilities, two had learning objectives on both adult and pediatric populations with disabilities, and only two had a focus on solely adult disability. Not all 17 sessions have been offered every year of medical school; 2012-2013 school year had 11 sessions, 2013-2014 and 2014-2015 had 13 sessions, while 2015-2016 has 11 scheduled sessions so far. Of the estimated 650 hours of pre-clerkship material, these 29 hours comprise 4.5% of our total didactic curricular content.

From 2012/13 to 2014/15 an average of 6.0% of the UofA pre-clerkship students sought additional optional educational opportunities by completing the DSDD pre-clerkship clinical elective. From 2013/14-2014/15 an average of 6.7% of students sought additional education opportunities by enrolling in the DD noon-time speaker series.

The literature review resulted in 271 articles, most of which described curricular interventions. A more extensive

systematic review is ongoing.

Potential Impact/Lessons Learned:
It is evident that education regarding patients with disabilities appears disproportionately low relative to prevalence. It is recommended that changes be made to remedy curricular gaps. More information is needed to establish the best teaching methods and content that should be included so as to optimize patient care. A national survey is planned.

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Narratives in Neurology: A Parallel Chart Initiative at the University of Virginia

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Innovation Idea: Narrative medicine posits that literary study enriches clinical skills, inviting the question: does close reading lead to close listening?

Rationale/Statement of Need: Narrative medicine is a growing area of medical education, using written or visual texts as surrogates for clinical encounters. Practicing the narrative skills of attention, representation, and affiliation is proposed to help providers better understand and connect with their patients. Literary techniques help providers draw stories from patients, develop a narrative arc even when none seems to exist, and convey those stories to other providers to ensure the patient receives appropriate care. Although classroom-based narrative medicine is increasingly popular, outcomes data are limited. In this pilot project we investigated whether brief training in narrative medicine and close reading is an effective educational technique to improve close listening and communication in a neurology clerkship.

Methods: The participants were third-year medical students in the required neurology clerkship and were divided into intervention and comparison groups. Both groups read a short essay on migraine, Joan Didion's "In Bed." They contrasted this with a textbook reading on migraine. Students in the intervention group also participated in a thirty minute narrative medicine training workshop, focusing on metaphor, genre, voice, and other literary techniques used in these two texts. Students in both groups were invited to submit a "parallel chart," rewriting a clinical History and Physical note from the perspective of the patient or family. Parallel charts were given to three independent, blinded readers, and were qualitatively coded and analyzed for themes and differences in form between the two groups. The hypothesis was that the brief narrative intervention helped the students listen more effectively to their patients and pay more attention to their own use of language. During debriefing, students were also surveyed for their their opinion of the assignment, suggestions for alternative texts, and general feedback on the pilot intervention.

Results: A total of 22 students (16 intervention; 6 comparison) completed the study. Through recursive coding and qualitative analysis, we identified that students who had completed the workshop used more complex sentence structure and employed richer metaphors than students who had not completed the workshops. Students in the comparison group relied more heavily on the formulas of a medical note, while students in the intervention group were more able to take on the voice of their patient, including the use of dialogue and lay language. Students in the intervention group were better able to convey the patient experience, through use of multiple perspectives and imagery. Student feedback was almost universally positive. One student commented, "I can see how my official [documentation] had lost some of the patient's most pertinent concerns related to their illness, and I will try to keep this in mind when writing subsequent [notes]." Five students requested additional material, including TV film clips and medically-themed poetry. One student felt the project was redundant, stating there were "plenty of lay medical pairings" available to students.

Potential Impact: A brief narrative intervention is effective at improving student understanding of patient experience. Because our workshop took thirty minutes or less, it can be scheduled with relative ease within the busy confines of clinical medicine. Additionally, the format is easily translatable to other disciplines within medical education.

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GWEP: serving the elderly and underserved through an interdisciplinary curriculum

Paula Park; Diane Chau; Kevin Broder; Gregory Talavera; Alejandro Hinojosa; Sammi Tam; Jonathan Watanabe

UC San Diego Health Sciences; San Diego PACE

Idea or Problem Statement: Development of a novel, evidence-based, interdisciplinary curriculum to improve culturally competent care for geriatric and underserved communities

Rationale or Statement of Need: The United States is an aging society. The elderly population is expected to grow at more than double the rate as the general population(1). According to the U.S. Census estimates, San Diego County is the second largest in population within California with a disproportionate growth rate in the elderly and Latinos. There is a projected 91% population growth in Latinos by 2030 in San Diego, contributing to 37% of the region's ethnic demographic(2). Seniors from minority backgrounds are more likely to experience elevated rates of poverty, limited education, and malnutrition with greater difficulty negotiating the health care system because of language and cultural barriers(3). Elderly Latinos with limited English proficiency are less likely to be aware of available community resources, and most likely face additional barriers if their health provider does not have Spanish-speaking staff. These barriers may be overcome by training healthcare professionals, family, and caregivers to deliver appropriate care. This important growing demographic necessitates enhancement of the training paradigm of healthcare professionals to better provide culturally competent, evidence-based medicine.

Methods: The San Diego Geriatrics Workforce Enhancement Program (SD GWEP) recruited 12 scholars (physicians, nurses, pharmacists, social workers, and students) from their respective fields and is training them through a one year, 120-hour curriculum using a combination of lectures, workshops, symposiums and clinical work. The scholars will be trained in various settings in conjunction with UCSD School of Medicine, Skaggs School of Pharmacy, San Diego PACE center, and VA San Diego. The program is funded through a competitive grant from HRSA, uniquely focusing on border population health. The lectures cover topics on geriatrics, cultural competency, and communication with literature review and discussions to promote evidence-based practice. The workshops employ hands-on training and introduce new technologies. The outreach programs promote community service and care for the underserved. Further dissemination will be accomplished through presentations at conferences, submission of manuscripts, and composition of a book on geriatric care. The SD GWEP integrates diverse aspects of learning and teaching with clear program objectives, which the scholars use to measure program effectiveness.

Evaluation plan: Curriculum effectiveness will be evaluated by measuring change in the scholars' knowledge and behaviors via self-assessments after each topic section using validated measures, such as the retrospective pretest and intention to change. Evaluation questions will be based on program objectives and may consist of questions such as: 1. How would you rate the overall educational quality of the activity (on a likert scale)? 2. As a result of this activity, I intend to make the following practice changes that may result in positive patient outcomes: Faculty will also be evaluated. In order to measure improved health outcomes in response to the GWEP curriculum, we will perform various quality improvement projects. Two notable outcomes we will measure are the number of high-risk medication use, and flu vaccinations in adults >65 compared to national averages using NCQA HEDIS measures. The goal is a 25% reduction in high-risk medication use and 100% immunization rates by the end of the year.

Potential Impact: We plan to develop and implement an interdisciplinary curriculum that generates culturally competent healthcare professionals, and potentially measure improved health outcomes by reducing high-risk medication use and improving vaccination status in the elderly. This curriculum may then be repeated in communities beyond San Diego.

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"I meant to do it, but…" Helping Residents Overcome Chronic Procrastination

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Tripler Army Medical Center

Workshop rationale:
"Crastinus" is Latin for "belonging to tomorrow," and many residents are "pros" at it. They often "put off" key tasks that are required for success, resulting in lower performance evaluations and painful counseling sessions. Residents may have specific internal barriers to getting things done, and these barriers can be magnified by constant bombardment by nonurgent, urgent, and important tasks. Observational studies suggest that among the general public, procrastination has increased fourfold from 15% in 1978 to 60% in present times. In residency training, what are the costs to individuals, the workplace, and patients of chronic procrastination? How can Program Directors intervene when procrastination interferes with a resident's milestone trajectory? The purpose of this workshop is to give Program Directors (and other members of the human race) specific tools to overcome procrastination, and achieve success by doing today what they were going to put off until tomorrow.

Intended Participants:
Program Directors , Faculty in UME and GME , Procrastinators

Workshop objectives:
After participating in this workshop, participants will be able to:
1. Categorize types of procrastinators, and give a humorous and memorable name to each type.
2. List strategies for tackling procrastination that are tailored to procrastinator types.
3. Practice using temptation bundling, the Zeigarnik effect, and other techniques to overcome procrastination in common situations seen in residencies.
4. Plan a simple workshop for residents on procrastination using SMS polling and notes from this session.

Instructional Methods:
Introduction (5 minutes)
Group Polling using Poll Everywhere (15 minutes). What tasks have you put off for more than a week? What are the costs of procrastination? [participants will also be introduced to SMS polling]
Small group activity (30 minutes): What kind of procrastinator are you? Participants will learn how to identify different types of procrastinators. Given common examples of resident procrastination, the small groups will brainstorm strategies for getting things done based on identified barriers to action.
Mini-lecture (15 minutes). Workshop facilitators will discuss strategies for getting things done that complement and reinforce the small group session.
Practice counseling (20 minutes). After pairing up, participants will practice counseling each other on how to overcome specific procrastination problems.
Commitment to action (10 minutes). Workshop facilitators will explore ways that participants see themselves using this material in counseling sessions, workshops with residents, and in their own personal lives.
Workshop evaluation (5 minutes)

Take-home tool(s):
References, including books and websites, on procrastination.
Catalog and description of techniques that can be used to overcome chronic procrastination.

FIME: Feedforward and Feedback in Clinical Education – An Interactive Skills Development Workshop

May, Win; Richards, Anita J.

Keck School of Medicine at University of Southern California and UCSF School of Medicine

Target Audience:
Faculty members who are called upon to provide feedback to their learners to ensure improved learning and performance.

Workshop Goals:
To train faculty members to provide effective feedback to their learners, using both feedforward and feedback mechanisms.

Workshop Objectives:
At the end of this workshop, participants will be able to:

- Describe the central role of the learner in the process of effective feedback
- Describe some models of feedback
- Practice giving and receiving feedback in order to improve performance
- Practice providing feedforward as an alternative.
- Demonstrate ways to integrate feedforward and feedback into clinical education.

Activities Description:
This is an interactive skills development workshop. There will be a brief review of the literature on the importance of feedback, the four levels of feedback, and the theoretical rationale supporting the provision of feedback . Some models that have been used to provide effective feedback will be presented. Workshop participants will practice the skill of giving as well as receiving feedback and feedforward through role play in small groups. Debriefing of the session will explore what strategies were successful and what could be improved upon.

Pre-workshop preparation requested
None

The Search is the Thing: Making Your Review Systematic

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USC Norris Medical Library & Children's Hospital, Los Angeles

Workshop Rationale:
Systematic reviews are considered high levels of evidence because of their ability to collect, appraise and synthesize all available evidence on a research question through a transparent process with the goal of minimizing bias. They are increasingly used to illustrate the concept of bench to bedside practice for students and residents. Not all faculty have conducted systematic reviews in their careers, putting them at a disadvantage when attempting to illustrate the importance of this evidence. This workshop will not only provide all participants with the knowledge and tools to conduct systematic reviews, but will also help teaching medical faculty assess whether or not systematic reviews are a reasonable assignment for undergraduate and graduate medical students.

Intended workshop participants:
Faculty, clinicians, researchers, librarians, graduate medical students, undergraduate medical students

Learner Outcome Objectives:
1. List the necessary steps to conduct a systematic review and understand it's role in evidence-based practice
2. Formulate a focused question appropriate for conducting a systematic review
3. Create a search strategy that is designed to answer your clinical question in a health sciences database
4. Minimize publication bias by searching for grey literature
5. Establish transparency by documenting and organizing search results

Instructional methods:
Librarian instructors will first provide a brief overview of the steps of conducting a systematic review. They will cite resources including the PRISMA Statement and the Cochrane Handbook for Systematic Reviews and address common misconceptions. Instructors will then provide a clinical scenario which participants will draw upon to create a focused research question using PICO as a guide. Once participants decided on a shared focused research question, they will use that question for hands-on practice in the following:

- Searching PubMed
- Searching for grey literature
- Identifying a relevant journal andor professional organization conference proceedings.

Each process will be introduced and demonstrated by the instructors who will then circulate the room while participants practice these skills. Following each process, participants will discuss their progress and have the opportunity to ask questions. Following the hands-on practice portion of the workshop, the instructors will facilitate a discussion among the participants regarding their outlook of the process of a systematic review and help identify parts of the process where librarians can play a role.

Implementation of American Family Physician Journal Article Presentations by Resident Physicians

Nicole Akers; Maria Cynthia Lopez

Bayfront Health St. Petersburg Family Medicine Residency

Innovation Idea: Enhance family medicine resident knowledge of best patient care practices using articles from the American Family Physician Journal

RationaleStatement of Need: In the busy modern-day field of Family Medicine, it is difficult to stay informed on the newest and current clinical recommendations by the different medical specialty groups, including the American Academy of Family Physicians (AAFP). The American Family Physician (AFP) Journal is a peer-reviewed journal published bi-weekly that summarizes best patient care practice guidelines on a variety of medical topics. However, with the rigors of patient care and other duties, finding time to read the articles proves to be a challenge. Time constraints impacting reading the articles are not only a concern for Board-Certified Family Physicians, but also resident family physicians. One solution is to implement a team-based intervention to ensure that all key recommendations are shared among all faculty and residents.

Methods: The participants are the 24 residents in the Bayfront Health St. Petersburg Family Medicine Residency. The intervention is an annual 24-session curriculum lead by the residents that utilizes every issue of the AFP journal. This activity began in July 2014 and is integrated into the residency's core curriculum, as part of a daily noon conference series attended by all faculty and residents. Each resident is the instructor for one session. Each resident presents the key patient care recommendations from one issue of the journal each year. This requires the resident to: 1) read the entire issue and extract the key concepts and recommendations which requires thinking at the analysis level of Bloom's taxonomy; 2) develop a handout of key materials (if relevant) andor develop test questions (or adapt those in the CME quiz section); and 3) lead the session, sharing the recommendations with example applications in patient care. The goals of this curricular unit include preparation for licensure for residents, maintenance of competence for faculty, encouraging adherence to the latest evidence-based medicine guidelines, and allowing each resident to take on the role of educator.

Results: 1) The program has been tracking the delivery of the curriculum and will be able to report on the first 18 month of the project (resident participation and topics covered). 2) Data on reaction of participants is gathered using noon conference rating forms. 3) To help determine impact on knowledge and behavior a brief questionnaire is being distributed to previous Bayfront Family Medicine resident physicians that were present prior to implementation of resident AFP Journal curricula, as well as current resident physicians. Scores from In-Training service exams and Family Medicine Board Certification scores from April 2014 (prior to the curriculum), April 2015 (9 months into implementation) and April 2016 (21 months after implementation) will also be compared to examine how performance has changed across time. 4) All current residents will complete a questionnaire that asks them to reflect on the impact on them of taking on the role of educator and how it has impacted their study habits. Preliminary results will be shared at the conference.

Potential Impact: This project provides a model for active engagement of residents in their own education as well as a model of a forum for discussion between faculty and residents to reinforce a commitment to lifelong learning.

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Outpatient Advance Care Planning IM Resident Curriculum: Valuing Our Patients' Wishes

David Chan; Elizabeth Ward; Brittany Lapin; Michael Marschke; Margaret Thomas; Amanda Lund; Manisha Chandar; Catherine Glunz; Valen Anderson; Peggy Ochoa; Joanna Davidson; Liza Icayan; Ernest Wang; Shashi Bellam; Jennifer Obel

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Innovation Idea: Outpatient Advance Care Planning IM Resident Curriculum

RationaleStatement of Need: Eliciting and documenting a patient's end-of-life (EOL) views is imperative with our aging population and rising EOL healthcare costs. There is a paucity of research in residents' ability to assess patient values and EOL views, and how residents translate these beliefs into a formal advance care plan. The University of Chicago (NorthShore) IMR created an innovative curriculum to improve residents' proficiency and comfort in leading outpatient advance care planning (ACP) discussions.

Methods: Four educational components were executed. First, residents completed an on-line module introducing ACP and guiding residents to complete their own ACP. Second, residents attended a didactic "How To" lecture given by physicians with expertise in ACP which emphasized ACP communication tools and a video demonstration. Third, residents conducted a video-recorded simulation-based ACP discussion with a standardized patient. Fourth, residents completed an ACP outpatient encounter with one of their continuity clinic patients. Expert preceptors directly observed, evaluated and provided feedback for resident performance during both patient encounters. Residents were surveyed prior and immediately after the curriculum with a nine variable questionnaire assessing the resident's training and comfort with ACP.

Results: Sixteen second year residents completed the curriculum and surveys. Pre and post curriculum mean change on a scale of 1 (uncomfortable) to 5 (very comfortable) were compared using paired t-tests. Results demonstrated statistically significant improvement in the following comfort level variables: eliciting understanding of health and prognosis (pre 3.63 vs. post 4.38, P=0.035), discussing EOL care based on patient values (pre 3.50 vs. post 4.38, P=0.008), specifically discussing EOL care based upon patient values in the outpatient setting (pre 2.75 vs. post 4.31, P=0.001), and initiating an advance directive and medical power of attorney (pre 2.56 vs. post 4.19, P<0.001). Results demonstrated statistically significant improved scores in several ACP formal training variables as well as a composite score of formal training variables (pre 28.4 vs. post 36.2, P=0.011).

Potential Impact: A multimodality curriculum including self-directed learning, lectures, and practice with simulated and actual outpatients with active reflection and feedback is effective in improving resident comfort level and formal training in ACP.

References:

An Evaluation of CA-1 Residents' Adherence to a Standardized Hand-off Checklist

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Innovation Idea: Hand-offs are prone to errors in communication. Checklists improve hand-offs, but adherence to these tools is often inconsistent.

RationaleStatement of Need: An estimated 400,000 patient deaths occur each year as a result of medical errors with 80% of these attributed specifically to errors in communication. While intraoperative and postoperative hand- offs are a critical component of anesthesiologists' practice, they have received far less attention in literature and reform than intensive care room hand-offs (1). Many institutions have templates or checklists in place for hand-offs and research has shown that the reliability of hand-offs is improved when these modalities are utilized. Further, patient care is improved with the standardization of practices (2). Despite these facts, standardized hand-offs are not consistently incorporated into everyday practice. Recent studies suggest that incorporation of hand-offs into residency curriculum and practice reduce medical errors and that teaching through simulation may improve hand- off skills (3). There is a need to evaluate how to most effectively teach the intraoperative and postoperative hand-off to new anesthesiology residents in a way that maximizes adherence to standardized hand-off techniques. In the present study we investigated the effectiveness of current practice.

Methods: The present study was conducted at the University of Minnesota (UMN) and received an exempt status by the UMN Institutional Review Board. Eight CA-1 residents of the UMN Anesthesia Residency Program took part in the study. A hand-off checklist was created by expert anesthesiologists and confirmed for content validity by anesthesiology physicians at multiple institutions in the Minneapolis metro area. CA-1 residents participated in a 1 hour simulated hand-off workshop in which they were given a patient scenario and asked to hand-off the patient while filming themselves prior to any education. They were then introduced to the hand-off checklist. They reviewed it, discussed it, and practiced with it. The residents were then given a second patient scenario and asked to again hand-off the patient while filming themselves without a physical copy of the hand-off checklist. The video recordings of each resident were timed and evaluated for content. The residents were then observed during transfers of care in the operating room and in the post anesthesia care unit at two weeks and at eight weeks following the workshop. The time, location, and content according to the hand-off were noted.

Results: The entire CA-1 class of the UMN Anesthesiology Residency program was included in the study. There were four rounds of hand-off analysis: pre-workshop (round one), immediate post workshop (round two), 2 weeks post workshop (round three), and 8 weeks post workshop (round four). One subject was excluded from round one and round two analyses and a second subject was excluded from round two analysis due to video recording problems. The average hand-off time was 207.14s (±37.21s) for round one, 191.67s (±51.50s) for round two, 98.66s (±37.82s) for round three, and 115.81s (±44.99s) for round 4. CA-1 residents included 70.70% (±0.11%) of hand-off checklist information in their hand-offs during the pre-workshop phase. Following a 1 hour education and practice of the standardized checklist, CA-1 residents still only included 70.00% (±0.02%) of hand-off checklist information in their hand-offs during the immediate post-workshop phase. CA-1 residents included 43.04% (±0.13%) of hand-off checklist information in their hand-offs at 8 weeks following the workshop. A one-way analysis of variance revealed significant difference between the groups $F(0.79, 1.13) = 21.81$, $p<0.05$.

Potential Impact: The present study illustrates that the current method of education for hand-offs is insufficient for CA-1 residents to become proficient in a standardized hand-off technique. Barriers of adherence to the standardized checklist and optimal timing of "refresher" educational session will be investigated in future studies.

References:

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A Centralized, Hybrid Tool to Supplement Understanding of Static and Dynamic Medical Literature

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Innovation Idea: A medical database, written and curated by physicians, to enhance the understanding of both foundational and current evidence-based medicine.

RationaleStatement of Need: Medical curriculums, often based on published medical textbooks, are typically delayed by 2-5 years in the analysis of breaking, current literature. Online supplements typically cover large breadths of subjects in the format of delayed broad reviews as opposed to reviews of current individual study summaries. As a result, there exists a tangible need to integrate both the foundations of evidence-based medicine with current medical reports of new studies to present a comprehensive resource to the trainee. This represents a logistical challenge in presenting both static (foundational) information in addition to dynamic (current) literature. 2 Minute Medicine® was created to address these deficiencies. The organization functions using news media systems and logistics for selecting key high-impact breaking medical studies, curated by physicians. A study report, written by physicians, is released the same day the original study is published. Reports are published in a centralized, user-friendly interface on www.2minutemedicine.com. To address the challenge of static foundational knowledge, 2 Minute Medicine created The Classics in Medicine.

Methods: 2 Minute Medicine is a hybrid news and textbook publishing organization designed to help trainees and physicians stay current with medical research. Data and systems were integrated to ascertain the most relevant and high-impact current medical studies from all journals, with summary reports created by physicians (Current Reports). In addition, a curated list of 200+ "landmark" studies, selected as foundational by a physician board, were summarized by physicians (The Classics in Medicine). Lastly, a once-per-week recap series of the top 5-6 studies was created (The Rewinds Series). This 3-pronged hybrid approach targeted both critical needs of reporting on current, new medical knowledge (dynamic component) as well as providing a foundation of evidence-based knowledge for the trainee (static component). The organization rated studies according to the Oxford Centre for Evidence-based Medicine. Key outcomes measured to assess the impact of the organization in augmenting consumption of medical knowledge included user engagement (via online bounce rate), page-views, demographics, content popularity, readership and qualitative reader surveys.

Results: The organization has published more than 3000 reports in addition to textbooks and electronic books. The website component serves over 350,000 monthly views worldwide. The bounce rate was 28%, in Q2 2015, a decrease of 2% from Q2 2014, indicating more engaging content (lower is better, 40-50% is considered excellent). Over 100 search terms relating to The Classics in Medicine were ranked in the top 10 results of Google. A user survey was administered to 250 users readers. Of the 105 that responded who responded, 36% were residents and 55% were trainees. Prior to using the site, readers reported consuming a mean of 2.92 studies per week. After using the site for at least one week, readers reported consuming a mean of 6.99 studies weekly ($p<.0001$). 90% of readers Agreed or Strongly Agreed that the amount of detail in reports was suitable. 97% of readers Agreed or Strongly Agreed that they were more up to date with medical research. 2 Minute Medicine won the Massachusetts Medical Society Information Technology Award for innovation in medical education.

Potential Impact: 2 Minute Medicine has evolved to strategically target key deficiencies in medical education. This hybrid resource presents traditional static information but also covers the dynamic component of current medical literature, updated daily. As examined, this strategy has resulted in an effective supplement to medical education.

References:

Getting to the Root of It: A Study of Resident Teachers for Quality Improvement Curriculum

Thilan Wijesekera; Robert Fogerty

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Innovation Idea: Design a resident-led, faculty-sponsored, paired quality improvement lecture-immersion dyad curriculum on a General Internal Medicine teaching service.

RationaleStatement of Need: Both the Accreditation Council for Graduate Medical Education (ACGME) and the American Board of Internal Medicine (ABIM) have stressed quality and safety (QS) as important components of resident education. Examples of QS resident education curricula include role-playing, lectures, and root cause analysis (RCA). Of these different teaching methods, some of the most successful initiatives have involved peer- teaching and hands-on experiences, but never together in formally studied curricula.

Our study objectives were three-fold. Foremost, we aimed to design a resident-led, faculty-sponsored, paired QS lecture-immersion dyad curriculum on a General Internal Medicine teaching service at an academic institution. We then wanted to measure participant performance in knowledge, skills, attitudes, satisfaction, and outcomes that could score highly on rigorous quality improvement and education standards. Finally, we hoped to design a tool for developing high-level skills in a resident champion who could serve as a local content expert for peer trainees.

Methods: Each dyad occurred over a two-week block with 6-7 participants including medical students, physician assistant students, and residents rotating through a General Medicine inpatient service at Yale-New Haven Hospital from January to June in 2015.

The seminar was created from an extensive literature review including Institute of Medicine reports, Institute for Healthcare Improvement modules, and past research studies in QS curricula. During the interactive, Prezi©-based, 45-minute seminar, learners used past experiences to create a hypothetical case, which resulted in a root cause analysis, all while the resident teacher weaved in important QS concepts. Several days later, the residents were then led on a 30-minute guided tour of a designated site (e.g. blood bank or inpatient pharmacy) as an experiential activity to reinforce the QS concepts learned in the seminar.

Three total pre- and post-intervention survey instruments using likert scale and open-ended questions were employed to measure knowledge, skills, attitudes, satisfaction, and outcomes.

Open-ended questions were graded using a full, partial, or no credit system based on the script of the lecture and associated grading criteria developed by the authors. A third-party adjudicator- a Yale University faculty member and QS expert- mediated any discordance between reviewers. Any changes between surveys on associated questions were evaluated for statistical significance using a Wilcoxon Signed Rank Test.

Results: Of the 40 learners eligible to attend the seminar, 23 completed the pre-seminar survey. 38 learners attended the seminar, and 19 completed the post-seminar survey. 25 learners attended the experiential activity, and 11 completed the post-activity survey.

Prior to the survey, few learners endorsed sufficient QS experience and learners were ambivalent about the experience they had received. After the seminar, there were several statistically significant findings (p-value <0.05) on the five key parameters tested. For knowledge, more learners correctly compared overuse, misuse, and underuse in addition to defining adverse event, active error, latent error, forcing function, and fishbone diagram. For skills, more learners felt that they could perform a root cause analysis. For attitudes, more learners felt comfortable with commonly used terms in quality improvement science. For outcomes, more learners planned on applying quality improvement principles to their current medical practice. For satisfaction, learners provided a unanimous rating of the seminar as either effective or very effective in its teaching of basic QS principles. Improvement in all these parameters, but especially satisfaction, suggests effective development of a resident content expert. Following the experiential activity, there was no statistically significant increase in resident comfort with learners rating it with only mild utility, despite positive verbal feedback during the activity.

Potential Impact: Resident-led, interactive QS seminar shows potential in student and housestaff education for QS knowledge, skills, attitudes, satisfaction, and outcomes while likely demonstrating a tool for development of a resident content expert for peer trainees. Experiential activity shows promise for QS curricula, but its role still needs elucidation.

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"The New Doctors' Bag:" A Hands-on Review of High tech gear for the Modern Physician

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Workshop Rationale:
Technology is fundamentally changing the way that physicians and patients approach medicine and healthcare. Some proponents of technology would claim that the physical exam is no longer the primary source for all diagnoses and "classic" physical examination skills are unnecessary and falling by the wayside. Many would argue that many aspects of the physical exam still remain central to the evaluation of our patients. As new tools emerge, such as digital stethoscopes, oto- and ophthalmoscopes, handheld ultrasound, pulse oximetry and electrocardiograms, as well as visual diagnosis devices, it becomes critically important for medical educators to determine their utility for medical education and more importantly patient care. Many of these technologies are being marketed directly to patients, and therefore medical educators should be prepared for the inevitable scenario where patients will come to an encounter with their own generated medical diagnostic data.

Intended workshop participants:
Faculty, students or any physician who wants to explore new digital tools for physical examinations.

Learner Outcome Objectives:
1. Understand existing digital exam tools and how they are used.
2. Discuss and explore potential uses of these tools in a medical education setting and how they could be superior to existing physical exam tools
3. Evaluate new technologies for effectiveness and utility in physical examinations.

Instructional methods:
We will review existing digital and portable physical exam tools, their uses in education and their cost. We will have at least one example of each tool and will offer time for learners to try using them. We will spend ~8 minutes per device and then allow 30 minutes for hands on activity. Eko is a digital stethoscope, which connects via bluetooth to a smartphone. In addition to providing noise cancelling technology for cleaner auscultation, it allows you to see, record and share heart sounds. They are working toward FDA approval for a function which will recognize heart sounds and diagnose abnormalities. Cellscope Oto is a digital otoscope that connects to an iphone, allowing parents to look into their children's ears and send the image to a physician for an immediate answer. D-eye is an eye and retinal imaging system that attaches to smartphones creating a fundus camera. Images and video of the funduscopic exam can be saved to a patients file or sent to a consultant for further evaluation. The cellscope and D-eye have amazing implications in the education setting as pediatric physical exams and eye exams are often challenging and students may not have many opportunities to see abnormal findings. Alive Cor is a mobile ECG. It allows patients to apply the device to their chest for an instant rhythm strip, allowing quick and easy detection at home.. In the educational setting, static ECG review can be replaced with interactive sessions for rhythm interpretation, captured ECG data can be later added to a library of interesting cases for discussion. Scanadu Scout. A handheld device that measures heart rate, core body temperature, blood oxygenation, and blood pressure in seconds, linking to your smartphone for tracking of the data. HUD by FirstDerm. Dermatology can be one of the most challenging topics in medicine, subtle findings differentiate one etiology from another. This device uses a high definition camera to capture the rash, and uses reverse image identification to compare it to a database and help find the most likely diagnosis. In education, this will allow educators to collect a robust image collection for teaching. Handheld Ultrasound. Portable ultrasound machines are already becoming part of the standard of care in many emergency departments and hospitals. Newer technologies now allow handheld ultrasound machinesprobes that connect to smartphones.

Take-home tools:
Participants will receive a packet of the course material, as well as handouts on each innovation highlighted. They will have experience with each of the tools to take home and potentially incorporate into their curriculum.

FIME: Orientation: A good start to CLER the pathway towards excellence.

Jubran, Rima; Thompson, Michelle; Oh, Jane; Tierney, Tracey

Children's Hospital Los Angeles

Workshop rationale:
Beyond ensuring that a trainee receives Program Goals and Objectives, knows where to find the call rooms and signs up for benefits, what is the point of trainee orientation? What if Orientation was framed as the introduction to your institution's Clinical Learning Environment and Culture? Join us for an interactive workshop to discover how to integrate ACGME Clinical Learning Environment Review (CLER) Pathways to Excellence into a reinvigorated Orientation that sets trainee performance expectations to promote a successful training experience.

Intended participants:
Clinical Program Directors of all levels.

Learner outcome objectives:
Following the workshop, participants will better able to:

1. Describe best practices for Trainee Orientation
2. Identify linkages between Trainee Orientation and CLER Pathways to Excellence
3. Develop and implement an (value added? – CLER based) Orientation Schedule suitable for the training environment

Instructional methods:

- Introductions of speakers and participants – **5 min**
- Necessary Components of Trainee Orientation : Brainstorming Exercise– **15 min**
- Applying Clinical Learning Environment Areas into Trainee Orientation – PowerPoint Presentation -**15 min**
- How would you introduce new trainees to your institution's Clinical Learning Environment Culture? – Brainstorming Exercise **-15 min**
- Break into pairs or small groups and utilize the template to draft a CLER savvy Orientation Schedule – Small Group Exercise - **25 min**
- Share experiences in developing an Orientation Schedule: Large Group Discussion – **10** min
- Lessons Learned: Large Group Discussion: **5 min**
- Workshop evaluations – **5 min**

Take-home tools:
Orientation Checklist and a Draft Orientation Schedule.

References:
ACGME Institutional Requirements
CLER Pathways to Excellence. Expectations for an optimal clinical learning environment to achieve safe and high quality patient care.

Navigating Curricular Improvement Through Continuous Student Assessment Data Analysis

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Idea/Problem Statement:
In-depth analysis of student assessment data to drive curricular improvement, instructional methods, and student outcomes in higher education.

Rationale/Need:
Analyzing student assessment data in higher education, specifically undergraduate medical education, is generally acknowledged as a necessity in assessing student knowledge, yet there seems be a general lack of understanding of its true potential, benefits, and risks. Used correctly and efficiently, delving deeper into student assessment performance can foster student and instructor self-awareness (David and Macfarlane-Dick, 2006). Students become more self-aware of their learning process while instructors metacognitively assess their instructional pedagogy. Research indicates student learning can be improved when useful feedback data is analyzed and utilized effectively through pedagogical practice. Additionally, research supports the belief that effective feedback practice fosters self-regulated learning through active monitoring of various learning processes, of which higher education should help build upon. (Nicol and Macfarlane-Dick, 2006). We contend that exploring exam data as a framework for monitoring student progress, timely realignment of instruction, and enhancing student achievement can provide the necessary information to make appropriate curricular changes to improve student outcomes.

Methods:
The purpose of our presentation is to discuss the utilization of ExamSoft software in a unique and creative way to analyze student exam performance and provide useful, relevant, and timely feedback to enhance student learning. The application, potential benefits, and our internal statistics of the various methods/approaches are discussed, culminating with a demonstration of how this process is implemented at our institution. This demonstration will include examples of utilizing this data analysis process to improve curriculum, instructional methods, and student remediation.

Evaluation Plan:
Understanding the value of analyzing student assessment data is only useful if its purpose and utilization is clear and operational. This session will provide members with an understanding of why utilizing computer-based examination software to analyze student performance can guide curricular improvement. Additionally, this session will allow members to experience a demonstration indicating how this system is successfully implemented at our institution. Participants will gain an in-depth insight into the application and benefits of utilizing ExamSoft to analyze student performance data in order to support curricular decision-making.

Potential Impact/Lessons Learned:
Utilizing technology to identify areas of student and curricular weakness has, and will, continue to increase student learning outcome performance on a deeper level. Faculty, administration, and students alike will benefit from timely and consistent anal

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Clinical reasoning in Virtual Patients

Hege, Inga

Institute for Medical Education; University of Munich; and Geisel School of Medicine at Dartmouth

Idea/Problem Statement:
The overall idea for this research project is to enhance the teaching of clinical reasoning skills with virtual patients.

Rationale/Need:
Clinical reasoning is a core competency students have to learn during medical school (1). It is often taught in face-to-face courses such as bedside-teaching or during internships. In addition, since the early nineties virtual patients (VPs) in the form of Interactive Patient Scenarios (2) have become more and more common in medical education for teaching clinical reasoning skills (3). VPs provide healthcare students with a save environment to learn and make errors before seeing real patients. However, until today it remains unclear how VPs have to be designed to support clinical reasoning skills acquisition effectively (3). Therefore, the aim of this project is to develop a clinical reasoning toolbox based on current research to be embedded into VPs.

Methods:
Following a grounded theory approach we explored the following themes:

- frameworks of clinical reasoning and related topics such as diagnostic errors, biases, uncertainty, and assessment
- virtual patients, VP systems and features they provide to foster clinical reasoning skills acquisition
- additional topics that emerged during the analysis such as adaptability, gamification, vicarious learning, concept mapping, or nonlinearity.

The approach includes so far 108 data sources, such as scientific articles, Massive Open Online Courses (MOOCs), a survey among healthcare students, virtual patient systems, videos, interviews, and websites. Based on the outcomes of this grounded theory exploration a concept for a clinical reasoning toolbox and guidelines on how to embed it into VPs will be developed. The tool will then be implemented in a large-scale, cross-institutional study.

The project received funding from the European Union's Horizon 2020 research and innovation programme under the Marie Skłodowska-Curie grant agreement No 654857

Evaluation Plan:
A detailed evaluation plan will be part of the concept development and depends to some extent on the features of the toolbox. However, it will definitely include an analysis of learners interactions, their progress through the virtual patients and a survey.

Potential Impact/Lessons Learned:
The projects results - including the clinical reasoning toolbox and the guidelines how to integrate it - will be made publicly available to be adopted by educators worldwide. The results of the study will contribute to the open question on how to design v

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Mind maps: Bridging basic science and clinical reasoning skills

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Idea/Problem Statement: Use of mind maps promotes clinical reasoning skills of nursing students.

Rationale/Need: Since the Flexner Report in 1910, the health profession curricula include basic sciences and clinical training.1 However, integration of these two domains still needs to improve in medical education.1 Goldman and Schroth (2012) proposed a framework that integrated these two domains at three levels: program, course and session.1 Although integration at the program and course level are well described, actual implementation is difficult.1 Evidence from experimental studies indicated integration at the session-level can be successfully implemented.1 One method of integration at the session level is linking in a causal network.1 The possible explanation derives from cognitive psychology and research into categorization.2 The cause and effect relationship creates a framework within which students' mind organize and integrate the constellation of the features of a diagnosis.1 Evidence showed that this cognitive coherence improves students' diagnostic ability and clinical reasoning skills. 1,2 One strategy to link a cause and effect is mind mapping learning technique. It is a non-linear approach to learning and makes the learners to think curvilinearly by using visuospatial relationship from a central theme to peripheral branches.3 There is limited information on the usefulness of the technique in medical education.3 As clinical reasoning skill is nonlinear relationship between concepts, the present study aims to assess whether mind mapping will be a useful tool for such purpose.

Methods: Mind-mapping will be introduced as an add-on teaching method for nursing students. They will be asked to create mind-maps for three selected topics of systems pathology (hypertension, ischemic heart disease and chronic obstructive airway diseases). Construction of mind maps will be followed by a technique described by Buzan and Buzan (1993).3 Each mind map will comprise a central theme and four major quadrants in clockwise arrangement. These major quadrants will focus on anatomy, physiology, pathophysiology and clinical features. From these main branches, relevant sub-branches will be created. As more branches are drawn, students will recognize the patterns between the branches, connect them and integrate different parts of the map.

Evaluation Plan: The students' perception on the usefulness of the technique will be evaluated by online survey using a 5-point Likert scale. The questions will focus on the use of mind maps in areas of organizing and integrating information. In addition, they will be asked to rate their frequency of usage of mind-maps from the scale of 0 to 10 where 0 is not use at all and 10 is full use of mind-maps in their study. Cognitive integration will be assessed by context-rich questions using vignettes and the questions will focus on the mechanisms (why and how) that underlies the diagnosis rather than factual recall. Then correlation between the test scores and frequency of usage of mind-maps rating scale will be calculated. It is hypothesized that mind maps help the students better integrate between basic sciences and clinical learning.

Potential Impact/Lessons Learned: Mind mapping can be used as an effective tool for cognitive integration between factual basic science knowledge and clinical reasoning skills of nurses. Nurses with good clinical reasoning skills can provide quality healthcare and better patient outcomes.

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Expanding Medical Students Motivational Interviewing Skills within a Family Medicine Clerkship

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Idea/Problem Statement: Use of a workshop and web-based mentoring to enhance usage of motivational interviewing skills of medical students within a family medicine clerkship.

Rationale/Need: Most preventable morbidity and premature mortality in the industrialized world are closely associated with modifiable human behavior (1). Motivational interviewing is a patient centered counseling technique useful in encouraging patients to consider and implement behavior change (2). Like all skills, motivational interviewing (MI) needs to be reinforced throughout training. Although medical students are introduced to the basic principles of MI during years one and two, they have little opportunity to practice with patients. The six week family medicine rotation, provides the perfect environment to merge the classroom instruction in the first week with practice opportunities throughout the next five weeks

Methods: The participants will be the 190 medical students, who will rotate through the Family Medicine clerkship in seven groups (24-30 students per group) during 2016-17. This intervention builds upon 8 hours of first and second year medical student training in concepts relevant to motivational interviewing. At the University of Southern California students spend the first week of the Family Medicine Clerkship on campus in classroom sessions, and the next five weeks in a clinical site, typically working one-to -one with a family physician. During the classroom week students will participate in a two-hour workshop to review the principles of MI and to role-play a series of scenarios using these techniques. While the students are at the clinical sites, a faculty member will be available for web-based consultations to assist them in the use of MI with their patients. This web-based mentoring provides back up for sites with no MI expert available. During these consultations a protocol will be in place to protect patient confidentiality. A pilot will be conducted in Spring 2016 to ensure the viability of a web-based platform for student consultations concerning MI. Potential platforms include SKYPE, FACE TIME, Blackboard Collaborate.

Evaluation Plan: Learner reaction to the workshop will be assessed using a standard session assessment form. The number of web-based consultations will be tracked during each rotation. Learners that utilize the web-based consultant will be asked to complete a survey monkey form to assess the usefulness of each session. Upon return to USC from their clinical assignment each student will complete a brief questionnaire to note a) their confidence in utilizing MI principles, b) how often they incorporated MI techniques into their interactions with patients, c) any challenges they encountered, and d) the key learning point they are taking with them. In addition, each medical student writes a narrative story during the family medicine clerkship. These stories will be examined to determine what percent, if any, include their usage of motivational interviewing in their stories. All of these data will be utilized to determine the effectiveness of this new curricular unit.

Potential Impact/Lessons Learned: If effective in encouraging the use of MI at the medical student level, this unit could be a model for other medical student clerkships so that entering residents are prepared to utilize these skills at entry

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Assessment of a Trans-Disciplinary Introduction to Clinical Medicine (ICM) Course

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Idea/Problem Statement: The Health, Technology, and Engineering (HTE) program groups a medical and PhD student subset together for ICM; quality of the experience is unclear.

Rationale/Need: Modern medical research is now highly complex, which has encouraged a shift towards a more collaborative approach to projects, referred to as "team science" [1]. Experts in technologic fields such as computer science and engineering are increasingly partnering with physicians on big data analysis, mobile health application design, and medical device development. However, engineers may not possess the clinical reasoning or communication skills taught in medical education necessary to design and complete such projects. Changes in educational curricula have been endorsed [2], and in 2011 the University of Southern California and Keck School of Medicine started the HTE program to join medical students and engineering PhD students. One part of this curriculum requires PhD students to take ICM with first-year medical students in order to learn to identify opportunities for interventions, build communication skills, and learn collaboration [3]. ICM is a longitudinal course that meets weekly composed of small groups of 6 students and 1-2 instructors, and features interaction with real patients to teach history-taking, physical exam skills, and professional identity formation. It is unclear how this experience benefits all parties and if this experience is appropriately structured. Therefore we plan to conduct a structured qualitative assessment of the HTE-ICM experience

Methods: We will conduct four focus groups to evaluate the current practices and assess the course's ability to meet stated goals. We will also identify problems and generate ideas for additional goals or changes to the system. Three focus groups will consist of 6 members who are past (1) PhD students (2) MD students or (3) ICM instructors and the fourth group will be (4) a mixed group of current PhD and MD students. Subjects will be recruited via email from the pool of participants on a voluntary basis; participation will be encouraged by providing food during the focus group. Ninety minute group interviews will be conducted by both authors and audio-recorded with transcripts then reviewed to identify themes. Results from the focus groups will be used to design a survey sent to all current and past members and stakeholders of HTE-ICM to confirm preliminary findings and narrow potential changes to the curriculum.

Evaluation Plan: Two researchers will review verbatim transcripts of focus group conversation using qualitative research techniques. Quotes representing the themes will be coded and grouped together into themes with the aid of computer software. Themes emerging from the data will then be used to develop a survey to confirm these findings and interest for hypothetical curricular changes which will be sent to all current and past students. Survey responses will be reported descriptively.

Potential Impact/Lessons Learned: Implementation of this study will highlight barriers and successes in trans-disciplinary courses that can be used to both enhance our local experience and guide development of similar programs at other institutions.

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The Effectiveness of the E-learning Program KOLI on First-Year Medical Student Performance

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Idea/Problem Statement: To determine how a curriculum-tailored, spaced repetition e-learning program affects first-year medical student academic performance and satisfaction.

Rationale/Need: Transitioning into the high-volume, information-dense curriculum of medical school can pose a challenge for many incoming first-year medical students. As a result, many medical students turn to memorization aid programs (MAPs). Most MAPs are flashcard-based tools that use the extensively studied principle of spaced repetition to test student retention of the material.1,2 In 2014, a community-generated flashcard program was started at the Johns Hopkins School of Medicine. The majority of students who utilized the program and responded to surveys rated it as being helpful in improving their exam scores.3 However, in general there is a paucity of research on the effectiveness of specific MAPs. Moreover, there is little data regarding institution-supported, content-driven programs that link student exam scores and satisfaction to usage of MAPs.

Methods: The Keck Online Learning Initiative (KOLI) at the Keck School of Medicine at USC was tasked with choosing an e-learning MAP and developing content for the incoming first-year medical students. Results from a preliminary needs assessment indicate that there is an overwhelming demand for an e-learning MAP among first-year medical students. In response, KOLI chose to use Memorang, a program that offers spaced repetition learning in addition to unique organizational and learning mode features. At the beginning of the first system block (FMS1), all first-year medical students at the Keck School of Medicine were invited to use the KOLI program. As a part of KOLI, 15 second-year medical students build Memorang study sets based on each first-year lecture for the first-year students. Each study set was standardized to a pre-set list of guidelines and checked by fellow second-year program coordinators for quality control. First-year students were encouraged to contribute to the collaborative nature of the program by submitting errata and feedback on each study set.

Evaluation Plan: An observational study of a population of first-year medical students (N=187) at one institution will be conducted. Data from Memorang usage reports and KOLI-developed surveys will be examined to determine the whether and how MAPs influence students' academic performance and satisfaction. Examples of usage data include, but are not limited to, the number of facts studied, total time spent studying, and response accuracy. KOLI developed post-exam surveys will collect data concerning student studying behavior and self-reported satisfaction. Student data will be matched across these sources through assignment of a random identifying number. Descriptive analysis will be conducted to understand the nature of data collected. Appropriate inferential and multivariate analyses (e.g., t-tests, regression) will be performed to determine if there is a relationship between KOLI Memorang study set usage patterns and student performance on exams.

Potential Impact/Lessons Learned: KOLI aims to level the medical education playing field by providing a collaborative, online platform to learn and retain fundamental basic sciences knowledge. By combining the unique features of Memorang with content tailored to a single institution's cur

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Curriculum development consultants: A model for promoting the learner's perspective

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Idea/Problem Statement:
We developed an innovative model for enhancing the learner's perspective in curricular design that goes beyond students serving on committees

Rationale/Need:
Harvard Medical School is in the midst of curriculum reform that alters both the structural design of the medical curriculum as well as the pedagogical methods that instructors are using. A major component of the pedagogical change is the shift from traditional lecture-based learning to more interactive and flipped-classroom learning sessions, wherein students prepare material in advance of the class session and work on problems with faculty during class. This pedagogical transition has required students to adapt to new learning models, but it has also forced faculty to develop new teaching styles and new course material.

However, as these sessions were put in practice, it was noted that the success or failure of these sessions was based on factors that were apparent to the students and less apparent to the instructors. For instance, preparatory readings were ill-structured or the in-class material was redundant to the preparatory material. Yet, there was not a good mechanism for students to highlight these experiences to faculty. Efforts were made to include students on curriculum course committees, however these committees were focused on logistics of course design, as oppose to pedagogical development.

To help remedy this issue, a group of students and faculty felt that a more structured process for faculty to engage students on the student's learning experience would provide valuable insight and help to create improvements in the development of the curriculum.

Methods:
To better integrate the learner's perspective in curriculum development, students were invited to work with faculty as Curriculum Development Consultants. In this role, students were given the ability to work directly with faculty in three different modalities:

- Session Review, In-Person Consult, and Session Development. The modalities are different to provide varying functions for faculty and varying levels of engagement for students.
- Session Review involves a faculty member making a lesson plan for a single class session available to three student consultants, who then review the materials and provide comments regarding the content and quality of the materials with the goal of helping the faculty member consider the subject matter from the learner's perspective.
- In-Person Consult consists of students meeting with a faculty member to provide the learner's perspective on a given aspect of a course or a specific topic. This may take the form of feedback on developing a new clinical elective or a mock teaching session.
- Session Development is designed for students to work closely with individual faculty members to develop new course sessions. This may include reviewing learning objectives, discussing in-class exercises, and developing the session material.

To organize this process, we developed a system for faculty to request a consult and each week a digest of all the available consultation opportunities is emailed to students who can then sign-up to participate.

Evaluation Plan:
Over the coming year, we plan to evaluate the Consultant program looking to understand two questions, does the integration of the learner's perspective improve the learning experience for students, and does this process lead to culture change in the student-faculty relationship? To answer these questions we have developed a number of evaluation approaches.

For Session Review, we plan to conduct a randomized control trial to evaluate the influence of the learner's perspective on teaching sessions. To do this, we will randomize individual sessions for review and then evaluate students' satisfaction and test scores from both reviewed and non-reviewed sessions.

For the In-Person Consult, we will conduct focus groups with students and faculty, and then compare the findings to prior focus groups of students serving on course committees.

For Session Development opportunities, we are planning to perform structured interviews with both students and faculty who participate in this activity.

Potential Impact/Lessons Learned:
Improving student-faculty dialogue and enhancing curriculum by incorporating the learner's perspective

Reducing Early Childhood Caries (ECC) in Kids Through Interprofessional Workforce Development

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Idea/Problem Statement:
500,000 children in LA have a medical home but have never seen a dentist. Can we design a reliable approach to reduce early childhood caries (ECC)?

Rationale/Need:
ECC is the most common chronic and infectious disease in children- 5 times more common than asthma. Lack of oral health care is the most common unmet healthcare need of children in the US, and here in Los Angeles County there are at least 500,000 children who see a doctor but never see a dentist. Without intervention ECC results in malnutrition, childhood speech problems, low self-esteem, and serious potentially fatal infections- resulting in missed days of school and learning problems that prevent children from succeeding in school and life. Medical and dental care are usually siloed services, leading to gaps in care. A lack of access to dental homes provides an imperative for shifting screening and some interventions to the medical home but health professional training in caries risk assessment has been limited and it is rarely practiced within primary care clinics. A new approach is needed which requires revisions in both core curriculum and care team design. We have found synergy in applying lessons learned from an Advanced Practice Nurse- based ECC care model developed collaboratively by the UCLA Schools of Nursing and Dentistry within an innovations network collaborative funded by First 5 LA. Early data suggests that care team training in ECC care processes can result in higher rates of screening and intervention and lower rates of ECC in children 0-5 seen in community clinics.

Methods:
The purpose of this educational innovation is to revise undergraduate nursing core curriculum and care team design to better equip learners to participate in an interprofessional care model for reducing ECC. Specific teaching strategies will be integrated into a nursing theory course using multiple approaches (cultural awareness/diversity, motivational interviewing, case studies, group discussion). Approximately 80 student nurses will participate by incorporating oral health promotion, ECC risk assessment, risk stratification and application of evidence based care bundles.

Successful learners will demonstrate competencies which include:

1. Knowledge of the pathophysiology and epidemiology of ECC.
2. Participation in population-based strategies to screen, risk stratify, and implement evidence-based prevention and treatment interventions to reduce ECC.
3. Articulate the role of the RN in leading interprofessional care teams committed to reducing ECC.
4. Demonstrate core interprofessional care competencies.

Evaluation Plan:
Outcome #1: Significant increase in knowledge as measured by pre-post and post-test assessment.
Outcome #2: Portfolio development from formative clinical service-based learning activities including the use of care guidelines, risk stratification and care bundle assignment, use of registries to risk stratify and monitor care processes, use of swim lane diagrams, PDSA cycles, and run-charts to streamline and improve reliability of care processes.
Outcome #3: Essay assignments within the student portfolio.
Outcome #4: OSCE and Sim-Lab demonstration of attitudes and skills consistent with successful participation within interprofessional care teams.

Potential Impact/Lessons Learned:
Through ECC curriculum and care redesign learners will demonstrate competency in caries risk assessment and care planning as well as specific competencies in interprofessional care thereby preparing them to participate in a more effective workforce. As a

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SELECT: Re-Envisioning Physician Leadership

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Lehigh Valley Health Network; University of South Florida Health Morsani College of Medicine

Idea/Problem Statement:
Most medical students are not equipped with leadership skills. The SELECT program is designed to train the physician leaders of tomorrow.

Rationale/Need:
Our innovative program started with the premise that the physician leader of the future must have high emotional intelligence to provide patient centered treatment, work collaboratively with colleagues, and negotiate a complex and evolving health care system. Our medical school curriculum to date struggled to provide such additional training in areas of leadership, health systems and values-based patient-centered care. As a result, providers are faced with rapid, change, increasing complexity of rules and documentation, feeling ill-equipped and relatively powerless. This has resulted in a loss of professionalism, physician dissatisfaction and burnout rates approximating 46%. SELECT - the only four year longitudinal undergraduate medical education program in the nation that is focused on the four domains of values based patient centered care, health systems, leadership, and scholarly excellence – was created to address these issues.

Methods:
SELECT is a four year curriculum designed train future physician leaders to negotiate an increasingly complex and rapidly evolving health care system. SELECT is highly innovative in both its design and delivery. The innovations began with the partnership between USF MCOM and Lehigh Valley Health Network (LVHN). After an innovative and rigorous admissions process, including Behavioral Event Interviewing (BEI), students spend the preclerkship years at USF-Tampa campus acquiring skills and understanding in the domains of leadership, values-based patient-centered care, health systems, and scholarly excellence. Clerkship years are spent at LVHN, an integrated health system permitting students to refine and apply their skills in a myriad of clinical settings. Delivery of course materials is highly interactive, including: case-based learning, simulations, and small and large group activities. Another unique aspect of the SELECT program is the assignment to each student of two faculty who serve as coaches throughout all four years. One coach is from the Tampa campus and one from the Allentown campus. The coaching pair works with a cohort of eight students, as well as individual students, for four years.

Evaluation Plan:
Students' knowledge is evaluated via multimodal pathways, including: classroom exercises; simulation; posters; OSSEs; group presentations; professional development plans; and coach and peer evaluations. While leadership courses often provide students with a theoretical foundation, traditional delivery of the content is not adequate to provide the appropriate context for students to apply their learning. It is crucial to provide contextual learning and assessment opportunities early on in the student's learning cycle for all aspects of the SELECT program curriculum, to ensure understanding of concepts early enough for students to work on mastery of application in the clerkship years. The unique nature of SELECT make it challenging to assess the outcomes of the program at the level of the individual student. We continue to investigate innovative methods of evaluating both student progression through the program, as well as programmatic outcomes and goals.

Potential Impact/Lessons Learned:
SELECT increases the likelihood that program graduates will enter practice with the tools they will need to be effective leaders. Additionally, SELECT supports the faculty development, facilitating dispersion of knowledge. Most importantly, the potential

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Developing Professionalism in UME through Longitudinal Learning Communities

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Idea/Problem Statement: Expanding first and second-year medical students' understanding of professionalism through longitudinal, faculty- facilitated Learning Communities

Rationale/Need: Professionalism at the undergraduate medical education (UME) level has been defined as "a process of socialization where students acquire not only the knowledge and skills, but also the values, attitudes and beliefs, in essence the culture of the profession of medicine". (1) To underscore the importance of teaching professionalism in UME, the AAMC's Entrustable Professional Activities include the competency of Personal and Professional Development. Local needs assessment data and the literature demonstrate that, from commencement of the pre-clinical years, medical students face challenging situations not easily addressed by standard professionalism curricula.(2) Longitudinal Learning Communities (LCs) with well-trained facilitators offer a curricular solution. Per an international consensus of UME deans, the most common primary goals of LCs include: fostering communication among students and faculty; promoting caring, trust, and teamwork; and helping students establish academic and social support networks. (3) Locally, students describe the LCs as a safe space for discussion of and reflection on the common, challenging situations in the complex and nuanced world of medical professionalism. This proposal is to expand our current LC curriculum in the University of Miami Miller School of Medicine MD/MPH track to include a focus on professionalism.

Methods: During the 2016-17 academic year, first-year medical students in the MD/MPH track (n=48) will meet once monthly across the academic year for a two-hour LC small-group session led by trained clinical faculty facilitators. Facilitators will meet before each session to be briefed on the learner objectives and plan. The first hour of the session will be dedicated to discussion of learners' guided self-reflections. The second hour will be a case-based review of a developmentally- appropriate challenge to professionalism (e.g., impairment, unethical conduct, managing value differences amongst patients/peers/colleagues/school administration, the impact of the hidden curriculum). Student will apply their prior knowledge and experiences, their value systems, and problem-solving skills to brainstorm, role-play, and map out strategies to approach such challenges. Facilitators will encourage learners to ask "Why?" in a way that promotes self- reflection and self-efficacy, with the assumption that learners are capable of finding answers, taking action, adapting to change, and learning from their own and others' professional missteps. In 2017-18, the program will be extended into the second year of the program while being continued with new first year students. By the end of the program, learners should demonstrate increased knowledge about and confidence in their approach to common challenges to professionalism.

Evaluation Plan: Learner reaction to this programmatic expansion will be evaluated twice yearly using a standard course evaluation form. Learners will also complete session-specific questionnaires to assess teaching quality, relevance of case content to current practice, and efficacy of application exercises. To assess learning, faculty facilitators and program directors will use the REFLECT rubric (Wald, 2012) to assess and provide feedback on students' guided self-reflections for identification of professional challenges and depth of reflection. At the end of each session, learners will complete Commitments-to-Act/Change with brief written follow-up at the next session. Comparison of Commitments-to-Act/Change will assess changes in learner behaviors, as well as barriers to behavioral change.

Potential Impact/Lessons Learned: If effective in enhancing professionalism, the LC framework combined with a case-based curricular model could be implemented in UME programs nationwide.

References:

1. Goldie, J. Integrating professionalism reaching into undergraduate medical education in the UK setting. Medical Teacher. 2008 June; 513-527.
2. Kirch DG, Gusic ME, Ast C. Undergraduate Medical Education and the Foundation of Physician Professionalism. JAMA. 2015; 313(18): 1797-1798
3. Ferguson KJ, Wolter EM, Yarbrough DB, Carline JD, Krupat E. Defining and describing medical learning communities: results of a national survey. Acad Med. 2009 Nov;84(11):1549

Using Kolb's Learning Cycle to Build Professionalism

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Idea/Problem Statement:
A modular curriculum in pharmacy school to develop the knowledge, skills, attitudes, and behaviors necessary for professionalism.

Rationale/Need:
Professionalism is an age-old concept within the healthcare profession. But students do not automatically become professionals merely by graduating from school. In fact, professionalism is often described as an "elusive goal" within schools of pharmacy. The expansion of pharmacy practice in the context of an evolving healthcare landscape has created significant challenges for developing professionalism as a uniform standard. Proper role modeling remains inconsistent in practice and education. This raises concerns as literature indicates role modeling and the "hidden curriculum" to serve as powerful influences for shaping student professionalism.

Yet guidance on professionalism often involves simple reprimands to improve demeanor, language and physical appearance. Although addressing such behaviors are important, students need to value the principles and underlying reasons for such behaviors. The American College of Clinical Pharmacy (ACCP) responded by publishing the Tenets of Professionalism for Pharmacy Students to provide a framework for professionalism. Furthermore, the Accreditation Council for Pharmacy Education (ACPE) released new standards calling for the educational need to support professional development. The standards require schools to impart the graduate with the knowledge, skills, behaviors, and attitudes necessary to demonstrate professionalism. A curriculum is clearly needed to deliberately teach the various competencies of professionalism.

Methods:
The proposed course will utilize two units per semester. The ACCP White Paper on the "Tenets of Professionalism for Pharmacy Students" will serve as the framework for student professionalism.

Kolb's learning cycle will be used to develop the skills, attitudes, and behaviors of professionalism:

I. Concrete Experience/Learners will be third year pharmacy students already receiving required Introductory Pharmacy Practice Experiences (IPPEs) as part of the school curriculum. The IPPEs will provide concrete experiences for patient encounters and professional socialization.
II. Reflective Observation/Students will be divided into small groups to share, reflect, and discuss the IPPEs. Small group facilitators will encourage students to recall experiences that challenged their views on professionalism.
III. Abstract Conceptualization/Students will express why their experiences were professionally challenging. Students will conceptualize their response to these challenges with their peers. The personal values expressed by students will be compared and contrasted with the tenets of professionalism.
IV. Active Experimentation/Through group discussion and consensus building, students will build confidence to characterize their own values of professionalism. They will be prepared for their next practice-based experience to exercise their professionalism.

Each week of the course will repeat this learning cycle to explore a different domain of professionalism.

Evaluation Plan:
The evaluation will include:

1. A pre- and post-curricular survey
2. A professionalism portfolio collating attendance records, multi-source feedback, critical incidents, and reflective writing /
3. Direct observation and evaluation of small group discussion by facilitators
4. A summative reflection at the end of the course
5. Triangulation to evaluate the teaching effectiveness of professionalism by combining self-assessment, peer assessment, and student assessment

Potential Impact/Lessons Learned:
Students will clearly describe the different tenets of professionalism and express how their own personal values align with professionalism. Students will be prepared to address the challenge of inconsistent professional socialization in practice and educ

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1. American College of Clinical Pharmacy. Tenets of Professionalism for Pharmacy Students. Pharmacotherapy 2009; 29(6): 757-759.
2. White Paper on Pharmacy Student Professionalism. Journal of the American Pharmaceutical Association 2000.
3. O'Sullivan H et al. Integrating Professionalism into the Curriculum. Medical Teacher 2012; 34: e64-e77.

Uncovering Implicit Bias

Chang, Jinnie; Munir, Naeemah

UC San Diego School of Medicine

Idea/Problem Statement:
A curriculum for pre-clinical medical students which will facilitate the process of uncovering implicit bias

Rationale/Need:
Racial bias can create health disparities via three pathways. The first pathway is persistent everyday discrimination that minority individuals experience which cause physiological and psychological stress also known as allostatic load. Allostatic load is associated with higher incidence of chronic disease such as hypertension, diabetes, respiratory problems, cardiovascular disease, and depression. The second pathway is physician implicit bias which may lead to disparities in physician decision making including diagnosis and treatment and thus racial healthcare disparity. The final pathway is the effects of physician implicit bias on the physician-patient relationship. Implicit bias may affect physician behavior in ways that may elicit a negative patient reaction, which degrades clinical communication and thus contributes to racial healthcare disparity (1).

Although healthcare providers may not be able to change the realities of persistent discrimination that our minority patients experience in their daily lives, we can address the implicit bias we carry into our patient encounters. The purpose of this idea is to prompt the exploration of implicit bias in ourselves to decrease racial healthcare disparities and thus diminish racial disparities in health.

Methods:
Phase I: Pilot Small Groups
The goals of the small group discussions are to:

Understand how bias affects healthcare
Uncover our own bias as future healthcare providers- participants will be encouraged to take the Implicit Association Test (IAT) (2) before meeting with the small group. Students will also be asked to reflect on previous moments where they have witnessed or experienced bias
Provide the tools and resources necessary to alleviate the impact of bias on our practice
During these pilot small groups, we will develop and evaluate prompts and discussion questions based on student responses.

Phase II: Facilitator Training
The facilitator's role in the small group discussion is crucial to providing a safe space; and thus facilitators must be aware of their own bias and be comfortable with discussion bias amongst students. We would request for facilitators to take the IAT prior to participating in the training. Similar prompts developed during the pilot small groups will also be used during the facilitator training.

Phase III: Incorporation of Small Groups into Practice of Medicine (POM) Curriculums
The small group discussions, along with prompts will become apart of the curriculum during pre-clinical years. Meetings have already taken place with the course directors who are in support of incorporating implicit bias discussions into POM. All discussion prompts and resources provided to students will be approved by the course directors.

Evaluation Plan:
A training session will be held for all small group facilitators. The purpose of the session will be to understand the goals of the workshop and provide general guidelines about how to create a safe space for participants to explore themselves. A large part of this process will involve facilitator feedback for the workshop vignettes. Additionally, there will be a facilitator feedback session after the workshop where facilitators will brainstorm improvements for future workshops, especially focused on how our performance can be more conducive to honest discussion.

Pre and post surveys will be given to participants to assess their understanding of how bias may cause health disparities, how their own bias shapes their care, and whether they feel they have the tools to effectively engage with these issues.

Potential Impact/Lessons Learned:
By empowering students to acknowledge their own implicit bias, accept their bias, and actively prevent it from affecting patient care, we will narrow the racial health disparities gap.

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1. Louis A Penner, Irene V Blair, et al. Reducing Racial Health Care DIsparities: A Social Psychological Analysis. Policy Insights from the Behavioral and Brain Sciences. 2014. Vol. 1(1) 204–212.
2. Implicit Association Test: (https://implicit.harvard.edu/implicit/takeatest.html)

Homelessness and Health Care: An integrated curriculum session for first-year medical students.

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Idea/Problem Statement:
An integrated, interactive, multi-modal curriculum session for first-year medical students to address issues in homelessness and homeless health care.

Rationale/Need:
Homelessness is an issue that negatively impacts a person's health and presents barriers to self-care and access to health services. In 2014, 578,424 people were homeless on a given night in the United States [1]; in 2015, the total in Los Angeles County was 44,359 people [2]. Health care professionals may benefit from educational programs to increase their understanding of issues and barriers pertaining to this uniquely underserved and vulnerable population, and can also play a role in improving processes to link patients with community resources. Medical students at the Keck School of Medicine of USC (KSOM) have varied breadth in their experiences with and knowledge of issues affecting homeless patients. The Liaison Committee on Medical Education calls for medical schools to provide an environment that will facilitate the "recognition and development of solutions for health care disparities" and "the importance of meeting the health care needs of medically underserved populations" [3]. At KSOM, students participate in the care of the indigent and homeless population serviced at Los Angeles County + University of Southern California Medical Center (LAC+USC). However, no formal curriculum surrounding homelessness and health care currently exists.

Methods:
Students will complete a pre-participation survey that assesses their knowledge and attitudes on homelessness and health care considerations. An introductory two-hour session will be delivered to MS-1s on Homelessness and Health Care (HHC) during their Professionalism and Practice of Medicine (PPM) course. The session will feature a student-led presentation as well as small-group discussion with guest speakers. During the session, students will learn about the definition of homelessness, its demographics, and its risk factors. Through interactive classroom techniques such as film clips, facilitated discussion with guest speakers, and student presentations, students will engage in open dialogue to address preconceptions and implicit biases surrounding homelessness. By session's end, students will be able to describe the unique challenges the homeless population faces; recognize how discrimination can affect the homeless; describe key components of the history and physical exam particularly relevant to homeless health care; and access resources for homeless patients. They will also develop a systematic approach toward taking care of homeless patients, which will aid them in addressing the unique health care needs of the population and understanding how to provide resources for homeless patients. The session will be coordinated to coincide and be integrated with Homelessness Awareness Week at KSOM, which will include lectures, panels, and volunteering opportunities.

Evaluation Plan:
Evaluation of the session content will include assessment of student reaction (Level 1) through an end-of-session evaluation and student reflection pieces. MS-1s will also complete pre-test and post-test surveys to assess learner changes in attitudes and knowledge (Level 2), using both qualitative and quantitative methods. Second-year students who did not have the session in their curriculum will also complete a survey that assesses existing attitudes and knowledge at KSOM. By analyzing the differences between the MS-1 pre-test and post-test results, we hope to determine the impact of the session on student knowledge. Analysis of the differences between MS-1 post-test results and second-year students' test results will be used to assess the session's ability to fulfill the extant need for a formal curriculum addressing homelessness at the medical school level.

Potential Impact/Lessons Learned:
This HHC curriculum at the KSOM has the potential to positively impact existing student knowledge, attitudes, and exposures with regard to working with the homeless population. The curriculum can be a model used in other medical schools, residency program

References:

1. Henry M, Cortes A, Shivji A, Buck K. The 2014 Annual Homeless Assessment Report (AHAR) to Congress. October 2014.
2. Homeless Count Results. Los Angeles Homeless Services Authority web site. http://www.lahsa.org/homelesscount_results. Published in 2015.
3. Liaison Committee for Medical Education. LCME: Functions and Structure of a Medical School (Standard 7.5- Societal Problems). April 2015.

Homelessness Awareness Week: From Policy to Health Care Practice

Trop, Justin; Zia, Stephanie K.

Keck School of Medicine of the University of Southern California

Idea/Problem Statement:
Week-long series of discussions, panels, presentations, and shadowing opportunities aimed at educating health professions students about homelessness

Rationale/Need:
Homelessness is an issue that negatively impacts a person's health and presents barriers to self-care and access to health services. An important goal of health care practitioners is to promote and protect patients' health. In order to do so effectively, it is imperative not only to assess their risk factors, signs, and symptoms, but also to understand their stories and the contexts in which they live their everyday lives. The Homelessness Awareness Week (HAW) seeks to aid students in gaining such understanding by engaging them in discussion about how political, economic, social, psychological, environmental, and personal factors come together to impact homeless health. Such understanding is especially important for health professions students in Los Angeles County, given that there are an estimated 44,359 homeless individuals here and homelessness is associated with overall poorer health outcomes including higher rates of communicable disease, malnutrition, violence, and mental health problems [1,2]. Research shows stable housing is a crucial element in maintaining good health in conjunction with coordinated medical and social services [2], but students and practicing health care professionals may lack knowledge regarding how to connect homeless patients with housing and other such services. Hence, HAW will also provide students with the opportunity to learn about available resources for homeless patients and the process of social service referral and provision.

Methods:
The HAW project was first launched in 2015 to address the need for education regarding homeless health disparities and health care. After receiving positive informal feedback, it has been expanded, and now will take the form of a week of events including the following:

Day 1: Policy Update on Homelessness in LA. Lecture by UCLA professor. Volunteering at a food pantry in Skid Row Day 2: Mental Health.Talk by LA Times journalist about getting to know a homeless man with schizophrenia / Discussion with mental health service providers and patients from a homeless services agency
Day 3: Clinical Perspectives. Panel of clinicians from internal medicine, emergency medicine, nursing, pharmacy, psychiatry, and social work who provide care to the homeless population
Day 4: Homeless Advocacy and Service Provision. Q&A with LAPD Officer who serves Skid Row and LA Times journalist who covers issues of homelessness. Shadowing experience with LAPD Officer and "backpack doctor" in Skid Row. Discussion with homeless housing service providers about temporary and permanent housing options

The goals of this week are to increase knowledge about homeless health disparities, enhance understanding about the diverse factors that impact homeless health, and empower students to connect homeless patients with housing and social service providers. HAW will also be integrated with a new curricular session on homelessness delivered to first-year medical students at Keck.

Evaluation Plan:
Attendees will complete a short evaluation at the end of each event to assess their knowledge, confidence in serving a homeless patient, and their commitment to change as a result of the HAW events. Level 1 attendee reactions will be collected using a Likert scale, while qualitative comments will be solicited regarding attendees' ability to incorporate what they have learned into clinical practice (Level 3) and their suggestions for improvement of HAW.

Potential Impact/Lessons Learned:
HAW's potential impact lies in its exploration of homelessness from diverse perspectives and its ability to empower students to better care for and connect homeless patients with social services. Furthermore, HAW can serve as a model for other student-led

References:

1. Los Angeles Homeless Services Authority. “Homeless Count Results.” The Los Angeles Homeless Services Authority. 2015. http://www.lahsa.org/homelesscount_results.
2. National Health Care for the Homeless Council. “Homelessness & Health: What’s the Connection?” National Health Care for the Homeless Council, Inc. June 2011. http://www.nhchc.org/wp-content/uploads/2011/09/HIn_health_factsheet_Jan10.pdf

Enhancing Learning Outcomes By Optimizing Medical Students' Mind Settings

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Idea/Problem Statement:
Developing a curriculum that induces, triggers, or nurtures medical students' appreciative attitude to ficilitate teaching and learning

Rationale/Need:
Factors that may influence learning processes and outcomes can be classified into two categories: external and internal. External factors include all environmental factors that a learner cannot control, such as parentage, classroom settings, regulations, strategies, learning theories, pedagogies, or available technologies. Internal factors include learners' inborn aptitude, shapeable mind-settings formed largely from their life experiences after birth, or the interplay of both. Educators should all agree that positive internal factors such as positive attitudes, ambition, appreciation, interest, and wonder are all teachable mind settings. Here we use the term "external causes" to refer to all educational efforts that are made to improve learners' external factors and "internal causes" to mean the combination of a learner's inborn aptitude and acquired shapeable mind-settings. Between the two aspects of the internal causes (inborn and acquired), the latter (i.e., mind-settings) are where the educational efforts can be the focus of educational efforts, but these efforts are rarely seen—i.e., educational approaches that are designed to shape or optimize learners' mind settings.

The author's previous scholarly works (Kuang, 2005, 2006) have revealed that an appreciative attitude has the potential to open the wisdom of learners and enhance the effectiveness of teaching and learning. Hence, we are developing a curriculum to foster an appreciative attitude.

Methods:
The curriculum is organized into four modules. Module I deals with Human Achievement (levels and patterns). Module II deals with Human Potential (how much and how intelligent). Module III deals with Human Relationships. And Module IV deals with what and how to appreciate.

Implementing the curriculum as an educational intervention involves two major steps. Step one is to train teachers how to use the curriculum. Step two is to have trained teachers to apply the curriculum in their classes.

The curriculum is being designed to have following format:

1. weekly, doable, short, fun tasks, readings, or thought pieces.
2. a year-long series
3. taking a stance of negative contrast. Some examples of the thought pieces using a stance of negative contrast are as follows:
   - Hypoglycemia causes coma and hyperglycemia causes many other problems of life-long suffering, so one should be grateful for the homeostasis of blood glucose level.
   - No one can afford a renal failure, so treasure and appreciate your renal success every day.
   - Quasi-experimental studies will be conducted using the curricular intervention as an educational treatment. Better academic performance or higher scores are expected from the experimental group than the control group.

Evaluation Plan:
1. Pre- and post-module surveys will be used to know how students' attitudes are changed after treatment.
2. Anything a teacher is using to evaluate the outcome of his/her subject; for example, if he teaches physiology, the same evaluation method will be used, and the experimental group is expected to have better scores for physiology.

Potential Impact/Lessons Learned:
The idea is the author's synthesis of modern Western life science and ancient Eastern wisdom, especially Confucianism. It reveals a hidden link between one's appreciative mind setting and potential and how an appreciative mind setting channels one's potential.

References:

1. Kuang, Y. (2005). A New Dimension to Facilitate Teaching and Learning. American Association of Behavioral and Social Sciences Journal, 43-53.
2. Kuang, Y. (2006). The Roots of Human Life and Prosperity. American Association of Behavioral and Social Sciences Journal, 113-122.

Introduction of Reciprocal and Near Peer Teaching Involving Pediatric Clerkship Students

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USC; CHLA

Idea/Problem Statement:
Implementation of a novel curriculum for 3rd and 4th year medical students designed to improve student learning through peer teaching in pediatrics.

Rationale/Need:
The idea of reciprocal and near peer teaching is not a new concept in educational research, particularly in medicine1. Many studies describe benefits of student peer teaching in the classroom i.e., creates a safe learning environment, enhances intrinsic motivation and alleviates teacher burden. This provides unique advantages for clinicians who must provide high-quality patient care simultaneously while effectively educating learners. There are several descriptions in the medical literature on reciprocal peer teaching (RPT) in the classroom, e.g., gross anatomy lab; however, there is a paucity of curricula introducing this during the clinical years where medical students are exposed to tremendous opportunities to learn while at the patient's bedside2. We aim to introduce the innovative concept of student peer teaching in the inpatient setting two ways: 1) incorporate RPT in the 3rd year pediatric clerkship during weekly bedside sessions with a pediatric hospitalist serving as both facilitator and observer while students alternate between learner and teacher roles and 2) apply a near peer teaching curriculum during a 4th year sub internship where a senior medical student serves as educator for the junior clerkship student. We currently conduct these student-led sessions at our institution, but have not developed a structured curriculum to study its efficacy. Our primary goal is to show that peer teaching improves student learning by showing change in attitudes and skills.

Methods:
during their 6 week pediatric clerkship and take place over 1 year. The intervention for the RPT method for 3rd year medical students will include the following: 1) a 1-hour didactic teaching session led by a pediatric hospitalist during week 1 of the clerkship which will include introduction of concepts of communication, strategies for small group teaching at the bedside and how to provide "on-the-fly" face-to-face feedback 2) weekly 1.5 hour teaching sessions where each student chooses a patient of theirs and takes the group to the bedside to provide a 15-minute session on concepts of their choice- i.e., demonstrate a physical exam technique, present their patient in a brief, case-based format and ask students questions, or demonstrate how to review asthma action plans or going over the patient's medications 3) one learner will then provide brief, face-to-face feedback to the presenting student. A hospitalist will serve as facilitator to add any additional teaching points related to their case. The intervention for the near peer teaching method will comprise of a 4th year pediatric sub-intern who will also be given a 1-hour didactic session led by a pediatric hospitalist as above with the addition of a brief overview of adult learning theory. They will then be asked to: 1) prepare and lead a 1-hour small-group teaching session to the third year students and 2) lead a half-hour bedside teaching session. Students will practice self-reflection by journaling their experience.

Evaluation Plan:
Considering Kirkpatrick's Pyramid of Outcomes, an evaluation plan studying a change in reaction and behavior will be utilized. The facilitators during the bedside sessions will directly observe the students' teaching and complete a brief, 5-question checklist evaluating the student's effectiveness in delivering a clinical concept, communicating their thoughts effectively, and their knowledge of the concept and accuracy of their bedside skills. Faculty will be trained to use these checklists to reduce risk of varying degrees of inter-rater reliability. At the completion of the curriculum, 3rd year students will complete a brief, anonymous 10- question survey looking at confidence in teaching using a 5-point Likert scale. Statistical analysis will be completed in order to study the efficacy of the curriculum. Since there are few 4th year students rotating during one year, exit interviews will be performed using qualitative analysis to study change in behavior and attitudes.

Potential Impact/Lessons Learned:
Implementation of this curriculum will enhance clerkship students' knowledge and skills that they can utilize throughout their career and prepare them for their future role as educators. If successful, this curriculum can be implemented and studied at o

References:

1. Olle Ten Cate & Steven Durning. Peer teaching in medical education: / twelve reasons to move from theory to practice, Medical Teacher, 2007, 29:6, 591-599 /
2. Krych et al. Reciprocal Peer Teaching: Students Teaching Students in the Gross Anatomy Laboratory. Clinical Anatomy 18:296–301 (2005)
3. Bulte et al. Student teaching: views of student near-peer teachers and learners. Medical Teacher 2007; 29: 583–590

Achieving Osteopathic Recognition in a Family Medicine Residency Program

Faucette, Lindsey

Marian Family Medicine Residency

Idea/Problem Statement:
Family Medicine Residencies require new curriculum to meet ACGME accreditation (Osteopathic Recognition) and best practices require identification.

Rationale/Need:
The AOA now confers Osteopathic Recognition to any ACGME-accredited graduate medical education program providing requisite training in Osteopathic Principles and Practice (OPP).

1 Osteopathic Recognition is advantageous to residents because it preserves the pathway for residents to obtain the knowledge and skills necessary to obtain Osteopathic Board certification upon completion of their residency training. Osteopathic Family Medicine and other primary care residency programs are beginning to tackle the task of integrating OPP into their training programs, but without a standardized curriculum or set of competencies as a guide.
2 An OPP Core Curriculum based on best practices could enhance the quality of Osteopathic graduate medical education and increase Osteopathic Recognition rates in our residency program and beyond.

Methods:
The OPP Core Curriculum will be designed for 18 residents in the PGY1-3 training levels in our Family Medicine residency program. Four-hour long hands-on, skills-based interactive workshops will be held quarterly across the academic year in our residency conference center and will also be simulcast at regional Family Medicine residency programs. Sessions will focus on teaching diagnostic and hands-on treatment skills applicable to commonly encountered diagnoses in the family medicine clinic and inpatient settings including: Osteopathic approaches to low back pain, upper respiratory infections, headache and pneumonia. The sessions will emphasize deliberate 3 practice of Osteopathic Manipulative Medicine (OMM) skills with targeted, on-the-spot feedback from OMM specialists utilizing competency-based assessment tools. By the end of the three-year long program, residents should demonstrate the knowledge and skills to integrate at least two OMM techniques into each patient care treatment plan as appropriate.

Additionally, we will work to establish “best practices” for teaching OMM and achieving Osteopathic Recognition through an online Osteopathic Virtual Learning Communities.

Evaluation Plan:
Learner reaction to session content and delivery will be assessed through brief surveys at the end of each session. Competency-based checklists will be used to assess participant learning during each session and also through direct observation in the clinical setting. Learner behavior will be assessed via a questionnaire at the end of the program targeted at attitudes and OMM use in the clinical setting. Learner behavior, specifically use of OMM, will also be assessed via questionnaire during the PGY3 year and longitudinally one year after completion of the residency program. Achievement of Osteopathic Recognition by the residency program from the ACGME as well as the Family Medicine OMM Performance Evaluation resident pass rates may be used for assessment of the impact of this intervention.

Potential Impact/Lessons Learned:
This model could be used by other residency programs that seek to expand or initiate OPP education and/or seek Osteopathic Recognition at their sites. Through development of an online Osteopathic Virtual Learning Community, our Core Curriculum could be im

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1. Osteopathic Recognition Requirements. (2015, February 9). Retrieved August 16, 2015. https://www.acgme.org/acgmeweb/Portals/0/PFAssets/ProgramRequirements/Osteopathic_Recognition_Requirements.pdf
2. Rakowsky, A., Mahan, J., Donthi, R., & Backes, C. The Doctors Hospital and Nationwide Children’s Hospital Dually Accredited Pediatric Residency Program: A Potential Best Model for Pediatric Osteopathic GME Training. The Journal of the American Osteopat
3. Ericsson, K., Krampe, R., & Tesch-Romer, C. The Role of Deliberate Practice in the Acquisition of Expert Performance. Psychological Review, 100 (3), 363-406.

On a CLER Day: Creating an Additional Day of Orientation to Meet a GME Need

Simonson, Jean

University of Nebraska Medical Center

Idea/Problem Statement: To assess the impact of an educational day on the confidence and knowledge of incoming residents and fellows related to the ACGME CLER expectations.

Rationale/Need: As part of the Next Accreditation System, the ACGME has developed the Clinical Learning Environment Review (CLER) Pathways to Excellence to guide institutions in educating future physicians. Little is known about the best way to effectively and efficiently educate residents and fellows in these areas, and currently no standardized approach exists to presenting these multiple educational topics across specialty training programs.

Methods: All new residents and fellows entering GME programs at our academic medical center were expected to participate in an extra day of orientation devoted to ACGME CLER topics in July 2015. The GME Patient Quality and Safety Committee determined the content of the day. Notification of the CLER Orientation occurred with an introductory letter sent from the Committee to all new residents and fellows and the GME Office following the NRMP Match. New residents and fellows were expected to complete foundational quality and patient safety on-line learning modules prior to arrival for orientation. CLER Orientation morning didactic sessions covered topics such as the incident reporting system, residents as teachers, HIPAA, infection control, supervision, and patient safety basics. In the afternoon, residents and fellows were divided into four groups and rotated between discussion rooms and practical stations. Afternoon topics included: root cause analysis and just culture; handoffs; human factors and institutional goals; and, teamwork, communication, and professionalism.

Participants evaluated the experience and their overall confidence with the day's topics with pre and post- session questionnaires. Residents and fellows were also invited to offer open text suggestions for improvement and future sessions.

Results: Survey results are still undergoing data analysis. Initial review of the responses from the residents and fellows indicated this was seen as a worthwhile educational experience that resulted in useful and practical information presented in an efficient manner. Overall, the experience was rated very highly. Suggestions for improvement focused more on the structure and timing of the day's sessions rather than the content.

Through this one-day format, it was possible to deliver a large number of ACGME CLER topics to an audience that contained nearly all incoming residents and fellows for the institution. The trainees found most of the material to be interesting and engaging; the feedback provided from the trainees and faculty will be used to modify the session for next year. Specifically, fellows felt a full day of didactics and simulated application was redundant for them, whereas new residents did not express the same sentiment. With careful evaluation of the morning content, fellows will most likely be excused from the application exercises in the afternoon. Evaluation of long-term applicability, usefulness, and recall of the presented content has not yet been accomplished. Completion of this type of educational offering seems to have created a very positive learning atmosphere related to professionalism, quality care, and patient safety within the GME community at our institution.

Potential Impact/Lessons Learned: Whether there is any long-range impact of this intervention remains to be determined. While the results may vary, this CLER day could be easily replicated or modified for use at other programs wishing to improve their GME orientation.

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Residents' demonstration of interpersonal and communication skills and family counseling in an OSCE

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Idea/Problem Statement: This study will report results of residents' skills as demonstrated in a pediatric informed consent OSCE station across seven years (2009 - 2015)

Rationale/Need: The informed consent process represents an important responsibility physicians hold to their patients. In addition to advising the consenting party about the procedure, its risks and alternatives, fulfillment of the physician's responsibility involves employing interpersonal and communication skills, and providing counseling to patients and families. Thus, residents must be trained in this process. Several studies have demonstrated deficiencies associated with the informed consent process. For example, Leclercq et al showed that most surgical residents in Holland had inadequate knowledge about required elements of informed consent and performed inferiorly compared to trained surgeons. (1) Li et al showed that parental recall of complications discussed was poor. (2) To further guide education on this topic, incorporation of patient counseling and employment of interpersonal and communication skills in residents' performance of the informed consent process should be investigated. The use of multi-station clinical examinations has been shown to provide a reasonable assessment of resident communication skills (3), which may be translated into workplace practices.

Methods: Between 2009 and 2015, a multi-station OSCE was provided to mid-second year residents within several community hospitals. Among the twelve stations for two groups (residents in family medicine and pediatrics, n=96) was a task focused on resident performance in obtaining informed consent and providing preoperative counseling for a pediatric head trauma patient. The patient was a 3- year who had fallen out of a window and hit her head and is somnolent. The residents were speaking with her very anxious mother. Physician faculty observers completed the ratings on 16-item form. The form used a three-point scale (completed, partially completed, not done) for each item. Eight of these items pertained to case-specific consent elements (consent), six of these items pertained to Interpersonal and Communication Skills (ICS), and two of these items pertained to family counseling (counseling). Our hypothesis is that the residents' overall performances on ICS and counseling items were each lower than their overall performance on the consent items. To test this hypothesis, scores will be compared for all the residents across all the years for all items within each category. T-tests will be performed to compare performance on consent vs. ICS items and then on consent vs. counseling items. In addition we will utilize descriptive statistics to report the results on each items, looking for areas where additional education might be required.

Results: Data are currently being entered and results will be available following data analysis prior to January 2 and reported at the IME conference.

Potential Impact/Lessons Learned: Evaluation of the residents' interpersonal and communication skills and their performance of family counseling in this OSCE station will provide data that could help guide educational efforts pertaining to teaching informed consent and the preoperative preparation process. This station might also be submitted to an education repository like MedEd

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Evaluating the Skill Level of First Year Residents in Screening for Alcohol use and Depression

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Idea/Problem Statement: The study examines the results of an OSCE station that includes assessment of first year resident skills in screening for alcohol use and depression

Rationale/Need: According to the Centers for Disease and Control and Prevention (2012), alcohol drinking is the third leading cause of preventable death in the United States (1). Estimates show that lost productivity, health care, and criminal justice costs linked to excessive alcohol drinking approached 223 billion dollars in 2006 (2). The one-month prevalence of depression is estimated to be one percent of the population, thus In any given year, 18.89 million American Adults will suffer from a depressive illness (3). Also, according to the American Association of Geriatric Psychiatry, depression is the most prevalent mental health problem among older adults. Approximately 80% of persons with depression report some level of functional impairment because of their depression, and 27% reported serious difficulties in work and home life3 (3). Screening for these prevalent issues is thus imperative and thus resident skills in these tasks should be assessed. The goal of this study is to evaluate how well entering first year residents screen for alcohol use and depressive symptoms during one station within a multi station clinical examination.

Methods: There are three major objectives of this project. First is to determine percentage of first year residents that pass the Alcohol and Depression clinical station each of the years 2009 to 2015 and the areas of strength and weakness in screening. Second, is to examine the trend in performance in this station across time. The third objective is to compare how well first year residents perform in this station versus their overall performance in the 12-station exam. Over the period from 2009 to 2015, 252 first year residents participated in the overall examination and in this station. 1) For objective one descriptive statistics will be used, to count the number who passed, versus those who received marginal pass or failure will utilize the standards used at each administration. Also the means and standard deviations will be calculated and reported for each item included in alcohol or depression screening. 2) For objective 2 the mean performance on the overall station and the components of alcohol screening and depression screening will be examined for each year across the seven years. 3) For objective 3 the results will be examined in several ways. The mean on this station will be compared to the overall mean for the test in each year. The rank (in terms of overall performance will be reported for each year).

Results: Data is currently being analyzed and results will be completed in December and included in the final abstract submitted at the beginning of January for inclusion in the IME Conference proceedings.

Potential Impact/Lessons Learned: This may inform changes in the teaching curriculum to improve the confidence and skill of residents screening for these conditions. Ultimately the potential impact is to improve the identification and treatment for those with these common conditions.

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A Cloud--Based, Skip Logic Evaluation App for Enhancing Real--Time, Concrete Feedback of Residents

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Idea/Problem Statement:
Current resident evaluation systems are PC--based and rely on a scaled assessment, which may contribute to delayed evaluations and loss of face--to--face

Rationale/Need:
With the introduction of milestone assessment by the ACGME there is an increased need for objective formative assessment not currently addressed by a detached, scale--based system. A scale format is frequently not granular enough to provide learners with discrete behaviors in which they need to improve, and may contribute to assessment inflation depending on how the scales are anchored (1). Moreover, an evaluation performed on a computer is typically done away from the learner and at a significant period of time after the evaluator has worked with the learner, if it is completed at all. We sought to create a mobile evaluation system that not only could be keyed to a specific progression of behaviors but could also be performed real--time and with the learner present. Ease and speed of user interface would be optimized to minimize evaluator frustration and enhance rate and percentage of completed evaluations.

Methods:
With the Department of Information Technology at the University of Columbia, the authors created a cloud--based evaluation smartphone app that utilizes skip logic, which guides the evaluator through a series of behaviors to describe the learner's ability rather than asking the evaluator to rate the learner's skill on a scale. The app tracks which milestones have been evaluated to ensure that all categories are being addressed, and prompts the evaluator to assess milestones that are in need of additional evaluation. The app features a QR scanner which can be used to scan a code on the resident's badge to begin the evaluation. Users with administrative functions on the app can assign evaluators specific milestones to address based on individual or specialty. Our tool can auto--populate summary documents in the formatting of the governing bodies for reporting purposes as well as clinical competency committee review, personalized resident review, feedback and targeted action steps. It can also track performance over user--selected date ranges. Finally, it provides seamless integration of the Mini--CEX encounters, procedures, and evaluations all linked automatically into reportable milestones and entrustable professional activities. Once fully integrated, our app will also house templates of evaluations from its users to create a virtual "wiki--evaluation" system so new users can choose to use existing evaluation series as opposed to creating new ones. Our app is currently in beta test

Evaluation Plan:
We plan to assess user satisfaction, learner satisfaction, evaluation completion rate and learner satisfaction with feedback. We also plan to assess time to completion of an evaluation as well as change in degree of assessment inflation.

Potential Impact/Lessons Learned:
This assessment system, while designed for the graduate medical education environment, could be adapted for evaluation of learners at multiple different levels and in multiple different environments. This assessment system could also demonstrate a signifi

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The Primary Care Decision: A Systems Dynamics Approach

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Idea/Problem Statement:
To investigate the interplay between the factors affecting medical student primary care career choice under the paradigm of systems dynamics.

Rationale/Need:
As the US population grows and ages, there remains an inherent and unmet need in the field of primary care. Nevertheless, the majority of students graduating from medical schools still elect to pursue specialty care, in spite of numerous attempts to enact and enforce policies that emphasize and restructure primary care education with the aim to increase its output. While some studies investigate the epidemiology and potential causes of this problem, there were no publications, to our knowledge, in which primary care career decisions, their consequences, and points for interventions were analyzed from the systems dynamics perspectives.

Our goal is to conceptualize the major factors (variables) and their interactions that affect student career choice in primary care, generate a dynamic model of these interactions, test the model to portray the existing system's behaviors, and capture the characteristic dynamics of the variables involved.

Methods:
A broad literature search was performed, covering topics of population growth and age distribution, medical student career preferences, and curriculum structures. Once the variables of interest were identified, a causal loop diagram was designed in the environment of Vensim simulation software, to represent the interactions between the variables as described by the literature. This casual loop diagram was then translated into a stock-and-flow diagram that was simulated to identify the range of influences within the system and possible tendencies in primary care education output (as it responds to the implementation of different policies).

Evaluation Plan:
Once the model was complete, the internal validity and integrity of the model were tested. Its external validity may then be verified against existing literature and real-life scenarios.

Potential Impact/Lessons Learned:
A viable system dynamics model of medical student career choice in primary care will provide a platform to identify and test future policies without prohibitive costs or risk of squandered resources.

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Development of a third year medical student elective aimed at career planning and core competencies

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Idea/Problem Statement:
Development of a third year medical student elective aimed at career planning and skill strengthening to care for the undifferentiated patient

Rationale/Need:
The fourth year of medical school is the traditional time to rotate in the field of emergency medicine (EM) and the fourth year medical student rotation is common at most academic institutions. However, many rotating students find they have rotated too late in the academic year, discovering they have an interest in the field but do not have enough time to apply or to fully purse EM as a specialty. Many of these students, also, have not been exposed to the undifferentiated patient in any other elective, and lack components of the core skill set needed for a successful emergency physician. We propose the implementation of a new emergency medicine elective, an exploratory elective, designed specifically for third year medical students. This elective would accomplish two objectives: 1) It would assist in earlier career planning by exposing students to the field much earlier in their training and 2) It would provide them more time to build a foundation for the care of the undifferentiated patient (strengthening history and physical exam skills related to the management of the patients in the emergency department).

Methods:
Who: third year medical students, 3-6 students per elective. When: Electives will take place in 3-week blocks in the emergency department, throughout the year. Where: The teaching format will be multi-disciplinary. Most of the student's knowledge will be gained by providing clinical patient care in the emergency room while paired with a PGY-3 or PGY-4 resident. (A third year medical student likely does not have the experience to manage an EM patient independently but can be assigned to a senior resident in the emergency department). Structured didactic lectures will also be a key component of the curriculum, with an emphasis on strengthening the assessment of the undifferentiated patient. Lectures will include approaches to chest pain, shortness of breath, abdominal pain, vaginal bleeding, headache, sepsis, the EKG, and basic approaches to airway assessment. There will also be a series of workshops, including: suturing, splinting (for basic orthopedic injuries), and ultrasound. The students will also be individually paired with an EM resident for the purposes of mentorship: to foster communication about the field of EM and to aid in career guidance and inquiry regarding the field of EM.

Evaluation Plan:
The students will be qualitatively evaluated both at the start and end of the rotation to determine if they could make an informed decision about picking emergency medicine as a field. They will also be evaluated with a written exam, with the same exam administered both at the start and end of the rotation. It will consist of open-ended questions, focusing on the core concepts from the lecture series taught during the elective (including chest pain, abdominal pain, shortness of breath, etc).

Potential Impact/Lessons Learned:
The implementation of the third year medical student exploratory elective could assist in early career planning for medical students as well as strengthen core skills and competencies that are fundamental in the care of the undifferentiated patient in the

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Development of Video Cases for an Anatomy-Based Clinical Reasoning Workshop

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Temple University School of Medicine

Idea/Problem Statement: To give learners a self-directed learning experience, we developed 6 video cases for an anatomy-based clinical reasoning workshop.

Rationale/Need: Our workshop was designed to add dimension to the 1st year Gross Anatomy course by integrating classic case presentations in video format and role modeling professional behavior. In addition we incorporated radiographic images (plain radiographs, CT scans, ultrasound images or videos) into the video cases portraying the diagnostic work up of the patients. This allowed us to further integrate diagnostic imaging and radiographic correlation into the Gross Anatomy course which built on student experiences from earlier in the course. The video cases focused on 6 clinical conditions that served to highlight varied aspects of the thoraco-abdominal organ dissection recently completed in their anatomy coursework. In addition, the video cases which portrayed an emergency physician performing a focused history and physical examination (H&P) also served the purpose of role modeling professional behavior and providing the 1st year medical students with an opportunity to view first hand, doctor-patient interactions, something lacking in paper cases used in prior workshops.

Methods: For each video case, a case script was developed. Two standardized patients were trained on 3 cases each. A doctor – patient interaction was filmed in our simulation center highlighting a focused H&P and a discussion of the suggested diagnostic plan. Video editing was performed by one of the authors and cases were uploaded to our departments YouTube site. Case #4 can be viewed at: https://www.youtube.com/watch?v=wHvbKsxjsCc. For each workshop (6 total sessions), students were assigned to 6 groups of 5-6 students; each group was assigned 1 case. One or more anatomy and clinical faculty members attended each session. Student instructions were provided 1 week prior to the workshop. Groups worked together to solve the case. Each group prepared a 10 minute Power Point presentation for the workshop with the goal of teaching their fellow classmates about their clinical condition. For their presentation, students were instructed to review the normal and abnormal anatomy relevant to their case, provide teaching points (epidemiology, clinical presentation, etc.), and develop a treatment plan and a multiple choice question focused on key aspects of structure or function. At the conclusion of each presentation, faculty further highlighted key concepts and provided formative feedback to the groups. Each group presentation was evaluated on a 12 point scale using an internally derived rubric focusing on professionalism, presentation content and presentation skills.

Results: 87 students completed the post course evaluation. Most students (84%) reported that the workshop achieved its stated objectives and was a valuable learning experience. Almost all (98%) reported that it took an appropriate amount of time to prepare for the workshop, 96% reported that their case was at an appropriate level of difficulty. Prior to the workshop, almost half (45%) of students viewed their case 2 times, while 1/3 viewed their case 3 times. Most groups (68%) met 2 times before the workshop. 37% of students reported that they spent 2-3 hours to prepare for the workshop, while 30% spent 1-2 hours. Most (76%) agreed the radiographic images were of high quality, 80% agreed the video cases were of high quality. 48% felt the video case was too long. Most students (89%) agreed the physicians in the videos role modeled professional behavior. Regarding promoting critical thinking, students were asked to compare the use of the video cases to paper cases used 2 weeks earlier in a similar formatted workshop, student's chose; paper cases (6%), video cases (41%), cases were equivalent (53%). Regarding quality of cases, students chose; paper cases (13%), video cases (39%), cases were of equivalent quality (48%). When asked about future workshops, students preferred; paper cases (31%), video cases (33%), had no preference (36%).

Potential Impact/Lessons Learned: Our video cases were well received; most students described the workshop as a valuable learning experience that achieved the learning objectives. Some students reported no difference between the quality of video compared with paper cases from a prior workshop. Students do not seem to have a preference for case format for future workshops.

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Development of an Asynchronous Online Learning Community for Medical Students

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Idea/Problem Statement: We developed an online learning community to facilitate ongoing communication and expand the learning experience in a safe learning environment.

Rationale/Need: In the past few decades, some medical schools have incorporated learning communities into their undergraduate medical education curriculum to foster communication, promote caring, trust, and teamwork along with establishing academic and social support networks. Asynchronous learning communities may also play a role in helping medical schools address comparability of educational experiences across geographically distinct clinical training sites as well as residency programs facing similar challenges as more specialties are adopting shift work scheduling for residents. Our learning community was developed for eight 2nd year medical students rotating though our academic emergency department as part of a 7 week summer clinical program, a 4th year student on academic elective and a faculty preceptor for a total community of 10 members. The rationale for developing the asynchronous online learning community was to create a better learning environment. We needed to overcome a number of challenges which we identified including; a combination of the shift work scheduling of community members, limited preceptor – learner continuity, lack of longitudinal exposure/engagement with learners along with the limited student – student collegial interaction. We further defined our learning community as a group of people who share a common learning context who organize themselves into a cohesive group to achieve a common goal.

Methods: We adopted e-learning teaching methods to facilitate our learning community. The use of internet technologies has been shown to compliment more traditional educational methods. E-learning allows for a collaborative experience and for learning to be more individualized. We incorporated 2 forms of e-learning to facilitate our learning community. We used discussion boards to facilitate threaded discussions which allow for 24/7 access, an advantage for our community of shift workers. We also incorporated a Twiitter account to allow for more real-time dissemination of educational soundbites. Expectations and guidelines for participation in the learning community were developed and reviewed with all learning community members prior to the start of the summer program. To assess student participation in one of our discussion board forums, we adapted and simplified a grading rubric based on 4 weighted criteria equaling 100%; promptness of responses (20%), frequency of responses (20%), content of posts (30%) and contribution to the learning community (30%). For each criterion, levels of participation were also described and weighted for an observer, a participant and an active contributor to the learning community. Pre and post summer program surveys were also employed to establish a baseline and evaluate the learner's perception of the program.

Results: None of the members had previously participated in an online discussion board for medical education purposes. Six members report having Twitter accounts, 3 (50%) use it for medical education purposes. At the end of the program, there was a total of 143 Tweets, an average of 20/week. The "Interesting Case" forum generated 31 different threads with a total of 99 posts, an average of 3.2 posts/thread. For the "Case of the Week" forum, 6 case threads resulted in 57 posts, an average of 9.5 posts/case. Three emergency medicine residents participated in this forum by posting a summary overview for some of the cases. We applied the participation rubric to the 9 medical students in the program, assessing participation in the most active discussion forum, the "Interesting Case" forum. A single reviewer (faculty preceptor) evaluated student participation. Two students participation was rated at 100, six at 80 and one at 49. The post program survey identified that all community members felt the program met the established goals. Seventy percent of community members rated the use of the forums for medical education purposes as excellent and 80% rated the use of Twitter for medical education purposes as excellent. Eighty percent rated the content of the "Interesting Case" and "Case of the Week" forums and Twitter as excellent. In addition, all community members reported that they read articles and/or linked to websites that were posted by other members during the program.

Potential Impact/Lessons Learned: Based on member suggestion early in the program, we decided to primarily post to the "Interesting Case" forum as opposed to an "Observations and Reflections" forum because of redundant posts. Second, we also modified responses to the "Case of the Week" posts by dividing tasks among the students to allow for a more meaningful discussion.

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Bridging a Gap: Integrating Documentation Skills with Clinical Decision Making

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Research Family Medicine Residency

Idea/Problem Statement: Bridge knowledge and skills required for documentation with clinical decision making by Family Medicine Residents using Progressive Disclosure Cases.

Rationale/Need: Accurate and concise documentation is critical to communicate the patient story (History/Exam), clinician's impression (Diagnosis), and necessary care provided (complexity of Medical Decision Making, or MDM, represented by a billing code). However, residents have difficulty connecting the necessary knowledge and skills for documentation with the complexity of MDM while focusing on clinical care. This disconnect may result in incomplete documentation, poor communication of patient care, and significant financial loss to residencies, as seen at our program and others, with more than $400,000 estimated loss per year total for 16 programs studied across five states (1). Despite Residency Review Committee requirements for practice management training, this issue persists into post-residency practice, with 42-54% error rate by Family Physicians in interpreting the complexity of MDM, and insufficient documentation in 40% of cases reviewed (2). Residents at our and other programs express a strong desire to acquire documentation and MDM knowledge and skills from the beginning of residency (3). Our residents also express a strong desire to integrate this training with training in evidence-based patient care. A longitudinal curriculum featuring Progressive Disclosure Cases as a tool to connect documentation, complexity of MDM, and clinical decision making may improve patient, learner, and institutional outcomes.

Methods: Progressive Disclosure Cases will be given monthly throughout the academic year to R1-R3 Family Medicine residents (n=36) during scheduled didactics. Progressive Disclosure Cases on high-yield Family Medicine topics will integrate evidence-based patient-oriented care with application of requirements of documentation for complexity of MDM. Residents will work collaboratively in a large-group setting guided by Family Medicine faculty facilitators, encouraging learners of differing developmental and cognitive levels to teach and learn from one another. Learners will utilize active learning techniques such as audience response system, interactive discussion, and longitudinal reinforcement of key concepts in sessions and in the Family Medicine clinic. By the end of the twelve sessions, learners should be able to accurately apply documentation and MDM for most common Family Medicine clinical scenarios.

Evaluation Plan: Pre- and post-intervention surveys will provide resident self-assessment of knowledge, skills, and confidence with application of documentation and MDM to clinical care. Learner reaction will be assessed through anonymous surveys after each session to gather feedback on perceived educational value and relevance to their current practice. A brief end- of-session quiz using the audience response system will assess learning. Learner behavior will be individually assessed by the faculty with clinic check-out and longitudinal chart review. Chart review data pre-intervention will be compared post- intervention using check sheets assessing adequacy of documentation, complexity of MDM and correlation with the documented clinical care. Feedback will be provided to the residents based on that comparative data.

Potential Impact/Lessons Learned: Potential institutional impact is significant, with possible estimated gain in revenue in the tens of thousands of dollars per year. Improvement in overall documentation has the potential for improved communication in relation to patient care. This proces

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Are Interns Prepared for the Hard Conversations? Evaluating Empathy in the Emergency Department

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Idea/Problem Statement:
Videotaped unannounced standardized patient encounters to assess empathy and interpersonal communication skills of Emergency Medicine residents

Rationale/Need:
A significant number of graduating medical students entering Emergency Medicine residency programs do not meet the entry level milestones mandated by the ACGME [1,2]. One study found that up to 26% of first-year residents failed to perform at Level 1 milestones related to professional values and patient-centered communication [1]. Professionalism and Interpersonal Skills and Communication are difficult to measure, as these skills cannot be adequately assessed using standardized testing, and so must be assessed based on observation. Ratings based on direct observation can be affected by observer bias, lack of fidelity (in the case of simulation or OSCEs) and the Hawthorne effect—that is, learners tend to alter their behavior when they know they are being evaluated. In contrast, the use of unannounced standardized patients (USPs) during actual clinical shifts in the Emergency Department has the benefit of providing a standardized situation and allows for recording of events that occur during an episode of actual care. In contract to an OSCE, this method provides a representation of usual care rather than best behavior, thus effectively mitigating the Hawthorne effect [3]. The use of video as well as audio to record the encounters allows for assessment of important non-verbal cues such as body language.

Methods:
The participants will be 16 first-year Emergency Medicine residents who will be randomly assigned to either an intervention or control group. There are six steps in the intervention

1) pretesting during orientation;
2) video-taped encounters with two USPs during the first four months of the year while the residents are working clinical shifts in the Emergency Department;
3) individual debriefing with a trained faculty member, including review of the tapes as well as the scores from the different measurement scales, and creation of individual learning goals and objectives;
5) two additional video-taped encounters with USPs during the final four months of the year to determine the effectiveness of the debriefing intervention;
6) and post-testing.

The control group will also participate in videotaped encounters with the USPs, but they will not undergo individualized debriefing with a faculty member following the first two encounters. The performance of the two groups during the final four months of the year will be compared to evaluate the effectiveness of USPs as a learning tool and formative assessment method. Following the end of the study after all four USP encounters, the eight control residents will also meet with a trained faculty member to participate in debriefing and prepare individual learning plans.

Evaluation Plan:
Several measurement tools will be used to assess first-, second-, and third-person measures of empathy and interpersonal communication skills. At the beginning of the study during pretesting, all residents will complete the Jefferson Scale of Perceived Physician Empathy (JSPE) during orientation. Following each videotaped encounter, the USP will complete the consultation and relational (CARE) measure and the Jefferson Scale of Patient's Perceived Physician Empathy (JSPPPE). Each session will be also be independently reviewed and scored using the SEGUE (Set the stage, Elicit information, Give information, Understand Patient's Perspective, and End the encounter) checklist. At the end of the study, the residents will again complete the JSPE during post-testing. Using these scales, the performance of the residents in the debriefing (intervention) group compared to the residents who received no debriefing (control) after the initial USP encounters will be assessed.

Potential Impact/Lessons Learned:
By using videotaped unannounced standardized patient encounters, this innovation will make an important contribution to the current understanding of interns' communication and interpersonal skills and has the potential to inform not only residency educati

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Yes, We CAM: Empowering Physicians to Speak with Patients about Complementary & Alternative Medicine

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Idea/Problem Statement:
Improve pediatric resident knowledge and documentation of CAM use through an immersive educational conference and electronic medical record prompt.

Rationale/Need:
The use of Complementary and Alternative Medicine (CAM) is prevalent and continues to increase, including in the pediatric population. Studies have shown rates of use ranging from 21-33% and as high as 76% among children with special needs (2). Despite increasing use, rates of physician inquiry regarding CAM use is shown to be low at 8%, with "lack of knowledge" about CAM therapies among reported reasons for not discussing CAM with patients (1). The risk of dangerous allopathic-complementary therapy interactions may be greater when healthcare providers do not discuss concurrent CAM use with their patients/families (3). Our interventions seek to address this gap in knowledge as a barrier to provider-patient communication by providing education about CAM, with a focus on teaching skills for self-education in the field. This educational intervention is coupled with the introduction of prompts related to CAM within the electronic medical record (EMR), where residents can document their discussions with patients. The EMR prompts serve to uncover and reinforce learners' knowledge structures related to CAM, drawing upon the learning principal that "how learners organize knowledge" influences how they learn and apply what they know.

Methods:
The phased interventions targeting the 3-year pediatric residency program at our institution took place over a 3 month period from July to September, 2015. All 90 pediatric residents in our program had exposure to the EMR prompts and an opportunity to participate in the educational intervention. The outcome measure of documented CAM inquiries is being studied among only the 30 first year residents. History and physical (H&P) notes in the EMR written during the first month prior to intervention will be randomly sampled to assess baseline patterns of documented discussions about CAM. During the second month, EMR prompts related to CAM use were added to the H&P template. Differences in the rates of documented CAM discussions between the first and second months will be compared to assess the effect of H&P visual prompts alone. At the beginning of the third month, a one hour educational conference was given to the pediatric residents at all levels of training including 1) an overview of the definition, prevalence and relevance of CAM; 2) strategies to discuss patients' CAM use; 3) an interactive tutorial on how to access and use comprehensive and evidence-supported online resources for self-education and management of CAM therapies; and 4) immersion activities to experience CAM modalities including mindfulness meditation and a natural product sampling. H&Ps written the month after the conference will then also be sampled to assess change in frequency of CAM documentation.

Evaluation Plan:
Analysis of variance (ANOVA) will be performed to compare the frequency of CAM documentation in admission H&Ps for each phase. Differences in the rates of CAM documentation will be reported as a proxy for the effect of knowledge gaps on residents' effort to discuss CAM with patients. A qualitative analysis will also be performed to measure the effect of the educational intervention on the documentation of the specific details of CAM use, e.g. type, frequency, source, and perceived adverse and/or beneficial effects. The attendees' evaluations of the educational intervention will be analyzed to determine whether the stated learning objectives were achieved.

Potential Impact/Lessons Learned:
Increased knowledge about the prevalence and effects of CAM will potentially promote more frequent and detailed discussions of CAM, leading to improved patient safety, culturally competent care, and therapeutic alliances. Analysis of the documentation wi

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Needs assessment regarding telemedicine education

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Idea: Development of a telemedicine curriculum for third year medical students involving a didactic component and an experiential learning component.

Rationale: The delivery of healthcare through telemedicine consultations continues to increase throughout the world yet dedicated telemedicine education programs are not ubiquitous in undergraduate medical education. Medical students are the physicians of tomorrow, thus it is important to provide optimal training in all methods of healthcare delivery including telemedicine. To this end we are developing telemedicine education curriculum that is led by both senior medical students and attendings and is delivered as part of a required outpatient medicine rotation. To create an appropriate curriculum we have developed an instrument to asses medical students current competencies regarding telemedicine in patient care and used the results of this survey to tailor the curriculum to medial students needs.

Methods: An 18-item Likert scale (1= strongly disagree to 5= strongly agree) questionnaire was delivered to medical students at Creighton University. Results were analyzed along three primary subscales: 1: Experience and knowledge of delivery of healthcare through telemedicine consults, 2: Understanding of laws governing telemedicine 3:Future of telemedicine in students careers

Results: Sixty-five fourth year students completed the questionnaire (44.8% response rate). This pool of responses was used to assess the current level of education and experience received in telemedicine at the conclusion of the traditional four-year undergraduate medical curriculum. An additional 84 first, second, and third year students completed the questionnaire; this data will be used to monitor how telemedicine curriculum implementation changes medical students understanding in the future. Along subscale 1 fourth year students scored an average of 1.76 with Standard Deviation (SD) of 0.93, along subscale 2 an average of 1.33 and SD 0.66, and along subscale 3 an average of 3.29 and SD of 1.02. Interestingly there was minimal difference between the responses of fourth year students and those of first, second, and third year students.

Potential Impact: Students have limited experience and knowledge regarding the delivery of telemedicine, and the laws surrounding telemedicine consultations, yet generally feel that telemedicine will play an important role in their careers. These results suggest that medical students are underexposed to healthcare delivery through telemedicine.

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Using Simulation to Build Effective Communication Skills in Saudi Arabian Medical Students

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UCI

Idea/Problem Statement:
A longitudinal curriculum incorporating simulation designed to build effective communication and teamwork skills in medical students in Saudi Arabia

Rationale/Need:
The evidence linking medical errors with ineffective or insufficient communication among team members is well established. A Joint Commission review of root cause analyses of sentinel events revealed that communication failure was a root in over 70 % of these events [1]. By the internship level, all medical trainees will need to work as effective team members. There is evidence that team training on the undergraduate medical education level can be effective in building these skills [2,3]. However, our medical school has not yet begun such training. Our plan is to develop a longitudinal teamwork and communication skills curriculum for third medical students in a six-year MBBS curriculum

Methods:
The participants will be 90, third year medical student at the Princess Norah University – Medical School. The curriculum will include five, three-hour sessions (November, January, March, May, June) and will begin in November 2017. All five sessions will be held in the school's simulation center. The students will be divided in to 2 large groups of 45 each. Each group will have a separate session simultaneously; the sessions will be as follow: 1] communication and team building workshop including a) team building exercises e.g. blindfold game, build a tower, listen to your peers, b) Team role play game (each group is subdivided to 5 groups each is 9 members); 2] simulation inter-professional teamwork scenarios emphasizing teamwork competencies and closed loop communication in different clinical settings e.g. ED, OR, ICU, ward, outpatient; 3] effective and accurate write up the patient medical data i.e. H&P, Progress notes, prescription, diagnostic study request; 4] effective case presentation in a mock morning report and in patient centered rounds – each small group will interview a patient and present the case; and 5] each small group will present their commitments to utilize these skills in the future and how they will determine when their objectives have been met

Evaluation Plan:
The curriculum evaluation will include: 1) a standard course evaluation form will be completed by the students to assess the quality and usefulness of each of the five sessions and the overall curriculum. 2) One measure of learning will be the learners' commitments to include these skills in their clinical rotations (reviewed for topic). 3) Student skills in performing specific skills will be assessed through observation during each of the simulations. 4) Relevant learner behaviors will be tracked during their rotations to see any differences in ratings for this group versus the prior class (with no pre-clinical training)

Potential Impact/Lessons Learned:
After the course is implemented and evaluated each unit in the course (including simulation scenarios) can be made available internationally through submission to MedEd portal

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Family Medicine Clinic Helping to Overcome Pain Effectively - HOPE Clinic, 1 year follow up

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Idea/Problem Statement:
A multidisciplinary team emphasizing treatment of chronic nonmalignant pain as a learning model for family medicine residents-patient and resident f/u

Rationale/Need:
The complexity of pain is indicative of the diversity in the elements of chronic pain conditions. Research findings strongly suggest that therapeutic components for chronic pain must integrate non-pharmaceutical, pharmaceutical, and psychological/psychiatric treatment modalities to ensure effectiveness of treatment.

Being a primary care facility we are often the front line health care providers who are managing chronic pain conditions. The nature of pain related concerns presenting in our clinic are often complex where there are likely comorbid medical as well as psychiatric conditions including substance use disorders, mood disorders, personality disorders, and significant persistent social stressors. Our department currently does not have a multidisciplinary team for treatment of chronic pain. Our standard practice has been focused teaching with individual patient encounters conducted by family medicine faculty members and outside referral service to departments such as anesthesiology to assist in pharmaceutical and procedural treatments of pain.

By providing a structured multidisciplinary clinical environment our family medicine residents are to learn about the nature and management of the complex or biopsychosocial pain conditions by conducting multimodal assessments, provide therapeutic education, participating in patient centered evidence based treatment planning, consultation for the primary medical doctor (PMD) and brief follow up as needed.

Methods:
Our treatment team is composed of two primary care physicians, health psychologist, and a senior family medicine resident physician. The primary care physician will refer the patients to HOPE if the patient agrees to explore alternative assessments and treatments of their pain and guide the long-term care of the patient with the PMD. The Family Medicine HOPE Clinic takes place on two half days a month with an initial trial of 45min patient visit slots allowing for up to six patient encounters.

Patients are referred to the clinic by the providers within our department and are scheduled for an initial evaluation. The initial visit consists of a patient centered and multifactorial assessment and history gathering that helps inform an integrative treatment plan and patient education. Follow up visits can be scheduled if appropriate. Additional visits include physiological symptoms assessment, assessment of patient engagement and use of motivational interviewing to help address ambivalence (if applicable) and emphasizes patient centered goal setting, therapeutic education, and evolved treatment planning.

Evaluation Plan:
To assess patient experience, we will ask for feedback and satisfaction of care at the end of the first visit and also assess pain severity and perceived changes to quality of life 6 months post initial visit. Resident learning will be measured via observation of their ability to evaluate, treat and refer patients with chronic nonmalignant pain and identify concurrent substance use and mood disorders. Specific components assessed regarding their learning will include: Screening tools, Brief Intervention, Assessing for Referral to Treatment as well as clinical skills involving initiation, maintenance, escalation and discontinuation of opioid therapy as well as educating their patients how to safely care for their opioid therapy. The psychologist will assess the residents' use of motivational interviewing to guide patients in choosing personal goals for treatment of their pain.

Potential Impact/Lessons Learned:
We hypothesize an experience like HOPE clinic will improve a family medicine physician’s ability to assess, treat individually and in an interdisciplinary manner, and refer patients with chronic nonmalignant pain. We also hope to introduce and recruit re

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An audio podcast format telephone triage educational curriculum for pediatric residents.

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Idea/Problem Statement:
Formal education in telephone triage is limited in pediatric residencies nationally though residents commonly perform this function.

Rationale/Need:
The training in telephone triage in pediatric residencies varies by residency and may be declining as more phone calls are covered by nurse triage lines. A 1985 survey of pediatric residencies showed that 91% of training programs gave pediatric residents the opportunity to answer phone calls from families and 45% offered training in telephone management.1 A survey of pediatrics departments associated with medical schools revealed 51% instituted formal training mostly using lectures, and some using reviews of telephone records, precepting during the call, review of recorded calls and simulated patients.2 Our current data suggests that experience and formal training are declining slightly with 78% of programs having residents take telephone triage calls and only 34% providing formal training (unpublished data). Given the limitations of attending time for teaching and duty hour restrictions on pediatric residents a curriculum that can be accessed at any time and by residents and requires little or no ongoing support is desirable. An on demand pediatric oncology online module curriculum showed educational benefit in our institution. Audio Podcasts have been used to provide continuing medical education with notable examples including prepaudio.org and pediacastcme.org. Audio format education has been demonstrated to be effective in a medical school pharmacology course.3 Data on which learners benefit most and Podcast education efficacy in graduate medical education are desirable.

Methods:
Seven ten-minute audio episodes forming a telephone triage podcast curriculum will be developed for pediatric residents. The curriculum will consist of a general introductory episode and a series of 6 episodes covering some of the most common chief complaints received by pediatric call lines split into two groups (Group A: fever, vomiting, irritability and Group B: cough, abdominal pain, head injury). The introductory episode will describe the goals of a telephone advice line, mechanics of documentation and the recommended format for calls (assessment, identification, triage, intervention, evaluation and conclusion). Chief complaint based episodes will discuss history taking guidance, triage(ED referral, same/next day appointment or home management), as well as home management strategies. Educational content will be approved by the residency director and members of the Pediatric Emergency Medicine faculty. All episodes will contain samples of simulated calls demonstrating effective strategies and pitfalls. Evidence for disposition decisions and home management strategies will be discussed when available. A brief written summary of each episode will be produced for reference. / Children's Hospital Los Angeles has four residents taking telephone triage in a given month on an every fourth night schedule. During a 6-month study period enrolled residents will have access to the introductory episode and will be randomly assigned access to a group of chief complaint based episodes.

Evaluation Plan:
Residents will be surveyed at the beginning and end of the 4-week block of taking parent calls. Primary outcome will be change in resident's self-reported comfort in handling the 6 covered chief complaints in regards to taking a history, triaging acuity and in giving home care advice. Residents will also be surveyed in regards to satisfaction with the episodes, completion of all 4 accessible episodes, self-reported learning style and tested on the recommended format of calls. Secondary outcomes will include (1) Completion rates and satisfaction, (2) Variation in completion rates and satisfaction between learning styles and (3) Knowledge of the recommend call format. If well-adopted, chief complaint based patient satisfaction and call times may be added as further outcome measures as will rates of repeat health care encounters for the same complaint (including acute care visits, emergency room visits and repeat phone calls).

Potential Impact/Lessons Learned:
A portable curriculum that can be used across pediatric residencies for skills in telephone triage could improve rates of formal education in this topic and improve resident comfort in handling these calls. Other downstream benefits include increased pati

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Pediatric Gynecology: what to know and how to say it

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Idea/Problem Statement:
Enhancing communication and technical skills in pediatric gynecology of resident in obstetrics and gynecology by using an interactive curriculum

Rationale/Need:
Ob/Gyn residency programs are not providing enough training time to pediatric gynecology education, and residents experience limited exposure in clinics. By graduation, most residents feel less than competent in managing pediatric evaluations (1). Multiple authors have published their concern and possible solutions to improve training during residency (2-3). Most interventions have been limited to independent study or simulations for technical skill development in pediatric pelvic examination. No intervention has addressed teaching the residents the communication skills needed to approach the pediatric patient and their parents. Our Idea is to develop a structured and interactive curriculum to ensure resident competence in all phases of the encounter. We will integrate the individual solutions provided in the literature, including short lectures to consolidate knowledge gained from assigned independent study, role playing and simulations.

Methods:
The participants in this initial pilot will be 20 Ob/Gyn residents training in the Adult University Hospital, associated to University of Puerto Rico. Activities will be performed in classroom and skills center over a period of 5 months, one activity per month (total of 15 hours). The first implementation is scheduled for Fall 2016. The goal is for residents to engage appropriately with pediatric patients with gynecologic issues. That is they will have the knowledge, skills (communication, data gathering of medical and psychosocial history, and pelvic examination) and commitment (confidence and recognition of importance) required. Content will be divided into five sessions that will include brief presentations, small group discussion, use of standardized patients and role-play, practice in the skill center on models (with feedback), and debriefing of all activities. Topics to be covered are pediatric anatomy and development, precocious puberty, congenital anomalies, pediatric pelvic mass and oncology, disorders of vagina/vulva and abnormal bleeding patterns, sexual education, sexual abuse, genital trauma, management of pediatric patients with disabilities, and how to communicate with the pediatric/adolescent patient. Role-play and standardized activities will cover history taking skills with pediatric/adolescent patient, delivery of bad news, providing sexual education and discussion of risky behaviors, evaluating sexual abuse, and performing pediatric pelvic exam.

Evaluation Plan:
For this pilot study, we will evaluate a) accountability by tracking activities to ensure that infrastructure and time works for each session; b) reaction, to evaluate perceived usefulness of the curriculum, we will provide standard evaluations for each session and conduct a focus group after the final session; c) learning of communication skills will be assessed by direct observation during role plays with feedback based on a rubric forms, and medical knowledge section will be evaluated with pre-test administered online, and post-test done in classroom; finally d) behavior will be assessed by commitment to act reflection after the final session.

Potential Impact/Lessons Learned:
If this curriculum is effective then it could be utilized by all specialties that care for Pediatric Patients including family medicine, pediatrics, and nurse practitioners

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#EMConf Social Media Curriculum

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University of Chicago

Idea/Problem Statement:
To help residents engage with and recognize social media as a component of their education by incorporating Twitter into weekly conferences

Rationale/Need:
Social media is an increasingly prevalent aspect of not only our personal, but professional lives (1). Responsibly and effectively using social media in the professional and academic settings is increasingly instrumental in the Emergency Medicine community; yet many areas for improvement and potential threats to professionalism persist, including ensuring the responsible sharing of accurate, well-resourced, and pertinent information. Fluency and literacy in social media may benefit residents, and there is little formal training in place to ensure this competency. CORD has recommended faculty and residents receive specific social media education and guidance (2), and with this project we hope to develop a role for exposure to and experience with social media as an adjunct to our curriculum.

Methods:
During weekly didactic conferences, residents on the Teaching Resident month-long rotation will use the residency twitter account (@UChicagoEM) to live-tweet two didactic lectures, including educational pearls, major points and relevant questions. At the start if the rotation, residents receive a document that outlines expectations and includes a basic introduction to Twitter and Storify. After the conference, the residents compile the tweets from each lecture to be reviewed by a faculty member and critical feedback and corrections, where necessary, will be given. Tweets, and all relevant associated online conversations are collated in Storify and, posted to the residency website (em.uchicago.edu/media/emconf) to create a permanent online repository.

Evaluation Plan:
Residents will complete a post-participation survey, assessing the intervention's effect on residents' attitudes towards the new curriculum. This will address topics including the participant's prior experience and attitude toward social media, perceived value of a social media component in ongoing education, and improvement of understanding of the educational content.

Potential Impact/Lessons Learned:
By utilizing a social media curriculum in conjunction with our weekly resident conferences, we hope to teach residents how to responsibly and effectively use social media within a professional and academic setting, as well as improve resident engagement w

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Longitudinal Geriatric Curriculum for Family Medicine Residency

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Union Hospital Family Medicine Residency Program

Idea/Problem Statement:
A longitudinal geriatric curriculum for PGY1 Family Medicine residents that combine interactive didactic sessions with reinforcement in the continuity

Rationale/Need:
According to ACGME, geriatric care is moving to the forefront of family medicine due to the increasing percent of aging population. A study focusing on resident training in nursing home care recommended an organized longitudinal geriatric curriculum with resident involvement in an interdisciplinary team (1). Another study concluded that the most successful programs in primary care residency training have clinical experience in 3 key elements: model geriatric care in one or more settings, patient care across sites or transitions of care, and interdisciplinary teamwork (2). Our program's core faculty agree that we need to modify our current geriatric curriculum that has an isolated one month block in PGY3 year to a dynamic longitudinal curriculum that begins in orientation of the PGY1 year.

Methods:
The pilot project will focus the seven PGY1 family medicine residents in our 7-7-7 program. The longitudinal curriculum will incorporate:

1) a learner-centered introduction to geriatrics session during orientation that incorporates level of health and disability, transitions of care management, and interdisciplinary teamwork;
2) monthly case-based sessions;
3) a 2 hour onsite orientation to nursing home care working in small groups, each with a faculty member;
4) reinforcement of geriatric care principles with each geriatric patient within their continuity panel, with special focus on efficient use of the electronic health record (EHR) for patients in transitions of care;
5) intentional reinforcement of principles during daily sit-down teaching rounds in the inpatient setting. Additionally, during their second and third years the residents will provide primary care for their assigned patients in the nursing home setting as well conducting a minimum of two home visits to home-bound patients.

Evaluation Plan:
The evaluation will include:

1) tracking of all activities to note any challenges or changes required;
2) assessment of learner reaction to activities incorporated into existing assessments of sessions and rotations;
3) use of time series design to track resident in-service exam scores (by year of training) in geriatrics, for the two years prior to implementation, during implementation and for two years post implementation;
4) direct observation of resident skill in providing geriatric care within the clinic;
5) periodic monitoring across time by use of the EHR to track medications and anticipatory guidance including fall prevention

Potential Impact/Lessons Learned:
Our model, which incorporates early and longitudinal learning about geriatric care across multidisciplinary health care settings, could be adopted by other programs in any specialty caring for older patients.

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Development and Evaluation of a Child Abuse Curriculum Designed for Residents Caring for Children in

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Idea/Problem Statement:
To design an electronic child abuse curriculum to teach residents about appropriate evaluation of child maltreatment in an acute care setting

Rationale/Need:
The purpose of this project is to develop an on-line child abuse curriculum tailored to residents rotating in an acute care setting, specifically the pediatric emergency department. This project will also evaluate the efficacy of the program, whether the information learned is retained and if trainee participation in the curriculum leads to better patient care.

The deficits in physicians' knowledge regarding child maltreatment have been well documented.(1-3) Physicians are often the first professionals to care for an abused or neglected child. However, many of these physicians have no formal training in child abuse pediatrics, resulting in misdiagnosis, over-diagnosis, missed cases of abuse, and inappropriate care for these children.(1,2) Many practitioners and researchers attribute this knowledge deficit to lack of training in residency. 4 In addition, there is a paucity of data regarding formal child abuse curricula in residency.(1)

As in most residency programs, there is currently no formal child abuse curriculum in the residency training programs at Harbor-UCLA Medical Center. Most educational opportunities occur when residents rotate through the emergency department or pediatric inpatient service when the Suspected Child Abuse and Neglect (SCAN) team is consulted on specific patients as well as an occasional didactic sessions during the year.

Methods:
The content of the child abuse curriculum will be based on published core content for residency training in child abuse, ACGME core competencies regarding child abuse and neglect, and content specifications delineated by the certifying Boards of Pediatrics, Emergency Medicine and Family Medicine. The input of additional child abuse experts will also be obtained to refine the curriculum content. Since emergency medicine, family practice and pediatric residents rotate through the emergency department, trainees in all of these programs at Harbor-UCLA will be eligible to participate in the educational program. The emergency department was selected as the target of the curriculum since this is where the vast number of children with suspicion of child abuse are initially seen.

The curriculum will be electronic. It will consist of 7 modules comprising the major topics regarding child abuse education. The modules will be only 15-20 minutes each and can be done at any time at the resident's discretion.

Evaluation Plan:
The success of the child abuse curriculum will be evaluated according to Kirkpatrick's hierarchy of outcomes. Evaluation tools will be designed and their validity verified. These tools will then be used to assess resident satisfaction with the course and their learning. Knowledge and attitude assessments will be administered before the program and immediately and several months after the course. Data will be compared to baseline with only a large effect size considered efficacious. Assessments may also be compared to those of residents in two other program who do not have formal teaching in child abuse.

Following completion of the curriculum and resident evaluation, impact on clinical practice will be assessed. This will be accomplished by determining the number of patients seen in the Pediatric Emergency Department who are not correctly referred for evaluation of child abuse. Data will be examined for one year before and one year after all participants have completed the course.

Potential Impact/Lessons Learned:
There are approximately 700,000 children abuse in the United States a year. The results of this project could improve physicians' ability to recognize and appropriately refer infants and children with suspected child abuse and ultimately influence nation

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Use of education modules to improve resident confidence in high yield emergency room scenarios

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Idea/Problem Statement:
This study aims to assess intern confidence levels in the work-up and management of common emergency medicine complaints through brief online modules

Rationale/Need:
The growing field of technology and web-based learning provides a novel method for expanding residency education in a more time-efficient manner that promotes autonomy. The fast-paced environment of the pediatric emergency department exposes pediatric residents to a wide breadth of disease pathology. Quite often, this is the setting in which residents see clinical scenarios unique to the ED, and subsequently develop the critical skills necessary in initial management. With the technological shift in expanding education through online mediums, the implementation of modules for residents to complete prior to their ED rotation may help improve confidence in evaluation of common pediatric emergency complaints.

Methods:
An online educational module on 5 common pediatric emergency medicine cases will be designed using Adobe Captivate, lasting approximately 20 minutes. CHLA interns rotating through the emergency department will be asked to participate voluntarily in survey. A brief 5 minute pre-test, post-test and 2 month post-rotation survey will be given to all study participants, to assess relative levels of confidence in evaluation/management of these cases. Two study groups, including the control group, will be involved. The control group will receive access to educational module 2 months after the completion of their ED rotation, with the two month post-test survey. The pre-test, immediate post-test and two month post-test surveys will be distributed using SurveyMonkey; modules will be designed using Adobe captivate. The modules will be distributed to both control and test groups via a unique URL link. Survey results will remain anonymous.

First-year residents will be emailed prior to the start of their ED rotation to volunteer for participation in this study. As two residents are assigned each ED block, the intern starting on night shift will be assigned the module to complete prior to the start of their block. The intern starting on day shift will be placed in the control group. These assignments will be taken from the shift assignments generated from the residency program office.

Evaluation Plan:
A 16-question survey will be distributed before and after the completion of online modules to assess resident confidence in management of 5 high yield cases, including cases in orthopedics, respiratory failure and sepsis. A 10 point scale will be used to objectively measure resident comfort in work-up of these cases; pre-test and post-test results between the control and study group will be analyzed to determine whether or not exposure to these modules improves resident education.

Potential Impact/Lessons Learned:
Online modules provide a medium for residents to continually expand their skills at a self-controlled pace. Early exposure to high yield pediatric emergency clinical scenarios may improve resident confidence in managing these cases in the ED, therefore s

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Streamlined Outpatient Pediatrics Training

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Idea/Problem Statement: Improve family medicine residents' competence in outpatient pediatric care through simulation and point-of-care tools.

Rationale/Need: Nationally, family physicians are playing a diminishing role in the care of children, yet they still care for 20-30% of children in the U.S.(1,2) Recently graduated family medicine residents expressed discomfort with their ability to care for children and the majority felt that they gave lower quality care to children than provided by community pediatricians. Additionally, our residency clinic has failed to meet the well child care guideline requirements of the Child Health and Disability Program (CHDP). CHDP is a program that ensures that Medicaid children in California receive high-quality preventative care. Point-of-care tools such as age-specific electronic medical record (EMR) visit templates and well-child visit checklists for residents and staff have been proven effective for improving adherence with clinical guidelines.(3) By improving our pediatric training and care we hope to graduate family physicians with the competence and confidence to care for children, achieve state and national standards, and restore the time-honored role of the family physician.

Methods: 45 PGY1-3 family medicine residents will receive a series of 15-minute pediatrics lectures culminating in a 2-hour multi- station hands-on history taking and physical exam workshop with volunteer simulated pediatric patients of various age groups. A faculty facilitator at each station will briefly demonstrate age-appropriate history and physical exam techniques. Residents will then apply those techniques to various clinic scenarios with varying degrees of complexity based on residents' level of competence. Faculty will provide immediate feedback via Ericcson's Deliberate Practice model. Residents will also receive hands-on training and practice with feedback using age-specific well-child visit checklists and EMR templates. The culmination of both training sessions will be a multi-station clinical exam (MSCE). During the MSCE, residents will be assessed by trained faculty in history taking, physical exam and diagnostic skills, and documentation skills using the checklists and EMR templates. By the end of the program, residents should be competent in providing outpatient pediatric care for the most common pediatric diagnoses seen in the clinic setting.

Evaluation Plan: To illicit resident feedback on the didactic/simulation training we will survey the residents after the final workshop to determine if they perceived that the content and delivery methods improved their knowledge, skills, and behavior in outpatient pediatric care.

To see if our intervention changed resident confidence in their outpatient pediatrics skills we will: 1. obtain a pre and post workshop self-assessment of the learners' comfort level with various pediatric clinical skills and 2. survey graduating residents in June on a yearly basis regarding their pediatric training.

We will assess if our intervention changed resident behaviors by using direct observation and evaluation of skills in clinic by preceptors and audit of EMR template and checklist use. In addition, CHDP will audit our well child visits every 3 months to see if we are meeting AAP guideline-based requirements.

Potential Impact/Lessons Learned: If successful, this program can empower graduating family medicine residents to provide excellent outpatient pediatric care with confidence and competence. This model can be generalized to family medicine residency programs nationwide.

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Childhood Obesity in Low Income Communities

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White Memorial Medical Center

Idea/Problem Statement: An integrated curriculum to enhance the care provided by family medicine residents for overweight and obese pediatric patients.

Rationale/Need: According to the CDC, childhood obesity has more than doubled in children and quadrupled in adolescents in the past 30 years within the United States. According to the CDC, childhood obesity is also more prevalent among lower income families. Studies report that family physicians and primary care pediatricians are uncomfortable managing childhood obesity. According to one study, only 12% of pediatricians reported high self efficacy in managing obesity, even though 39% believed that treatment of obesity by primary care physicians can be effective. Obese children are much more likely to become obese adults with metabolic syndrome. With regards to the local community being studied: Boyle Heights is a low income neighborhood with a poverty rate averaging at 33% in comparison to the overall LA rate of 22%. Similarly, thirty-two percent of children in Boyle Heights were obese in 2010 which is the second highest level in Los Angeles where the overall rate was 22 percent.

In the past, one family medicine resident addressed this issue by presenting the CDC statistics and guidelines to residents of Family Care Specialist Suite 230 (FCS Suite 230). This pilot study will attempt to use EMR to facilitate application of these recommended guidelines and appropriate management of children who are overweigh and obese.

Methods: Family medicine residents at FCS Suite 230 will learn to use EMR prompted reminders and standardized order sets to improve management of overweight and obese pediatric patients ages 2-21. This will be an integrated program designed to improve knowledge, attitudes, and patient care skills of family medicine residents.

This study intervention will focus on the 21 family medicine residents in our program and take place over 3 months (when to when). The intervention will include the following: 1) use of clinic EMR to remind providers that intervention is necessary for overweight/obese children ages 2-21 yo. 2) A pre-click will be created for the clinic EMR that will outline the anticipatory guidance topics necessary to be discussed with these patients and what labs are needed during first and repeat encounters. 3) I will give a short presentation on the current statistics in management of overweight/obese children at FCS Suite 230 and start monitoring clinic progress after this short lecture is given; 4) integration of the medical assistants into the utilization of the protocol; 5) A standardized instrument called the big 5 questionnaire will be incorporated in the EMR system to facilitate initial family assessment of contributing factors to patient obesity. 5) EMR will be used to provide statistical data regarding management after these interventions were implemented in clinic.

Evaluation Plan: Progress will be monitored by how often residents address the reminder on EMR and how often patients meeting overweight and obesity criteria have appropriate labs ordered. Usage will be encouraged after an educational lecture session is presented and awareness of easy access to automated standardized lab orders and anticipatory guidance recommendations in our clinic EMR is discussed. Resident learning will be measured by how management of each residents overweight/obese patient management improves after this intervention is presented. Other patient variables that will be taken into consideration will be concurrent chronic medical conditions.

Potential Impact/Lessons Learned: Resident progress will be measured by how often overweight/obese patients are coded for in EMR and how their management improves after this intervention is presented. Other patient variables that will be taken into consideration will be concurrent chronic

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Resident Attitudes Towards Medical Education Curriculum at a University-Affiliated Medical Center

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Idea/Problem Statement:
To study resident attitudes towards the teaching curriculum at a large academic medical center and potential components of the curriculum.

Rationale/Need:
It is widely recognized by leaders in graduate medical education (GME) that residents play an important role in education amongst their peers and for the medical students and junior residents with whom they work. GME programs realize the importance of residents as educators and develop curricula to teach their novice educators.1 A study by Henry et. al showed that residents generally have a positive attitude towards teaching and recognize the need for formal and informal teaching education.2 A second study found that residents who possessed a strong knowledge base, tailored to their audience, employed repetition and used clinical examples were perceived to be better teachers.3 This study will allow for re-evaluation and improvement of the medical education curriculum with a focus towards emphasizing the qualities of a good educator. Prior to changing the curriculum, we must study the attitudes of residents towards the current curriculum in order to assess areas of improvement and deficiencies as well as strengths.

Methods:
We will design and implement a survey that will be distributed to the residents of the departments of pediatrics and internal medicine to gauge their awareness of the curriculum and attitudes towards residents as educators. We will then survey residents with questions related to topics that educators might familiarize themselves with in order to improve their teaching abilities and assess residents' attitudes towards these subjects. Finally, we will include questions regarding qualities that residents feel make a strong educator. Survey will be distributed via electronic mail or distributed in person.

Evaluation Plan:
The survey results will inform us of the general attitudes towards medical education at the university-affiliated medical center. Based on these attitudes, we will then assess the effectiveness of the current medical education curriculum and its benefits at the university-affiliated medical center. Furthermore, it will reveal potential areas of improvement or expansion for the curriculum.

Potential Impact/Lessons Learned:
By studying resident attitudes towards teaching and topics related to education, we will be able to better design a curriculum to improve the ability of residents to serve as educators for their peers, junior residents, and medical students.

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A Global Health Track For Family Medicine Residency

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Kaiser Permanente

Idea/Problem Statement:
Global health track for residents to help meet cultural competency milestones, improve physical examination skills, and treat underserved populations.

Rationale/Need:
In an ever more global society with an increasing number of immigrant patients, Cultural Competence in medicine, as aspect of Professionalism, is very important for today's family medicine residents. It is important for them to have an understanding of the health care system in other countries. Although International rotations have been shown to improve residents' physical examination and procedural skills (1) only 54% of family medicine residencies offer global health training. (2) Local needs assessment data demonstrate an interest in providing a Global Health Care Track for our residents in the hopes that this immersive field experience will improve interaction with multicultural patients, encourage careers with underserved populations, and reduce healthcare costs.

Methods:
All PGY2 (n=9) and PGY3 (n=9) family medicine residents at Kaiser Permanente may participate in the Global Health Track. The outcome objective of this program will be improved interaction and understanding of foreign patients, better examination skills and to meet cultural milestones. Each resident must choose one of the Kaiser international sites to go to for a two to four week elective providing medical services before graduation. Before the trip, the resident will have to do independent study of their particular country and submit a written one page summary. Then, after their field experience, they will submit a two page summary of their experiences, including how it helped them to become more culturally competent, if it improved their examination skills and how the experience will impact their practice in America with foreign and underserved populations. The resident must also to do a one hour presentation for the other residents. I will then give the resident a one-on-one feedback session on their write ups, presentation and further discuss their field experience. Both the resident and five of their foreign patients will be given surveys before and after the international field experience evaluating and comparing the resident's physical examination skills and cultural competency. I will compare the results of the pre and post travel surveys.

Evaluation Plan:
Each resident will be held accountable to complete the pre and post-assignment, international elective, presentation, and survey in order to be given a global health certificate. Resident reaction will be assessed through the post-travel survey. To improve learning, the resident will submit a two page self-reflection discussing if they experienced changes in attitude, behavior, and interaction with their domestic foreign patients and with their examination skills after their elective. The five foreign patients' pre and post-survey will help measure the resident's behavior. The post-elective survey should show improvement in cultural competency and examination skills.

Potential Impact/Lessons Learned:
If successful, this program can be implemented nationally for other residency programs and can help improve residents' examination skills, and be more culturally competent thus improving interactions with diverse and underserved patient populations.

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Continued optimization of sustainable ultrasound curriculum in Mwanza, Tanzania

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Innovation Idea: To provide an ultrasound curriculum that is pertinent, time-efficient, retainable, and sustainable in the long term for Tanzanian healthcare students.

RationaleStatement of Need: To address the physician shortage and growing healthcare needs in the rural population, the United Republic of Tanzania introduced new levels of healthcare providers in the 1930s. The largest and most well known level is the Clinical Officer, a practitioner trained in medicine with a scope of practice similar to that of a physician. Since July 2013, teams of medical students from the University of California, Irvine School of Medicine have developed and administered a three-week elective course on clinical ultrasound to Clinical Officer students and professionals at the Tandabui Institute of Science & Technology (TIHEST) in Mwanza, Tanzania. Although ultrasound machines are sometimes used as a diagnostic tool in the local hospitals, TIHEST had previously been unable to incorporate ultrasound training into the Clinical Officer curriculum. Through our course, we provide TIHEST Clinical Officer students with basic ultrasound training that can be utilized during their clerkships and throughout their future medical careers.

Methods: The “Introduction to Clinical Ultrasound and Basic Pathology” course consisted of lectures and hands-on ultrasound training. Topics included “knobology,” cardiac, pulmonary, abdominal, Focused Assessment with Sonography in Trauma (FAST), pelvic, and obstetric examination, and included additional material on ultrasound diagnosis of common pathology through interactive clinical vignettes. Portable Sonosite ultrasound machines allowed for hands-on practical skills sessions. A pre-course survey and a multiple-choice assessment measured baseline knowledge in ultrasound. Weekly quizzes were administered and students took a comprehensive final examination containing multiple-choice and practical assessment portions. A post-course survey recorded students’ subjective comfort levels and opinions on the usefulness of the class resources. Efficacy of the course model was evaluated by measuring the change in median score between the pre-course assessment and the final exam, as well as the overall course passing rate (with scores above 65% defined as passing). An ANOVA study analyzed the effect of any prior ultrasound experience on class performance.

Results: -71% of students with no prior ultrasound experience, 26% had observed it in clinic, and 3% had taken another course. -Course passing rate = 65 out of 68 complete = 95.6% (mean adjusted = 82.51%, median = 81.98%, SD = 10.5%). Slight increase from pri

Potential Impact: With high course pass rate and favorability ratings of the course, the curriculum developed by UCI SOM was a success. Most notably, integration of pathology into the course proved overall beneficial to the learning process. With worldwide demand for efficient diagnostics, UCI has helped set an important precedent in international medical education.

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Implementation and Evaluation of a Newly Introduced Healthy Literacy Curriculum – A 2-Year Experience

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Idea/Problem Statement:
Implementation and evaluation of an interactive, multi-modal health literacy curriculum introduced at the Keck School of Medicine.

Rationale/Need:
Approximately 90 million people in the United States have limited health literacy (HL) skills [1]. Gaps in communication that arise as a result of limited HL has been known to ultimately affect the physician-patient relationship. The incorporation of health literacy (HL) into the curriculum for medical students is an evolving process. Medical schools across the country have incorporated various lessons on health literacy into the standard curriculum over the past decade. The majority of instruction occurs in the first year and there is wide variability in the time, content, delivery, and evaluation of HL curricula [2]. Furthermore, there is a lack of data in reporting the impact of a HL curriculum implemented in the medical school setting. Prior to 2012, no formal health literacy curriculum existed at the Keck School of Medicine of USC (KSOM). Since 2013, a two-hour session on health literacy has been introduced as part of the mandatory first year Professionalism and the Practice of Medicine (PPM) course. There is also an optional six-session selective dedicated to Health Literacy as part of the second year PPM course offerings. To date, no formal analysis has been conducted to evaluate the HL curriculum at KSOM. With the inaugural learners in clinical rotations, longitudinal data can be ascertained to detect any long-term behavioral changes.

Methods:
An interactive, multi-modal Introduction to Health Literacy (HL Intro) was debuted in 2013. Session content was modified based on feedback, and in 2014, the session as delivered as an interactive student-led session. In Fall of 2014, the optional six session Health Literacy Program selective (HLS) was offered to second year medical students. Student reaction to the HL Intro and HLS was obtained through an end-of-course evaluation, student learning, and planned changes in student patient care behaviors.

The first phase of program evaluation examined Kirkpatrick 1, 2, and 3 (as applicable) levels of assessment of the HL Intro, and Level 1 and 2 assessment of the optional HL selective (HLS). Quantitative data using a 5-point Likert scale was collected, and qualitative data analysis is currently ongoing. Qualitative data will be examined and coded for thematic threads and planned behavior changes. This data will be collected from first year students and second year HLS students to assess learner reaction, as well as third year students in clinical clerkships to assess long-term behavioral changes. Future methods of program evaluation, currently in development, will utilize OSCE cases to objectively assess any measurable difference in the utilization of HL principles between HLS students and matched controls. Once cases are identified, blinded evaluators will review video performances and note use of HL principles.

Results:
Quantitative results indicate that the HL Intro session has been received well by students, garnering an initial overall evaluation of 4.14/5 and steadily increasing with addition iterations of the sessions. Feedback solicited from faculty suggests that the session is practical and applicable, and possibly “one of the more important sessions” delivered in PPM. Student comments are both positive and constructive, citing the Teach-Back Method as an essential element in the session.

Preliminary qualitative data collected from students in clinical rotations is variable; some comments suggest the successful application of HL principles in students’ interactions with patients, while other students report the lack of opportunity or consideration of implementing HL principles.

Potential Impact/Lessons Learned:
Learner reaction to the HL Intro has been favorable; however, more data is needed to assess long-term behavioral changes and use of HL principles in the clinical setting. The impact of the HLS is more elusive due to limitations in response rate and sample size, but overall, KSOM’s HL curriculum can serve as a model use at other institutions.

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GS PREPS: Preparing Residents for Excellence in Professional Service

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Idea/Problem Statement:
Pedagogy-focused, technology-enhanced professional development empowers faculty to overcome roadblocks and maximize resident learning and achievement.

Rationale/Need:
Scarce time and resources represent familiar roadblocks for surgical residencies, limiting faculty access to new and more effective paths along their journey to prepare residents for excellence in professional service. Charged as teachers and mentors, but lacking pedagogical preparation, faculty teach as they were taught.1 While this approach has produced individuals who pass boards and become surgeons, it limits the ability of surgical programs to benefit from past and present research and practice that may serve as a framework upon which to build a robust curriculum and pedagogy for 21st Century surgeons. 2 A solution to this dilemma must deliver professional development sessions that achieve three primary goals. First, the solution must equip faculty with research-based, practical knowledge and skills. The approach must deliver confidence and motivation, appealing to faculty as a reasonable, compelling investment of time. Second, technology must enhance face-to-face learning in a way that removes barriers of time. Face-to-face sessions promote valuable discussion and engagement, but must not require additional faculty meetings. Technology must provide next steps for faculty to enhance knowledge and effectiveness through means and at times that individual faculty find readily accessible. Finally, the solution must minimize the investment of financial resources. Demands that would require reallocation from other program features will more likely fail.

Methods:
Carle Foundation Hospital's General Surgery Residency Program has implemented faculty professional development for the 2015-2016 academic year that strives to achieve all three goals identified in the abstract rationale. Surgical faculty members gain knowledge and skills in pedagogy from an Education Specialist who has an extensive background in pedagogy, curriculum, and evaluation. This individual collaborates with the Program Director to identify appropriate pedagogical and other knowledge and skills. Topic selection based on program review and a faculty needs assessment have included memory enhancement, questioning techniques, and resident surgical skills performance assessment. Monthly faculty meetings include GS PREPS as a 15-minute agenda item. The typically interactive session delivers one primary skill and one or two secondary points of information and skills, designed to ensure faculty are empowered to incorporate the primary skill or new knowledge immediately into their efforts with residents. Web-based modules and discussion-boards provide follow-up information to extend faculty development beyond the formal presentation, as well as access to content designed specifically for those unable to attend faculty meetings. Building on existing internal network resources and delivered by an Education Specialist already employed in the program, no additional expense has been required so far.

Evaluation Plan:
Informal evaluation takes place monthly, as the Program Director, Education Specialist, and Program Coordinator (who also attends the faculty meetings) discuss impressions and feedback from faculty. A more formal evaluation plan includes: assessing educational outcomes through monitoring resident in-training exam performance and board certification rate; evaluations of faculty presentations during core curriculum conferences and tracking performance over time; formal assessment of didactic teaching; and formal survey about the impact of GS PREPS on faculty self-efficacy and resident knowledge and achievement. This data will be collected at the end of the academic year. In addition, faculty meetings and an annual retreat will provide forums for faculty to share questions, concerns, and suggestions for the future of the program.

Potential Impact/Lessons Learned:
This program is highly generalizable to other training programs within our system and nation-wide. Technology components empower collaborators to share content, sessions, and guest speakers. A network of curricular enhancements could provide access to all

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A Faculty Development and Mentorship Program in Medical Education for Pediatric Hospitalists

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Idea/Problem Statement:
An interactive workshop series and mentored observation on family-centered bedside rounds will enhance the clinical teaching skills of hospitalists.

Rationale/Need:
Residency work hours limitations restrict the amount of time pediatric residents have for didactic teaching with their inpatient attendings. Family-centered bedside rounds (FCBR)--the primary setting for inpatient resident education--have been shown to have benefits for both patients and learners, but may be more time consuming than table rounds (1). Past surveys of pediatric residents have shown that they appreciate learning at the bedside and feel that bedside teaching is underutilized, but that deficits in faculty knowledge and skill in this area can be detrimental (2). A needs assessment sent to pediatric hospital medicine faculty at our institution showed that medical education skills in general, and skills associated with conducting FCBR in particular, were an area of perceived need for professional development. Faculty development workshops have been used in the past to address teaching skills in the setting of FCBR, using such methods as the OSTE (observed structured teaching encounter) as an assessment tool (3). This program would combine a longitudinal, year-long series of medical education workshops with an innovative peer mentorship and evaluation system to promote and assess the performance of pediatric hospitalists as educators in FCBR and beyond.

Methods:
The intervention will target pediatric hospital medicine faculty of all levels at a single university affiliated children's hospital. The participants (n=40) will take survey with a combination of likert-type items and open-ended questions to assess attitudes and behaviors relating to medical education, with a focus on FCBR. Faculty will then participate in a series of six two-hour educational workshops designed to cover a broad spectrum of educational topics, including adult learning theory, teaching to small groups, utilizing technology in teaching, promoting learner autonomy, providing feedback to learners, and working with learners in difficulty. The workshops will incorporate interactive elements such as group case-based problem solving and simulated rounding experiences, and will be accessible online by faculty who are unable to attend the in-person sessions. The participants will also choose or be assigned a peer mentor within their division. This mentor will act as an observer during rounds at at least three time points spaced throughout the academic year. Using a novel evaluation instrument, the mentor will provide structured feedback to the participant on their conduct of FCBR and education of residents and other trainees present on rounds. Triangulation will be achieved by including self-reflection and a review of trainee evaluations as part of the formative feedback process.

Evaluation Plan:
Evaluation will utilize Kirkpatrick's levels, with a focus on participant reaction, knowledge, and behavior change. Reaction of the participants will be evaluated at all stages of the program through surveys consisting of likert-type items as well as open-ended questions. Brief knowledge tests will be administered and completed online following the educational workshop sessions. Impact on individual faculty teaching behaviors will be evaluated primarily based on self-reporting in surveys and focused interviews before and after completion of the program, with the post surveys incorporating a retrospective pre/post methodology. Effectiveness of the program and its impact on the pediatric hospital medicine faculty as a whole will be assessed by an analysis of the peer evaluation instrument data in aggregate, with a focus on change over time as the educational program progresses. Individual peer evaluations will remain anonymous and will not be used for official yearly faculty evaluations.

Potential Impact/Lessons Learned:
By combining a workshop-based educational intervention with ward-based peer mentoring and a novel evaluation tool, this program addresses an important need for hospital medicine faculty in any teaching hospital.

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Perioperative Care from a Patient Perspective: A Novel Experiential Learning Activity for Residents.

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Idea/Problem Statement: We constructed a non-clinical professional development month for residents in which one day of the rotation was spent shadowing a patient.

Rationale/Need: A resident's perspective is from the provider standpoint. In order to gain insight into the larger health system, in particular perioperative care, we believe a resident physician needs to experience a day of surgery from the patient's perspective. We asked our residents to shadow a patient on the day of surgery. The rationale for developing a patient shadowing component of the rotation was threefold, 1-Expose residents to SBP and PBLI early in their training in order for them to gain dual perspectives, 2-Establish a point from which residents develop an appreciation for the healthcare system as a provider and a patient and 3-Distinquish the patient as a person not a disease process. Additionally, evaluating resident's performance in SBP and PBLI is difficult; therefore we established a mechanism for developing and assessing their skills within these two competencies. Lastly, we believed this experience would provide a foundation for lifelong learning.

Methods: We planned and implemented a patient-centered experience in which the residents followed a patient and family for an entire day during the perioperative experience. They observed the patient's experience from hospital admission to post- anesthesia care unit (PACU) discharge. However, rather than being with the patient in the operating room while they were under general anesthesia, the residents remained with the family in order to gain perspective of the perioperative health care system, something that they otherwise would not see during residency as a structured part of the curriculum. After this experience, they participated in a debriefing workshop where they gave feedback to hospital leadership concerning each phase of the patient and family experience throughout the perioperative period.

Data Collection: Our research study received approval from the Vanderbilt University Institutional Review Board. A survey was given to all PGY-1 anesthesiology residents (N=15), specifically addressing the patient shadowing component of the non-clinical professional development month. This process was assessed via pre- and post-implementation surveys following the residents' longitudinal interaction with a VUMC patient. The surveys were sent by email via Research Electronic Data Capture (REDCap, Vanderbilt University, Nashville, TN).

Evaluation Plan: This experience provided residents a unique and authentic perspective into a patient's experience while navigating the health care system in the perioperative period. The feedback gleaned directly from residents during the debriefing session, immediately following the shadowing day, yielded a list of over 20 potential improvements to the perioperative health care system at Vanderbilt University Medical Center. Our goal is to continue this rotation for every PGY1 class of residents each December. We will evaluate the effectiveness of the day of shadowing via pre and post surveys through REDCap. Additionally, we will track any QI/QA projects throughout the residents' four years of training to identify any changes to hospital policy or regulations as a result of resident feedback. Additionally, we will track residents progression through the Milestones by gathering evaluation data through New Innovations, our evaluation system.

Potential Impact/Lessons Learned: We hoped to draw attention to the patient as a person therefore possibly positively impacting the resident's view of the people they care for daily. An added result would be the development of Quality Improvement Projects constructed from the resident's s

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Engaging the trainee in the hematology referral process

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Idea/Problem Statement:
One-on-one review of hematology referrals to engage trainees in the evaluation process and gain independence in addressing hematology consults

Rationale/Need:
Out-patient referrals are a large component of patient care in pediatric hematology and trainees must develop competency in the evaluation of these cases to satisfy ACGME training guidelines and provide optimal patient care as they become independent hematology providers. At the beginning of fellowship, there is knowledge and skills gap in the trainee's ability to address common hematology consults. This interactive intervention is meant to improve their ability to develop a differential diagnosis, complete an initial work-up and establish a likely diagnosis based on initial patient evaluation. This intervention is based on experiential learning principles as the learner participates in the evaluation, has an opportunity to reflect on concepts discussed, and utilizes these new skills in future interactions with patients. This method also employs concepts of adult learning in that it is interactive and task-oriented.

Methods:
This intervention is geared towards hematology-oncology trainees at all levels. During the first year of training, fellows review hematology referrals with the attending physician in face-to-face interactions 3-5 times per week to gain experience in the initial evaluation of information. During this phase, the trainee must collaborate with the faculty member to develop a differential diagnosis based on the available information and determine which initial tests should be completed for a cost effective and efficient preliminary work-up. Fellows of all levels of training participate in the second component of this activity during their weekly continuity clinics, when they are required to synthesize the information collected from the initial visit, including history, physical exam findings, and laboratory results, to develop recommendations for additional work-up based on the likely etiology of the patient's presentation. In these encounters, the fellow is expected to assess the information obtained and participate in future evaluation and management of these patients. This intervention is a novel method to engage trainees in the various aspects of the initial evaluation and follow up of hematology referrals. This methodology utilizes real world situations to train fellows to become competent pediatric hematologists.

Evaluation Plan:
We will track the number of referrals each trainee reviews to ensure they have adequate exposure to the most common hematologic cases. Their progress will be evaluated through direct observation during referral reviews and in continuity clinics. Pre- and post-intervention evaluations will be completed to assess knowledge and skills developed. Case-based patient simulation throughout training will be utilized to determine if the trainee has acquired the necessary skills to appropriately complete an initial and on going evaluation of the most common hematology referrals. We will also obtain the learners' feedback regarding satisfaction with the intervention in order to continuously improve the process.

Potential Impact/Lessons Learned:
This intervention will assist in the development of educated, competent pediatric hematologists through enhanced training, leading to increased proficiency in the evaluation and management of common hematologic problems and thereby promoting efficient, co

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Journaling Anesthesia Resident Performance to increase Practice Based Learning Improvement

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Idea/Problem Statement:
Enhanced assessment and feedback of learner workplace performance through longitudinal instructor journaling.

Rationale/Need:
Teaching in anesthesiology is typically one-on-one but episodic so months may go by between teaching encounters with an individual resident and a specific attending. This makes longitudinal assessment of a resident's development difficult. Failure to promote personal ownership and continuous monitoring impede many trainees from developing the Practiced Based Learning and Improvement Competency (Goldman 2011). The cool idea proposed here is to use preceptor journaling to track anesthesiology residents across an 18-month period to provide better mentoring for the residents and continuity in learning. By creating a mental space outside of the clinical setting for example by journaling, a mindful teacher can have a space to reflect and improve skills (Dobkin 2014). It will also provide assessment data for the program.

Methods:
The target learners are 10 PGY3/PGY4 anesthesiology residents across 2016- 2017. This is the implementation of a model. The instructor will structure each teaching encounter with residents to take advantage of best practices for modeling, supervising and teaching. Incorporating adult learning theory and questioning as a teaching tool. Each encounter can include: 1) Discussion of the case - diagnose learner's knowledge and prior experience in which to build upon and create educational links; establish resident's learning goal, set expectation, closed loop communication to see that you and the learner have an agreed upon plan; 2) they see the patient, obtain informed consent and set up the room (faculty observes when feasible); 3) Discuss the case and provide initial feedback; 4) supervise the peri-operative period (observation, direct instruction, feedback), increasing observed autonomy as appropriate; 5) post operative handover (observation and feedback); 6) debriefing of the case with discussion of how well learner's goal was met, and new goal for the next case. Encourage self-reflection 7) preceptor writes notes on related to these six steps into the journal; 8) potentially sending a copy of a note to the learner. The journal will be available to the residents to view when working together and will be confidential and not given to the department or Program Chair or Director.

Evaluation Plan:
At the completion of 4 clinical workdays, residents will fill out a confidential evaluation which will explore these concepts 1.) How well they liked the model 2.) How often did they complete their short-term goals 3.) Did this provide continuity and contribute towards their long-term goals? 4.) Is there anything they will change with their current routine after participating. The evaluations will be returned to me without identifiable data. During the journaling, I will address any benefits or obstacles that presented and how they were handled.

Potential Impact/Lessons Learned:
The long-term impact will be more continuous goal directed learning for the residents.

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CBD: Cake Based Discussion, A new teaching approach utilizing taste and smell senses in learning

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Idea/Problem Statement: Transforming local hospital teaching for junior doctor in to more effective, more enjoyable and most importantly in to a very memorable experience.

Rationale/Need: Personally we think local hospital teaching is boring, searching the literatures , very little mentioned about this problem, however this issue has been researched with in higher education. Interestingly 59% of students find their lecture boring half the time & 30% find most or all of their lecture to be boring (Mann, S., 2009). What is more interesting is that the use of power point is considered as the most important teaching factor contributing to student boredom(Mann, S.,2009). Didactic teaching sessions are widely used in medical training programs to deliver core content(Wolff, M et al , 2014) which is in most of the time is bland. Using some techniques like telling a story, draw a map or learn by doing in medical training all proved to be effective in delivering core knowledge(Wolff, M and et al , 2014).Looking in depth in to these techniques it seems that all these methods are increasing learners engagement through stimulation of senses . Sensory stimulating theory of learning stated that about 75% of knowledge held by adults is learned through seeing & 13% through hearing. The remaining 12% is through taste,smell and touch(Oxford Centre for Staff development, 2011). Sensory stimulating theory advocates that if multi senses are stimulated simultaneously greater learning will take place(Oxford Centre for Staff Development,2011). We thought that by stimulating senses like taste & smell during teaching session in our hospital we can improve learning experience.

Methods: We used local hospital teaching sessions (weekly junior doctors teaching) in different departments, to give a talk about various medical & surgical subjects. For each session we prepared a teaching about a medical condition, an investigation method or operative procedure. To stimulate multiple senses we designed & produced homemade medical/ anatomical models made entirely from edible materials like cake, pastry & honeycombs. In the morning of the session, junior doctors were given the chance to have a look at the cake model (e.g. brain, fractured bone, AAA operation, laparoscopy simulator or CT- scanner) & informed that the teaching will be based on this edible model & by the end of the session everybody will enjoy a nice piece of cake. Teaching session then delivered in the afternoon using direct interaction & discussion without using power point or any form of didactic teaching. By the end of the session all the attendees will have a piece of the cake.

Evaluation Plan: We intended to keep the session as much enjoyable as possible by removing any form of paperwork, therefore we did not obtain any written feedback for any of these sessions but we had a thorough verbal feedback to evaluate this teaching method. All feedback comments were strongly positive and very encouraging to continue this approach. All doctors & other health professionals attended the session clearly stated that its the first time to come across such approach in teaching which is very refreshing & interesting. Some also mentioned that these sessions by far are the most memorable teaching experience they have ever had.

Potential Impact/Lessons Learned: For each session more than triple the planed number of learners attended, including doctors from different speciality & of different training grade including registrars & consultants. Interestingly other health professionals e.g. nurses, physiotherapists

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Casting a Wider Net for Learning: Usage of a Clinic Passport

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Idea/Problem Statement: Use of a digital passport for resident continuity clinic to track exposure to outpatient topics and facilitate self-directed learning.

Rationale/Need: Since 2010 the AAMC has been predicting a physician shortage, a majority of which are general practitioners (1). While some residency programs have created special primary care tracks (2), the majority are still heavily inpatient based, leaving new graduates to feel ill prepared to manage patients in the outpatient setting. The Children's Hospital Los Angeles (CHLA) outpatient general pediatrics curriculum consisted of decentralized resources, including weekly lectures, one on one precepting, self-directed online learning modules, and the "Topic of the Week" taught by preceptors during resident interactions. Both residents and preceptors found it frustrating that the topics were not coordinated and often did not relate to the current patient being discussed. Additionally, without formalized preceptor groups, it has been challenging to build on the resident's prior knowledge and assess if they are mastering important skills or topics. Based on this feedback, it was imperative for the continuity clinic education committee to develop and implement a new curriculum and tracking tool that is learner-centered and longitudinal (3). Our goal is to develop an easy to use tracking tool that integrates all educational resources, relates in real-time to each patient and allows for ease of both formative and summative evaluation.

Methods: All 90 pediatric residents at CHLA will be introduced to the paper version of the clinic passport, called the Sage Book, during their continuity clinic in October 2015. Preceptors will be provided with a corresponding guide of resources and participate in faculty development sessions on the use of the Sage Book, precepting techniques and to review of key topics. During the pilot phase (11/15 - 6/16), residents will bring their Sage Book to each precepting encounter during their weekly clinic half day. Residents will select a topic from the Sage Book that relates to their current patient, document what they have learned from their preceptor and what questions they still have. During subsequent encounters the preceptor can review what has already been taught and follow-up on the residents' documentation of self-directed learning to further expand on the topic. During semi-annual meetings, clinic mentors will review the Sage Book with the resident to identify areas for future focus. After the pilot and evaluation, a digital application will be developed that allows portability and linkage to educational resources within the passport. By the end of training residents should be able to: 1) Detect gaps in own knowledge; 2) Formulate questions to address gaps; 3) Utilize guidelines to practice evidence based medicine; and 4) Express comfort in their ability to care for patients in the outpatie**nt setting.**

Evaluation Plan: The evaluation will include: 1) assessment of opinions about the outpatient curriculum, comparing baseline attitudes of preceptor and residents to post-pilot attitudes, using standardized Likert scale surveys; 2) pre- and post- resident self- assessment of 14 common outpatient pediatrics topics; and 3) conduct of pre- and post- focus group sessions with the program leadership to examine preceptor feedback of residents. We will also collect all Sage Books, de-identify and review by year of training for overall frequency of use, common topics identified, and resources most frequently utilized.

Potential Impact/Lessons Learned: A digital version of the Sage Book will allow for it to expand from an individual tracking tool, to a method of data collection with generated reports on topics, residents and preceptors. The digital application could be shared with other pediatric progra

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The Intern Study Guide

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Idea/Problem Statement:
How can residency programs educate their Interns on the transition from being traditional students to self-directed learners?

Rationale/Need:
Residency marks the beginning of a complete change in the paradigm of learning. Student doctors become full-time employees, and yet, are still expected to acquire massive amounts of knowledge pertaining to their specialty. Without daily lectures and organized curriculums, how does one complete this task? Should programs take a moment, during the beginning of residency, to specifically address this issue? Current literature suggests residents often struggle with the concept of self-directed learning, even in their final years of training. With varied advice being offered to them, there is a need to create a uniform study plan. Ideally, this information would be offered at the start of residency. As well, intermittent "check-in" sessions should be established to assist in guiding new Interns throughout their first year. As case studies have shown, routine coaching can help condition good habits of self-reflection and troubleshooting obstacles. This rationale led to the development of "The Intern Study Guide," a formal introduction to residency education based on adult learning principles.

Methods:
The target audience was a class of 17 Interns in an emergency medicine residency program. There were 2 main outcome objectives

1) Interns would understand the concept of self-directed learning and realize its importance during residency training and
2) Interns would devise an organized, independent study plan. This presentation was executed as a single workshop held during the orientation of their Intern year. This interactive session, entitled "The Intern Study Guide," included 16 Powerpoint slides that served as talking points for a general group discussion. A senior-level resident led the workshop. The first portion of the presentation highlighted the need to adopt a more andragogical than pedagogical form of learning. Interns were encouraged to develop their own study tactics and acquire their own resources to stay up to date on emergency medicine. This would involve much self-reflection of their preferred learning styles, and an understanding that this would be a work in progress. To assist them with this task, residents were given tools to self-navigate the educational requirements specific to their level of training.

As Interns, they were advised to focus their study efforts in 3 main areas:

1) Preparing for the USMLE Step 3 examination,
2) Establishing a knowledge base of emergency medicine and
3) Developing their clinical acumen. Recommendations on a multitude of text and online resources were provided to them, so that they could develop their own study plans.

Evaluation Plan:
To assess the efficacy of this intervention, quantitative data will be collected via a survey prior to the intervention and at the end of the academic year. This will include a questionnaire to be completed by all of the participants exploring the Intern's sense of competency in self-directed learning. Responses will be computed as Likert scores. In addition, a senior resident and faculty member will review and monitor the Intern's self-directed study plan during his or her mid-year and end of year evaluation. Finally, test scores from annual in-service exams will be compared to previous years. Further evaluation of "The Intern Study Guide" will include itemizing commentary from the Intern participants. Their feedback will be used to modify the presentation in future sessions.

Potential Impact/Lessons Learned:
If "The Intern Study Guide" shows an improvement in an Intern's confidence in self-directed learning and thus their medical knowledge, and possibly even shows an increase in in-training exam scores, similar interventions could be applied at other programs

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An Educational Tool of Curated Resources for Emergency Medicine Residency Education

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Idea/Problem Statement:
A learning tool for residents that curates the overwhelming array of emergency medicine educational content into a focused longitudinal curriculum.

Rationale/Need:
Until recently, independent study in medical training occurred through textbooks that were updated every few years. With the advent of the Internet, there has been an expanding movement of digital emergency medicine (EM) educational content. This transformation of the educational landscape provides physicians with a myriad of rapidly updated online educational material at their disposal. Recent studies have shown that EM residents not only utilize podcasts more than any other study tool (including textbooks), but they found these resources the most beneficial.1 It is anticipated that online educational content will continue to play a more prominent role in resident self-study.

However, modern online education has its drawbacks, namely the dilution of quality content amongst the barrage of websites, podcasts, blogs, and social media. For those in training, navigating the sea of resources available can be overwhelming and may present a significant barrier to effective learning. Applying the “paradox of choice”2 principle to educational resources, residents can be discouraged by the plethora of digital material.

Creating a searchable database that easily categorizes online digital media by topic can obviate the need for learners to spend excessive time searching for relevant study material. This database would allow for a more efficient self-directed learning environment. The same tool can assist educators in identifying relevant resources for their EM curricula.

Methods:
The didactic curriculum of the LAC+USC Emergency Medicine residents includes weekly small group lectures, or modules. Each module covers an essential EM “core content” topic. These interactive sessions provide a longitudinal foundation for the residents’ theoretical medical knowledge through the four-year program. The students are expected to supplement their clinical and didactic learning with independent study, outside of their time in the hospital.

The Education Division currently uses this tool to establish study plans for the 68 residents that correspond to their weekly core content lectures. The tool itself is an Excel file that provides a searchable database. The specific medical topics are pulled directly from the American Board of Emergency Medicine’s (ABEM) updated appraisal3 of core content that serves as the basis for emergency medicine board certification. In anticipation of each class’s module, appropriate asynchronous learning material found through the curated Excel file is posted to the USC Blackboard website (a popular online learning management system). The sources of content are internationally recognized and trusted in EM education which includes videos, podcasts, and validated board review questions. The posted material is categorized as “Required,” “Recommended,” and “Additional Material,” to identify the priority of each resource. Each resident’s access of the material is tracked through the built-in analytic capabilities of the Blackboard website.

Evaluation Plan:
At the midpoint of the academic year, a quantitative and qualitative survey will be sent to all 68 residents of the Department of Emergency Medicine evaluating their experience with the Blackboard curriculum derived from the curated Excel file. They will be asked through various Likert scale and descriptive questions to evaluate their motivation to engage in independent study in an extra-curricular environment because of the curated content, in comparison to having to find resources themselves. They will be asked to compare how much they feel they are studying compared to the time period prior to implementation of the curated curriculum and whether they were more satisfied with the new system. Their responses would then be matched to their individual access metrics on the Blackboard website. We hypothesize that the curated educational tool will have made it more likely that residents would engage in independent study, by eliminating barriers to finding quality educational content.

Potential Impact/Lessons Learned:
Using our database, both physicians in training and curriculum developers can identify educational content in an efficient manner and overcome the barriers of motivation in searching through an overwhelming amount of online content. If successful in our

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The Flipped Clerkship: Incorporating Flipped Curriculum into Emergency Medicine Student Education

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Idea/Problem Statement:
We are exploring a flipped curriculum model as a possible alternative to traditional weekly clerkship didactics.

Rationale/Need:
Emergency Medicine rotations can be more challenging than other medical student rotations, and clerkship directors are tasked with supplementing student clinical experiences in the ED with didactic materials. Traditionally, this is achieved through focused lectures given by department faculty. Implementing weekly lectures in a rotation with such variable schedules and ensuring consistent high quality lectures are provided can be difficult. Students are forced to leave clinical settings to be available for these sessions, interrupting their learning in clinical settings. In addition to these logistical issues, modern educational theories on adult learning no longer support hour long traditional lectures. Instead, they support self-directed learning reinforced with small-group or team-based learning. The flipped classroom model supports this method of learning, and can easily be incorporated into a medical student clerkship. Medical students will benefit from a standardized approach to their education, and more opportunities for specific questions and interactive discussions, and less time spent on explaining core topics. Research indicates greater gains in test scores and competencies for junior residents and medical student learners when given online and web-based curriculum to augment bedside learning. (1,2) These studies cite the importance of "just-in-time learning" (3) and asynchronous content delivery for providing medical information when learners need it the most.

Methods:
At UC Irvine, instead of traditional didactic lectures, medical students watch short 3-5 minute podcasts on set topics before a scheduled didactic session. This time is used to review cases and discuss the concepts covered in the podcasts. This allows more efficient use of learning time and will hopefully prove a more effective learning model. Students will be challenged to utilize and apply the concepts presented in the podcasts for activities like reviewing relevant cases, answering review questions, or creating mini teach-backs to educate their peers.

Evaluation Plan:
To evaluate the effectiveness of the flipped-classroom model, quizzes are provided to students following scheduled sessions. The goal of these quizzes is to highlight key points identified by the faculty, while providing feedback for students on their understanding of the material, ensuring they are clearly presented with the learning objectives of each session. / / Shelf exam scores are compared between the students from prior years who received "traditional" lecture didactics and those who take part in the flipped-classroom approach. Student feedback will be gathered via course evaluations and study surveys. The surveys use Likert-scale questions so students can evaluate different elements of the flipped classroom. These surveys will be provided at different timepoints during the rotation to assess changes in student perception of flipped classroom and their comfort level with the clinical material. /

Potential Impact/Lessons Learned:
If effective, this model could help guide other schools to "flip" their clerkships, creating a new standard in emergency medicine education which can take advantage of this generation's extensive use of technology.

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Assessing Quality of Medical Student Documentation using Digital Instruction in Emergency Medicine

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Innovation Idea: To evaluate the need for additional instruction for medical students regarding the documentation of patient encounters and their adherence to billing guidelines.

RationaleStatement of Need: In 1997, Health Care Financial Administration (HCFA) published guidelines that required physicians to document key aspects of a patient encounter for billing purposes, consequently revoking medical students' involvement in patient documentation during their clerkship rotations. Many clerkship directors were concerned that this lack of participation would adversely affect medical education, leaving students unprepared to accurately document patient encounters in accordance with HCFA during residency. Furthermore, many Emergency Medicine residents reported a lack of confidence in their ability to document patient encounters with high adherence to HCFA. With the rise in use of electronic records following the Patient Protection and Affordable Care Act of 2010 and the importance of comprehensive documentation, evaluation of medical student education regarding documentation is necessary.

Methods: To assess this need, Digital Instruction in Emergency Medicine (DIEM) was utilized by medical students on their Emergency Medicine clerkship to simulate patient encounters, giving them the opportunity to practice their documentation skills. These documentations were then de-identified and assessed for completeness and adherence to HCFA guidelines. In total, 103 medical students completed the DIEM simulations, and their documentation was assessed by the billing department via a Billing Audit Tool for completeness in the following areas: chief complaint, history of present illness, past medical history, family history, social history, and review of systems per HCFA guidelines. We then assessed areas of deficiency by calculating the percent of students' who neglected to accurately document each section in accordance with HCFA.

Results: Our initial analysis indicates that medical students were deficient in documenting the following areas: Quality (35%), severity (10.7%), duration (28.2%), timing (45.6%), context (78.6%), modifying factors (59.2%), associated symptoms (95.1%), personal history (20.3%), family history (99%), social history (80.5%), and lack of comprehensive review of systems (92.2%).

Potential Impact: Our study illustrates a lack of comprehensive documentation and poor adherence to HCFA, indicating future complications with billing as future residents. We recommend additional medical instructions focusing on documentation and adherence to billing guidelines should be implemented prior to, or alongside, clerkships.

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Narrative Medicine Workshops in the Preclinical Curriculum

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Idea/Problem Statement:
Narrative Medicine Workshops in the Preclinical Curriculum

Rationale/Need:
Studies have shown that medical students' empathy declines between matriculating medical school and graduating, with the largest decline in empathy occurring following the third year of medical school. (1) Nearly half of aspiring physicians become emotionally, spiritually, and physically overwhelmed over the course of their training, resulting in a loss of empathy in the patient-doctor relationship. Research indicates that higher ratings of physician empathy result in better patient compliance and outcomes, and even reduce the frequency of medical malpractice suits. (2) A preclinical curriculum that incorporates narrative medicine may be effective in improving skills such as empathy and interpersonal communication among medical students, with potential protective effects against burn-out in the long-term. Results of this pilot study may be useful to help inform future medical humanities curricula with the ultimate goal of training physicians with effective interpersonal skills as well as empathy and compassion towards their patients. We hypothesize that the medical students who participate in narrative medicine workshops will demonstrate measurable gains in empathy and will also regard the learning process in a more positive light relative to students who do not participate in these workshops.

Methods:
The research design for this study is a cohort study that incorporates descriptive surveys and written reflections. Students who elect to participate in the study will be given the preference to either participate in the workshop group or a control group based on preference. Students in the workshop group will utilize the narrative medicine workshops in order to complete reflection assignments required for completion of the Patient-Centered Medicine I and II courses. Both groups will complete three anonymous surveys to be administered throughout the duration of the PCM course: one before the workshops, one during the midway point, and one after the conclusion of the workshops. Students in the workshop group will also complete a subjective evaluation of their workshop experience at the conclusion of the experience. The workshops will be conducted by myself and one other student volunteer and will be held at the Robert Wood Johnson Medical School for one hour intervals on Thursday evenings from 6 pm until 7 pm. The workshops will be structured whereby students will be given a prompt- a short story, narrative, or poem related to a major theme in medicine. Students will spend 15 minutes discussing the piece and the remainder of the workshop will be devoted to producing their own written work related to the theme. Themes include death and dying, disease, the physician as healer, patient-doctor relationship, and will feature work from prominent physician-writers.

Evaluation Plan:
At the end of each session, students will complete a brief questionnaire where they reflect on the writing experience. At the conclusion of the yearlong workshop, students will complete a post-psychometric assessment designed to measure qualities such as empathy, communication, interpersonal skills, creativity, and introspection (Figure 2). They will also complete a subjective evaluation of the narrative medicine course.

Potential Impact/Lessons Learned:
Results of this pilot study may be! useful to design future medical! Humanities curricula in medical schools with the ultimate goal of training physicians who demonstrate effective communication and interpersonal skills as well as empathy and compassion t

References:
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Game Theory and Medical Education

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Idea/Problem Statement:
Are there any educational benefits to applying game theory to learning in complex environments like medicine?

Rationale/Need:
The learning that occurs in a game environment reaches higher levels on Bloom's Taxonomy and allows for systems-based thinking in a complex environment. Massive multiplayer online games create worlds where players communicate, interact and consider resources, strategy and efficacy when making moves. The learning that takes place in these environments can go beyond knowledge acquisition, to higher levels of application, while also teaching systems-level concepts. Therefore the game environment is suited to learning about the complex nature of the health care system, test decision-making strategies and develop team-work skills in players and learners. The learning also has a greater potential to be self-directed, allowing learners to make mistakes and learn from them, with progress in the game denoting higher levels of knowledge and application.

Methods:
Compare learning outcomes, knowledge retention and self-efficacy between groups of students who augment their traditional learning strategies in medical college courses, with MMORPGs (Massive Multiplayer Online Role Playing Games) designed to teach the same material, and those who do not.

Evaluation Plan:
Randomize two groups of 2nd Yr students into two groups, allow both groups to follow the traditional curriculum, after which one group will interact with a gaming environment designed to allow them to learn the same concepts in the game itself; the other group will not. Compare satisfaction rates, time spent studying, self-efficacy and test scores, application to real life case studiies. Re-test students in 3 months to evaluate longer term retention of material and concepts.

Potential Impact/Lessons Learned:
Using the medium of gaming to teach in medicine has the potential to improve student satisfaction and application of concepts to real world problems.

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EM-Radiology Exchange Program: Improving Communication and Cross Disciplinary Education

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Idea/Problem Statement:
An Emergency Medicine (EM)-Radiology Exchange program was created to promote interdepartmental communication, education, and improve patient care.

Rationale/Need:
Historically, communication between radiologists and emergency physicians has consisted of a radiologist's reading a clinical indication for an imaging study consult and an emergency physician's subsequent reading the dictated report. This limited communication paradigm can lead to miscommunication and dissatisfaction between these specialties. Now, given the increasing volume of advanced imaging ordered in the emergency department (ED), more dynamic communication between radiology and emergency medicine (EM) is paramount for quality patient care. Both specialties have recognized the importance of communication by dedicating ACGME milestones to this skill.

While it is intuitive that each specialty should understand each other's workflow, there are relatively few studies aimed specifically at interdepartmental education and communication. One study by Stubbs et al created an emergency radiology curriculum for PGY1 and PGY2 EM and radiology residents, and the course survey showed that all participants found the course useful and applicable. A case study by Panek et al highlighted how a systems-based practice approach to improving delays in radiology exam turn around time led to improvements in communication between specialties and the institution of a regular EM/radiology teaching conference. We hope to build on these studies with our EM-Radiology Exchange Program and prospectively evaluate improvements in communication, while meeting specific educational objectives.

Methods:
The exchange program involves PGY2 EM residents on their Emergency Ultrasound rotation and PGY2 Radiology residents on their Emergency Radiology rotation. Each resident spends a half-day with attendings from the other specialty. EM residents spend time with Emergency Radiology attendings and residents reviewing scans performed on ED patients.

Learning objectives include:

1) Understand the importance of appropriate clinical information to ensure accurate reading of radiology studies and relaying important radiologic findings in real time.
2) Discuss workflow challenges that EM physicians encounter and provide feedback on elements of the radiology report.
3) Reference American College of Radiology appropriateness criteria.
4) Compare and contrast benefits of various computed tomography (CT) protocols.
5) Review approaches to reading body CT and plain radiography.

Radiology residents spend time with EM attendings and residents on the Emergency Ultrasound team and other EM residents working in the ED. Learning objectives include:

1) Understand issues with work flow, patient care, ordering radiology studies, and perceived barriers to throughput.
2) Understand the different objectives and clinical use of point-of-care ultrasound and radiology ultrasound exams.
3) Select appropriate probe (linear, curvilinear, phased array) for intended object of interrogation and demonstrate proper probe placement.
4) Demonstrate ability to interrogate and visualize abdominal organs.

Evaluation Plan:
We plan to survey residents to assess whether the specific educational objectives were met during the exchange.

- For radiology residents, the survey will include questions about ultrasound probe selection, probe handling, adjusting depth and gain to optimize an image, and how radiology-performed ultrasound differs from point-of-care ultrasound.
- For emergency medicine residents, the survey will include questions about what clinical information is essential to communicate when requesting specific radiologic studies, appropriate CT for common indications including which studies require contrast, and review the search pattern for a CT of the abdomen and pelvis.
- Residents from both disciplines will be surveyed to determine the impact of the exchange on the communication

between the departments. They will rate the communication between the departments, the value of the exchange, and whether they feel the exchange has had an impact on the communication between the departments.

Potential Impact/Lessons Learned:
We hope to improve interdepartmental communication and understanding. Additionally, residents will learn aspects of diagnostic imaging unique to the other's specialty. We hope this will translate to better patient care and serve as a model for other train

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Interprofessional Education of Medical and Nursing Students in the Emergency Room Setting

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Idea/Problem Statement: Using multimodal activities to help nursing and medical students to develop skills in interprofessional communication in the emergency room setting.

Rationale/Need: The authors of World Health Organization(WHO) Framework for Action on Interprofessional Education(IPE) and Collaborative Practice pinned IPE as preparation for collaborative practice and an important step to improve health outcomes(Gilbert 2010). In fact, in 2013 LCME recommended that the core curriculum of a medical education program prepare medical students to function collaboratively on health care teams that are interdisciplinary. Limited research has been done on interprofessional training during clinical training and unfortunately at our institution there is no integrated IPE between medical and nursing students at the clerkship level. Didactic and simulation activities have been shown to be an effective mechanism for developing individual and team skills(Bridges 2011). Thus, we are proposing a structured curriculum to help students develop these skills in an emergency room setting.

Methods: This intervention will be piloted July 2016. It will take place over one year, approximately 40 third year medical students and 20 nursing students whom are working toward their APN degree will participate during the 12 month pilot.

The overall goal of the curriculum is to provide skills, knowledge and a team-based experience to ensure that students are able to approach the care of children in the emergency setting from a collaborative perspective. The training will extend across four weeks. In the first two weeks, there will be two 90 minute session for students to learn

1) the concepts of interprofessional healthcare teams and collaborative patient centered care.
2) Discuss the roles and contributions of each student as a health professional within the team dynamic lead by staff in different fields. The third week, will involve a 90 minute, role play activity to build skills.

The last session, will involve two simulated cases to promote interprofessional teamwork to provide emergency care to simulated pediatric patients. The case will be developed for usage at the medical/nursing student level. The students will work through two 30 minute simulations 1) asthma exacerbation 2) seizure and apply the principles of interprofessional communication, role clarification and team functioning learned in earlier sessions. Debriefing will be done after each simulation to help learner build insight and refine skills.

Evaluation Plan: Learner reactions will be collected using an opinion questionnaire. There will be reflective journals to allow students to reflect on their initial impressions and experiences with interprofessional collaboration. To assess students attitudes there will be a pre/post test using two validated tools: Interdisciplinary Education Perception Scale (IEPS) developed by Leucht and the Attitudes Toward Healthcare Teams Scale (Attitudes Scale) developed by Heinemann(Luecht 1999). Also, a retrospective pre-post will be given to assess student knowledge of IPE and degree of change in knowledge or attitude of IPE. A post / simulation debriefing will be conducted. This will allow the team to reflect and provide peer feedback on learning to improve practice and patient outcomes.

Potential Impact/Lessons Learned: Model program for other medical and nursing schools as well as for Emergency Medical Departments.

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Integrated team training for family medicine residents

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Idea/Problem Statement: Enhance family medicine resident skills in outpatient team-based care through implementation of interprofessional weekly team meetings.

Rationale/Need: With ongoing transformation of primary care to patient-centered medical homes (PCMH), there is a need for physicians and staff to work interprofessionally, providing comprehensive care for a growing patient base. The benefits of team- based care include improved patient safety, quality of care, and patient and staff satisfaction (1). Additionally, interprofessional care is a facet of the ACGME core competencies (2). Local survey data show that nearly half of Family Medicine office staff and providers are unsure of their professional role within the office healthcare team. While 100% of respondents reported office staff and providers as healthcare team members, only 50% included patients as part of the team, and only 17% viewed social workers, pharmacists, and mental health professionals as team members.

Improving residents' knowledge, skills, and attitudes toward interprofessional, team-based care is necessary preparation for entering the primary care work force. Our intervention is based on the validated TeamSTEPPS curriculum to educate all members of our team and develop a model that residents can utilize in any future outpatient setting (3).

Methods: The learners include 15 family medicine residents, and 10 Family Medicine/psychiatry residents (PGY 1-5) along with clinic staff members, family medicine faculty, and members of our interprofessional care team who are divided into four care teams. The learners will attend weekly practice meetings, structured so that each care team has time together for a debrief (reflecting on the week that passed) as well as a brief (looking forward to the week ahead). Meetings will include mini-training on principles and skills of team care from the TeamSTEPPS curriculum, review of roles and responsibilities of our interprofessional colleagues (pharmacist, dentist, physical therapist, social worker, etc). and interdisciplinary patient case conferences. At the end of this 12-month program, learners will be able to: (1) describe the value and benefits of team-based care and inter-professional collaboration, (2) explain relationships between team members, (3) apply a team- based approach to improving patient care, and (4) value different perspectives and experiences.

Evaluation Plan: Evaluation of learner reaction to the curriculum will be assessed using a quarterly survey and feedback will be used to make iterative changes. Individual behaviors and attitudes will be assesed pre and post-intervention utilizing the Teamwork Mini-Practice Environment Survey (a validated team assessment tool) (4), 360o evaluations of resident's team performance, and a commitment-to-act with follow-up to determine how residents' relationships with interprofessional team members have changed after completion of the curriculum. Impact on patient care will be monitored periodically by following EMR quality indicators.

Potential Impact/Lessons Learned: Team-based care is a solution to the growing demands on the primary care physician. If our longitudinal curriculum is effective in enhancing team-based practice and patient outcomes, it could be generalizable to residency programs nationally.

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Leadership and Career Development Retreat for Post-Graduate Pharmacy Trainees

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Idea/Problem Statement:
The evolution of the practice of pharmacy over the last two decades has resulted in a greater need for leadership and metacognitive skill development.

Rationale/Need:
In 2008, Zellmer described significant changes transforming the practice of pharmacy and concluded that "leadership is needed to close the immense gap between our vision and how most pharmacists practice their profession (1)." The need for leadership and professional development skills is also recognized by the accreditation organizations for both pharmacy students (ACPE) and post-graduate residency programs (ASHP) who have incorporated leadership and self-awareness into the skills that are required to be included in training programs. The Center for the Advancement of Pharmacy Education (CAPE) defines leadership as a "function of knowing yourself, creating a culture of trust and open communication, having a vision that is well communicated, empowering others, taking a broad view of situations, and forming strategic alliances (2)." The CAPE outcomes have been adopted as Standard 4 requiring programs to impart the knowledge, skills, abilities, behaviors, and attitudes necessary to demonstrate self-awareness, leadership, innovation and entrepreneurship, and professionalism in graduates. Similarly, ASHP Competency Area R3 requires leadership and management competency for post-graduate residency program accreditation. We have developed a formal curriculum to build leadership, metacognitive and career development skills in post-graduate pharmacy trainees (3).

Methods:
A 10-hour curriculum including a weekend retreat was developed to help post-graduate pharmacy trainees build leadership, metacognitive and career development skills. Each summer during the first month of residency/fellowship training, approximately 45 postgraduate pharmacy trainees participate in a weekend retreat focused on leadership skills. Prior to arrival at the retreat, participants complete an MBTI, a networking survey, a values survey and read assigned chapters from Steven Covey's 7 Habits book. The on-site activities include: getting to know yourself; career planning (mentoring, networking, and career plan); and team building. During the workshops, participants are assigned to two kinds of teams (by MBTI) and by program type (USC-Allergan Pharmaceutical Industry, Veterans Affairs Greater Los Angeles, USC Keck Acute Care, USC Ambulatory Care, USC Community Pharmacy, USC-Caremore, USC-Norris, Hollywood Presbyterian, and Huntington Hospital). The teaching techniques include brief didactics, interactive small group tasks, individual and small group reflections, and team building activities (including longest paper chain and tallest tower).

Evaluation Plan:
Participants complete program evaluations (Level 1), write learning lessons (Level II), and make a commitment to act (Level III). Follow-up sessions are held 3 and 6 months after the session, to assess progress on career planning and professional development. A survey of participants who have completed their training 6 months and 18 months after the sessions to assess the value of the programming is in process (Level IVa). The results of the 2014 and 2015 programs will be presented in the poster or presentation.

Potential Impact/Lessons Learned:
The curriculum provides a model for post-graduate training programs in any health profession to help residents and fellows build leadership, teamwork and professional development skills.

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Resident Leaders

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Idea/Problem Statement:
A leadership course for internal medicine and pediatrics residents focusing on self-efficacy and emotional intelligence.

Rationale/Need:
Residency places people in various complex situations where leaderships skills and self-knowledge are crucial to outcomes. A course on leadership will train participants about themselves, their colleagues and the environment they operate in, in order to improve their level of career satisfaction and self-efficacy.

Methods:
A longitudinal curriculum of 6 sessions, 2hrs each, with a balance of didactics and workshops, administered through the academic year on a rolling basis. Sessions include: Emotional Intelligence, conflict management, autobiography and physician identity, The Seven Habits, Effective Leadership & Teams, MBTI.

Evaluation Plan:
Prior to implementing the curriculum residents will be given a case- and knowledge-based survey regarding their basic knowledge of leadership and self-efficacy skills, confidence in their ability to manage conflict, and their habits of self-management. / Attendance, feedback and course evaluations. / Longer term self-reported behavior changes inculcated into regular practice.

Potential Impact/Lessons Learned:
Residency training poses a challenge to the trainee and the educational enterprise to provide a useful map to navigate the complexity of medical practice.

References:

Beyond the LIFE Curriculum: A curriculum for Educational Leaders in Academic Health Centers

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Idea/Problem Statement:
A structured and facilitated process to assist educational leaders in Academic Health Centers to enhance the learning environment.

Rationale/Need:
Clinical Learning Environment Review (CLER) site visits began in 2014. The initial report on 248 institutions indicated opportunities for improvement in many sites. These were found in all five areas: lack of resident engagement in hospital quality improvement, patient safety, supervision, fatigue management, and professionalism. "Transitions of care" was not included. (1) The challenge educational officials face is to translate these opportunities into actionable items for their hospital leadership teams to embrace. One issue, disruptive behavior, found on this survey is also of concern to the Joint Commission due to its impact on patient safety. (2) Our idea is to develop a curriculum for educational leaders and hospital executives to explore the issues, the underlying cultural challenges and tools to develop local solutions. (3)

Methods:
The participants would be leaders in selected community hospitals (n≈40). A trained facilitator will guide the hospital leadership through a two-step process.

Step 1 is a general session to include: 1) Ascertain the knowledge of the participants via ARS in relation to the CLER pathways and to their own local results, followed by a brief review of pathways and results. 2) The group would then break in to subgroups, each focused on a pathway to a) work together to uncover the root causes of challenges faced, b) select their first challenge area with respect to their pathway, and c) identify team leaders and change agents in their institution who could facilitate process improvement in the area of this challenge. Each subgroup will be provided with a targeted module for their pathway. The module would guide the team leaders and change agents through a process of a) deeper analysis of the cultural milieu to determine areas for needed changes; b) determine potential actions (policies, procedures, training, etc., c) select specific actions; and d) develop a timeline to achieve the action plan selected. Resource packets will be tailored to each pathway using cases found in the LIFE curriculum videos or in the literature as appropriate for that pathway. Facilitator would move among the groups to oversee the process and provide redirection as needed.

Evaluation Plan:
Participants will produce an action plan to improve one area of their learning environment with a delineation of who in the hospital leadership team will be accountable, how success will be tracked, and an estimated timeline to see results. All participants will be surveyed at the completion of the course to assess their individual commitment to facilitate the institutional change process and their willingness to share best practices moving forward.

Potential Impact/Lessons Learned:
Our workshop will provide academic leaders with a mechanism to facilitate process improvement in their learning environment and tools to track those improvements.

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The Benefits and Challenges of a Formal Mentoring Program in a Gastroenterology Fellowship

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Idea/Problem Statement: The lack of published data on mentoring during gastroenterology training may result in limited recognition of the benefits of formal

Rationale/Need: Mentoring is important for professional development and success in academic medicine. However, there is no published information about formalized mentoring in gastroenterology fellowship training. Focused instruction for the development of procedural skills is typically incorporated into gastroenterology education. However, data on structured mentoring for patient management, procedural activities and academic development in gastroenterology programs is not available. / The lack mentoring information in gastroenterology training raises potential concerns about the availability of faculty for individualized instruction, personalized support and focused career guidance. Structured mentoring within gastroenterology education has the potential to comprehensively address important curricular milestones and personal development through customized activities. While multiple mentoring models exist, the traditional mentor-mentee dyad structure is the most frequently recognized academic arrangement. This study evaluated a formal one-on-one mentoring program that was embedded into gastroenterology education at a university-based fellowship program.

Methods: Gastroenterology faculty mentors and fellow mentees were paired into a dyad mentoring relationship by the fellowship director. The pairing was formalized for one year, with the potential ability to change during the subsequent academic years. Faculty were given written and verbal information about effective mentoring prior to formalizing the mentoring program. Expectations were for faculty to support professional development and to provide personalized career advice. The frequency of meetings and mentoring activities were determined by the mentor-mentee dyad. / One year after the implementation of the program, an anonymous, qualitative survey was distributed to all faculty mentors and fellow mentees. Respondents were asked to delineate the benefits and challenges of the one-on-one mentoring program. The responses were categorized and evaluated for faculty and fellow consistency. Responses were also assessed for personal, process and outcome learning.

Results: All gastroenterology fellows were assigned a formal faculty mentor. All mentors and mentees completed the anonymous survey. The faculty and fellows identified the benefits of the mentoring program to include personalized support for professional development and career advice. Additionally, the program fostered trusted relationships, personalized advocacy and improved faculty-fellow communication. Faculty noted that fellows were more open to feedback, had improved clinical performance and developed greater confidence. Fellows reported that they set higher personal goals and improved exam scores because of their mentor. A challenge for the program expressed by faculty and fellows was the potential for limiting interaction with other faculty because of the mentoring assignment and that there should be a reinforced understanding that the mentoring program does not restrict relationships with other faculty. One-third of the faculty expected the fellows to be the primary initiator of problem-solving discussions, although fellows expected a shared process. In addition, one-third of fellows indicated that there should be a formal process for changing mentors if desired. Findings could be categorized into personal, process, and outcome factors. Personal learning included the recognition of the importance of commitment and communication. Lessons about the mentoring process included recognition of the importance of individualizing the mentor-mentee interaction while devoting adequate

Potential Impact/Lessons Learned: Commitment to training excellence encourages the development of innovative programmatic activity within gastroenterology fellowships. This study revealed that mentoring can have significant impact upon professional and personal development. These results are potentially generalizable to other subspecialty fellowship programs.

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Metacognition and Learning: Instructor Perception-Based Adaptions and Lessons Learned

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Idea/Problem Statement: Insights gains from learner perception of interacting elements and lessons learned by instructor from a two year investigation of metacognition.

Rationale/Need: Research indicates that student response systems (SRS) can have a positive effect on learning by increasing student metacognitive development [1], and suggest that instructional design combined with interactions with lecturer contribute. Research literature on teaching consistently demonstrates higher learning outcomes when instruction with instructional strategy use is compared to traditional lecture. Despite this body of research hesitancy pervades with instructor use of technology. Among the many reasons are lack of time, expectation, professional development opportunities and digital training and a general concern that a detriment of learning may occur with focus on technology use1. An important function of educational technology in 21st Century education is to provide an increased ability to target specific learning and to allow continuous improvements for individual learnings during the process of learning. The manner of implementation of technology in the educational setting and instructor habits influence. This study provides insights into graduate health science learner perspective on student response system use, instructor perception, and adaptations to instructional design, and adaptations in instructional focus resulting from the two year study [2].

Methods: Data were collected from two cohorts of graduate health science candidates (n=107) over two consecutive years. Instrumentation relevant to this study is the qualitative examination which consisted of informal observation and interviews (n=54). The interview questions for the 2013 (n2013=30) cohort were more highly structured than the 2014 cohort (n2014=24), resulting in a more robust body of data collected for the 2014 cohort. Interview questions sought to compare the use of SRS to low technology comparison response system use (LTRS). Questions asked about the influence of these two systems on lecture note-taking experience, study strategies, preparation for lecture, preparation for quiz/exam, and peer influence. The more structured interviews (2013) took 5-10 minutes and the reframed interviews ranged from 15-45 minutes dependent upon respondents. An example of how interview questions change from 2013 to 2014 is the structured interview asked, “How did SRS/LTRS results cause you to evaluate your thoughts?” and the 2014 interview script for this question read, “When you saw the histogram and what thoughts did you have when the histogram results were presented? How did that influence your thinking? If it did, how so? Do you have an example? Informal observations were documented though discussions between the principal investigator and lecturer following treatment and comparison methods and at the conclusion of the study. Observations were based on perception of polling methods.

Results: Students perceive improvements in the learning experience and are influenced by response system use in the areas of gaining understanding, reference group comparisons, and note-taking. The majority of respondents indicated that response systems improved the ability to understand what was important to the instructor, how respondents compared with peers level of understanding, and what information to revisit when studying. Both methods provided benefits to learning. Respondents indicated that calibrations of accuracy of answers and level of understanding was improved with SRS, leading to increased confidence or realistic appraisal. Instructor observed answer changes with LTRS increased distractions during polls/quizzes. Further analysis in underway for qualitative analysis of learner and instructor perception.

Potential Impact/Lessons Learned: Triadic reciprocality3 (SLT Model) is a malleable process through which the instructor can have the primary influence in identifying concepts that are not well understood, directing attention to concepts, and structuring lecture content with terms that may serve as priming-retrieval cues priming pathways for LTM and improving metacognition.

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Graduate Health Science Learner Metacognition: New Directions and New Questions

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Idea/Problem Statement: Results from a factor analysis of learner metacognition inform new questions and improve the ability to measure this complex construct.

Rationale/Need: Self-regulation and self-knowledge are fundamental aspects of metacognition that are linked to improved learning outcomes. Research indicates that metacognition is influenced by technology. Improvements to inventories that measure metacognition may inform in practical ways instructional and technology design. Questions will be piloted that align with factors that are not as clearly represented and revised to improve alignment with construct subcomponents3. New items seek to determine changes in learning occurred prior to, during or following learning experience by identifying whether plans developed for learning, learning goals identified, strategy selected or changed, knowledge gaps assessed, individual and/or group experience monitored, and quiz/exam study efforts. Factor analysis (n=253) sample size is related to the inherent features of the data. The strength of communalities and the degree of strength of factor loadings was examined and found that data loading onto three factors is weak while data loading onto five is strong. Data were clearly factorable with six loadings for SRS data and five for LTRS2.The possibility of structuring the learning experience through use of interactive technology has the potential to support student learning and contribute to improvements in student learning outcomes. The results from piloting new questions are expected to further inform the process of influencing metacognition and the measuring metacognitive influence more specifically.

Methods: Data will be collected from a prospective 150 graduate health science candidates during the last two weeks of the fall 2015 semester. Results will be analyzed by mid-December 2015 and available for inclusion in the final draft and for presentation. IRB approval was obtained to administer the survey via Qualtrics© and factor analysis will be conducted using SPSS 22.0. Survey instruments that were utilized in previous studies1 to measure metacognitive self-regulation resulting from educational technology will be administered. These consist of two inventories with a total of 23 items. An additional 34 items will be piloted in an attempt to gain more specific insight on study strategy, preparation and review for lecture, goal setting and planned efforts by learners that may be in reaction to technology incorporated into the instructional design. The factor analysis should confirm which items to eliminate and clarify factor groupings. Strength of factor communalities and the degree of strength of factor loadings will be reported and factor loadings will be explained.

Results: Factor analysis informed revisions and additional questions that were designed to measure the influence of educational technology on metacognition. This study's purpose is twofold: a) attempt to improve question alignment with metacognitions components3 and b) to broaden the number of subcomponents to additional aspects of metacognition. Analysis was conducted separately for high technology student response systems (SRS) and for the comparison method, paddles, low technology response device (LTRS). SRS analysis resulted in six factor loadings, and with LTRS five. Difference in factor loadings is attributed to the nature of the response devices with SRS focusing on the individual experience of learning and LTRS on changes in the interacting elements of the learning context, specifically the potential for group influence1. This effort is a response to the factor analysis, to improve the ability of the instrumentation to ferret out the complexities of the subcomponents of metacognition.

Potential Impact/Lessons Learned: Technology changes the learning context that influences instructor and learners. Instructor strategy and instruction may be adapted to influence positive student learning behaviors and outcomes.

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Learn by Teaching: A Pilot Study of Medical Students as Instructors for a Parent Education Course

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Idea/Problem Statement:
Senior medical students instruct new-parent education classes, thereby gaining pediatrics knowledge and allowing assessment of communication skills.

Rationale/Need:
Medical education has been criticized for not providing sufficient patient-student interaction to allow the development of communication skills, health literacy awareness, and understanding of the social context of illness. Students are assessed objectively via shelf exams and their preceptors but not often subjectively by the patients and families with which they interact, so it is also difficult to know if the direct interaction they do participate in is effective. Community based programs have gained interest as a way to broaden medical school training [1]. One such program is a parent education course, which has been shown to improve parenting and child behavioral problems but only reaches a limited portion of patients [2]. Therefore we propose that clinical-year medical students interested in pediatrics will teach a community-facing parent education course and be evaluated by the participants on their ability to transmit knowledge and communication skills. A somewhat similar program to teach parent education skills to pediatric residents had a positive impact on consultation skills and parent disciplinary practices [3] but to our knowledge this has not been investigated at the medical student level.

Methods:
As a pilot the 10 members of “Keck Kids”, a medical student-interest group, will each lead at least one new-parent education course with the supervision of a faculty member during an academic year. These classes are modeled after those previously given at Children’s Hospital Los Angeles (CHLA) through the “Parent University” and cover basic topics such as immunizations, child safety, illness warning signs, infant feeding, and support resources. The same powerpoint presentation will be used each class, but students will be encouraged to augment this and to be creative in their presentation. Class will be conducted at CHLA every month on a Saturday and publicized via flyers and social media. Both currently hospitalized patients’ parents and members of the community will be invited to attend.

Evaluation Plan:
Prior to the class, parents will complete a short Likert-scale survey assessing their knowledge, attitudes, and abilities regarding newborn care. Following the class, parents will repeat the survey and also assess the knowledge, communication skill, and confidence of the lecturer. Students will similarly be surveyed about their knowledge and confidence in teaching about pediatrics before and after their teaching day.

Potential Impact/Lessons Learned:
Implementation of this intervention will provide students with a real-world interaction to develop teaching and communication skills in pediatrics, which if successful could be expanded to additional disciplines and across institutions.

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A "Role of the Physician in the Business of Medicine" Curriculum for 3rd Year Medical Students

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Idea/Problem Statement:
Medical students are not formally exposed to the challenges related to the role of the physician in the business of medicine.

Rationale/Need:
Current medical students lack exposure to business concepts and to practicing physicians outside of the academic environment. At Keck, 86% of the graduating 2014 class felt it "beneficial to their career to have some training or courses related to the business and management of healthcare". 68% felt it would be "beneficial to their earning potential". 25% of the class expressed interest in pursuing a career path that included biotech, finance, healthcare administration, information technology or health insurance. We created this course to help students better understand business concepts and equip them with the vocabulary of healthcare finance and policy. By understanding the complexities and current policies, they can examine how these forces will impact them on an individual physician level.

5 main areas of focus were addressed: Physician financial well-being, Macro healthcare economics, Physician leadership skills, Career planning, and Innovation. Students are interested in financial management of a practice and how cost impacts the delivery of care. Medical students need to understand how various insurance models work and that the role of the government in healthcare may shift over time. Physicians are also increasingly functioning in teams and act as leaders of care teams. There is currently little emphasis on or direct exposure to how physicians acquire and enhance their leadership skills.

Methods:
Keck's first Business of Medicine (BOM) curriculum was delivered in 2012 via small group case discussions over several weeks (10 hrs) in the spring of Year 2. A major course revision took place in 2014, with students participating in the spring of Year 3. This eliminated the distraction of Step 1 preparation and allowed students to draw upon their recent clinical experiences. We added protected reading time, contemporary articles, a second panel discussion, and new lectures. The lectures ("Evolving Payment Models," "Creating a High Performing Health System," and "Physician Leadership/Emotional Intelligence") by physician leaders exposed students to key concepts of medical payment models and physician leadership attributes. Each lecture was followed by a panel of practicing physicians discussing key concepts ("How Practicing Physicians Manage Their Practices" and "Alternative Careers in Medicine"). The aim was to energize students to explore BOM concepts as they progress through Year 4. Many faculty provided perspectives outside of academia, an area where students have relatively little exposure.

The small group workshop is highly interactive, based upon succinct, relevant, and timely readings. Students have the opportunity to engage with practicing physicians with expertise in BOM. Students draw on their past 6 months of clinical experience to identify key patient care issues and digest how the concepts of innovation and systems changes impact their patients.

Results:
In 2012, the curriculum was rated "okay" (mean score of 2.8 out of 5, range of individual sessions from 2.87-4.08)). It was shortened in 2013 to a single panel discussion of practicing physicians and was better received (mean score 3.21 out of 5). In 2014, we redesigned the curriculum to increase the number of faculty leaders, increase the total course time to 9 hours, and added a second panel discussion and new lectures.

The student reception of the redesigned course was positive. The overall course rating was a mean of 3.88 out of 5. Individual session ratings ranged from 2.86-4.16. Overall, 88% of students recommended we continue to offer the course to 3rd year students.

Topics that students were interested in hearing more about were: negotiating contracts, healthcare policy, financing their educations, financing a primary care career, working with underserved populations, and personal financial planning.
17 faculty members taught in the course. They were excited about designing the curriculum, delivering the content, engaging with students around novel topics, and sharing their life journeys. All faculty plan to teach again this year.

Potential Impact/Lessons Learned:
Lessons learned were that students appreciated relevant material delivered by practicing physicians, and greater interactivity by faculty. Based on student feedback, we plan to introduce a 4th year elective, 1st and 2nd year panel discussions, and a Student Interest Group.

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Do learners "like" social media? Investigating the use of Facebook as a supplement to clerkships

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Innovation Idea: A Facebook group with educational content was created as a supplement to clinical learning for USC Keck School of Medicine students during their Pediatric Core Clerkship.

RationaleStatement of Need: Incorporating social media into medical education has been a hot topic among medical educators given known efficacy of internet-based learning and social media's ease of access over a variety of devices. Further, there is a growing body of research on how learners already use social media for educational purposes.1 Despite Facebook's overwhelming dominance in the social media world with 936 million daily active users,2 very few studies have evaluated its potential use for medical educators in reaching learners and whether learners would be readily interested in using the Facebook platform for educational purposes.3 To answer these questions, we created a Facebook group for the Pediatric Core Clerkship to assess ease and frequency-of-use in addition to learner satisfaction with using Facebook as an educational supplement to their clerkship.

Methods: Pediatric clerkship medical students over 4 six-week blocks were invited to join a Facebook group where a pediatric resident posted clinical pearls and knowledge-based questions once daily. Answers were posted the following day. Students were encouraged to respond to posted questions and to post their own content. To ensure voluntary participation only, no incentives were offered for participation. Posts and responses were only visible to participating students, the posting resident, and a faculty supervisor that reviewed posts for accuracy and HIPAA compliance. At the conclusion of each block, students completed an anonymous survey evaluating ease and frequency-of-use of the group, whether they found the content relevant to their learning, and whether they would want a similar intervention in other clerkships. Preferred social media site and means of accessing the group were also assessed. Learner use of the group was documented by recording membership of the group, number of responses to posts made by the resident, and number of posts made by the learners.

Results: Data from the four blocks showed that 68 of eligible 108 students joined the Facebook group. Participation in the group primarily consisted of responses to resident-posted questions with 4188 (47%) of questions answered. Students posted their own content for their colleagues four times. 70 students completed the survey. 6570 (93%) stated that Facebook was the social media site they used most often. Of those who had completed the survey, 52 had used the Facebook group. 4852 (92%) agreed or strongly agreed that the Facebook group was easy to use. 4650 (92%) either agreed or strongly agreed that the information posted was useful in improving their knowledge, and 3850 (76%) agreed or strongly agreed with the statement "I would like more clerkships to use the Facebook group platform." With regards to the discrepancy between participation in the group and its positive response, students were asked what prevented them from posting within the group. 2835 (80%) responded that they were "interested in reading only," 335 (9%) responded that they were "not interested in using," 135 (3%) responded that they "did not find it relevant," and only 135 (3%) responded "privacy concerns."

Potential Impact: Facebook use is already well-established among medicals students, and an educator-driven Facebook group was easily adopted and well-accepted by these students during their Pediatric Core Clerkship. Further, its use led to self-reported improvements in knowledge, and most students recommend expansion of its use to other clerkships.

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Doctors Planning to Conduct Ward Round and Bedside Teaching in a Foreign Language

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Innovation Idea: As economies in South East Asia are expanding rapidly in all sectors, a need to develop a series of intensive preparatory courses for local staff in many Chinese teaching hospitals was identified to meet the demands of the rapidly expanding western-style

RationaleStatement of Need: China has been developing rapidly within the last few decades; following an opening up policy and allowing the free flow of ideas and knowledge into the country. With the increase of its urban population and its rapid development, it has needed to quickly adapt to satisfy its ever growing needs. Not only can this adaptation be seen in its technological designs, but also in its healthcare and education settings. Alongside traditional medical teachings, universities and institutes of higher learning are focusing on western medical practices and educational theories. With internationalization, clinicians in teaching hospitals are required to be able to communicate with foreign colleagues and visiting scholars while incorporating current educational research into their teaching methodologies. In response, Shantou University Medical College launched a voluntary training course entitled, “Improving Communication and Teaching Skills in English for Medical Professionals” at the city’s first affiliated hospital, with the aims of preparing clinicians to conduct teaching rounds in a foreign language (i.e English) and igniting a self-regulated approach towards studies of foreign med journals.

Methods: This is a qualitative study that mainly used assessments and self-report questionnaires from participants. The participants included clinicians from various departments of the affiliated Hospital of Shantou University Medical College (SUMC). They voluntarily enrolled in a 12-week intensive training course that included pre- and post course assessment tests; lectures and activities that focused on the use of hospital related language, communication skills and latest teaching pedagogies. To facilitate the learning process, a combined learner- centered and skilled-centered approach was adopted. As most physicians were busy with both clinical work and teaching responsibilities, prior agreement of schedules and time tables had to be arranged.

Results: The course (n=12 weeks) was conducted twice over a period of 6 months with two separate batches of physicians. Medical Clinicians from varying specialties (n=15), surgeons (n=2) and anesthesiologists (n=2) attended the two training sessions. Post-test scores of the participants were higher compared to their pre-test scores. Regular attendees with better English abilities scored higher on the post-test evaluation. Analysis of answers to the open-ended questions revealed participants more at ease with less anxiety in using medical language to communicate with foreign medical students and visiting scholars; becoming more aware of teaching pedagogies; able to handle difficult teaching situations more effectively and felt more appreciated by students, not to mention, their better understanding of health care related jargon. One main issue expressed by the majority of attendees was time constraint and how they would have liked to have had the opportunity to attend such sessions at the beginning of their teaching careers. One positive outcome from the analysis of their reports pointed to them being more conscious in trying to allocate more time in reviewing foreign medical literature.

Potential Impact: Doctors expressed satisfaction in having attended the course, with considerable improvement in hospital related vocabulary, scenario discussion and communication skills, not to mention, self-confidence and rapport building. It is hoped the course will be held several more times during the year, with more doctors participating.

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Mobile Spaced Education for Surgery Rotation Improves NBME Scores

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Idea/Problem Statement:
Use of a spaced-based mobile app tool will optimize study time and improve student performance and knowledge on a general surgery rotation.

Rationale/Need:
The third year surgical rotation in medical school is intimidating. Surgery is invasive, mistakes can be costly, and many surgical techniques are not taught in the early years of training. Nearly 45% of students express feelings of intimidation, unrealistic expectations of knowledge, and poor or inadequate learning experiences during their rotation. In addition, students often have 'down-time' over unpredictable stretches where they have to be available, but with limited access to traditional study materials. Use of an "app-based" study tool may be one method to optimize this time and deliver education easily. An educational philosophy that lends itself to a mobile platform is spaced education, an approach based on the psychological principles known as the spacing and testing effects. The spacing effect is the idea of presenting and repeating information over spaced intervals of time and the testing effect is the idea that presenting information in a testing format improves long-term retention. Although spaced education for medical school students has been shown to improve knowledge acquisition and retention and boost learners' abilities to accurately self-assess their knowledge, its use in a mobile platform for NBME exam preparation has not. The purpose of this study was to describe the implementation of a spaced-education mobile app tool for students in a third year general surgery clerkship and to determine its effects on their performance on the NBME examination.

Methods:
An observational cohort design was used to study the value of a spaced education tool offered to all third-year medical students rotating in surgery (n=152) at a single institution over a year. A comparison group was utilized consisting of all students (n=136) from the previous year. Case-based multiple-choice questions (n=158) were derived from the students' textbook for use on a commercial mobile testing service (QStream, Burlington MA, USA). Eight questions were delivered daily via smart-phone app or email. Answers with explanations and references were given immediately, and questions were repeated in a spaced manner. Questions were "retired" if answered correctly twice. Pre- and post-rotation surveys were given and performance on the NBME surgery exam was recorded. Measures of academic achievement were obtained including GPA, MCAT scores, and USMLE scores and intensity of app use was noted. Bivariate correlation and linear regression analysis was used to investigate correlation of NBME scores with intensity of app use and prior academic achievement variables. Post hoc comparisons were made between users and non-users of the app, as well as to students from the prior year. For this, students were divided into groups based off USMLE quartiles and a median split technique was used to categorize students into groups based off intensity of app use (regular vs. casual use). We then compared NBME scores for non-app users, casual app users in each academic achievement group.

Results:
A pre-rotation survey was completed by 148 (97%) students. Nearly all (146/148, 99%) had a smart phone, and used it for tasks such as answering medical questions, productivity, studying for licensing exams, social networking, and entertainment. When asked how they studied for high stakes tests, the most common response was use of practice exam questions. Of the 152 students offered use of the app, 121 (80%) used it. NBME scores were significantly correlated with all variables of academic achievement, including GPA, MCAT, and USMLE scores ($P < .01$), as well as intensity of app use. Overall, users of the app had higher NBME scores than non-users of the app (75.5, n=121 vs. 68.8%, n=31, $P<.001$). However, app users had statistically higher USMLE scores (225.4 vs. 209.8, $P<0.001$), cumulative GPA (3.3 vs. 2.9, $P<0.001$) and MCAT scores (mean of mean = 9.6 vs. 8.9, $P<0.01$). Thus, we examined students' NBME scores after categorizing them by intensity of app use and academic achievement using USMLE scores as a marker. Low-level and mid-level achieving students who used the app had significantly higher NBME scores than those who did not use the app (71.2% vs. 78%, $p<.001$ and 64.6% vs. 71.4%, $p<.01$ respectively). There was no difference in the NBME scores based on app use in the highest scoring USMLE group. Compared to the previous year's class, the group offered the app had a significantly higher NBME score, with the most improvement seen in the mid-level achieving students.

Potential Impact/Lessons Learned:
The use of a spaced education app-based tool may increase NBME scores. Statistically significant improvement is observed in students at the lower achievement levels, and overall trends suggest at least minimal improvement for all who use the app. Students feel more prepared for their exam, and feel they have gained knowledge in surgery.

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Efficacy of Electronic Multimedia Instructions: A Pilot Study.

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Innovation Idea: This study examined the effects of video animations on patient understanding and recall of discharge instructions from the Emergency Department. We covered three of the most common discharge diagnoses: splint care, lacerations, and upper respiratory infec

RationaleStatement of Need: Discharge instructions given to patients leaving the Emergency Department (ED) aim to help patients with future care of their illnesses. If effective, discharge instructions can inform patients on medication management, self-care, prevention of future illness, when to follow-up and also warning signs to return to the ED. Currently, however, discharge instructions are not fulfilling these goals as patients are frequently unable to understand or remember the instruction they are given.

Previous studies addressing this issue found some success in simplifying instruction language, adding illustrations or verbal instruction and computerizing the instructions (1-2). Based on these recommendations, we believe pertinent animated videos to written discharge instructions will benefit patient understanding and recall while bypassing literacy issues by presenting information in a more universally understandable manner. Not since Gagliano's 1988 review of video instruction efficacy has there been a substantial comparison of adding video instructions to improve understanding in patients at ED discharge, despite numerous improvements in the accessibility and practicality of this media (3).

Methods: Our study was a prospective, non-randomized analysis of survey data collected from adult patients discharged from the UC Irvine Medical Center ED. This pilot study tested the plausibility of providing video discharge instructions. We created simple videos to complement the diagnosis-specific written discharge materials for 3 of the most common chief complaints in the ED. We then presented the videos to 50 consented patients with pertinent chief complaints and surveyed them afterwards on the clarity and appropriateness of the video.

At discharge, all adult patients meeting the eligibility were provided with a study information sheet, study video and survey and were informed that study participation is completely optional, having no effect on their treatment in the emergency department. The treatment team was unaware of a patient's enrollment in the study and discussed discharge instructions with the patient per standard protocol. The video was only an adjunct to the instructions. Immediately after the video was presented, participants were provided a survey with 5 questions regarding the quality and clarity of the video, as well as 4-5 questions on their understanding of their dis

Results: The main aim of the pilot phase of this study was to see how patients responded to this new medium of instruction. The results were overwhelmingly positive, with patients giving a >90% rating on clarity, utility, and pertinence of each video. Ratings were consistent between different videos, with no video being rated >5% more or less than the others. Furthermore, while there was no control group for this pilot study to compare initial understanding, we found that patients maintained understanding 24 hours later compared to their own baseline, with recall of 80%, 102% and 107% for the cast care, laceration care, and upper respiratory infection care videos respectively. When compared to existing studies which show a significant decrease in recall with existing written instructions, this data is very promising for the benefit of video supplementation increasing patient's memory for instructions. While the results are somewhat limited due to its nature as a pilot study, in the near future, we hope to progress to a full randomized control trial on the efficacy and feasibility of multimedia discharge instruction in the emergency department.

Potential Impact: Video instructions are a very feasible and well-received medium for patient education. While our study does not compare directly to written discharge instructions, video instructions were very positively rated by patients and their understanding and retention of materials was improved from previous studies on instruction understanding.

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Use of Nearpod to engage resident learners on their own devices

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Workshop Rationale:
The use of facilitated small groups has become an increasingly utilized technique in the implementation of “flipped-classroom” medical education. While allowing for a more situated and learner-directed approach, learning may be less effective in “larger” (>6 learners) small groups, environments with limited space, or when visual aids are needed but unable to be projected as in a typical lecture-hall format. We discuss our experience with educational software that allows facilitators to manage content on individual learners’ mobile devices and tablets in real-time to improve participation, gauge both group and individual understanding, and allow for guided exploration of evidence- based concepts.

Intended workshop participants:
All levels of educators in health professions

Learner Outcome Objectives:
1) Understand the Bring Your Own Device (BYOD) movement as experienced in both primary and advanced educational disciplines
2) Review the facilitated small-group technique in education and its role in the flipped-classroom movement
3) Become familiar with the capabilities of “device-sourcing” software such as Nearpod for use in emergency medicine education
4) Discuss limitations and pitfalls of live “presentation-sharing” technology

Instructional methods:
Time (min) 0-30 Interactive primer (using nearpod technology) 30-50 Guided development of 5 “slide” presentation using at least two “activities” 50-70 Independent development of projects 70-90 Presentation of projects PRIMER: The first 30 minutes will be spent exploring the rationale and concepts surrounding the BYOD movement in education, as well as become familiar with features of specific BYOD technology such as Nearpod. Audience members will participate by logging in to presentation software that is easily accessible from any tablet, laptop, or smartphone, where they will be able to interact with Nearpod from the learner’s perspective. GUIDED DEVELOPMENT OF BYOD PRESENTATION: The next 20 minutes will consist of a tutorial on how to create an interactive BYOD presentation using the Nearpod application andor website. An additional 20 minutes will be given to practice using the software by creating a short presentation (less than 5 "slides", and using at least one additional function (i.e. polling, webpage direction, free-response, etc) on any topic of their choosing. The facilitator and assistants will go around to each table in order to assist participants and answer potential questions. PRESENTATION OF PROJECTS: The final 20 minutes will allow participants to share their individually developed presentations and experiences with their tablemates.

ACIME: Conflict Management Styles

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Conflict management is a challenge for all medical educators- for themselves and for those they lead. Resolving conflict occurs by using specific techniques and tactics to bring the personnel involved towards a resolution or at least a compromise to avoid escalation and the destruction of the team, possibly resulting in poor patient care delivery or poor educational session. One such technique was designed by Kenneth W. Thomas and Ralph H. Kilmann, who introduced the Thomas-Kilmann Conflict Mode Instrument (TKI) in 1974. The TKI is a conflict style inventory, which is a tool developed to measure an individual's response to conflict situations. The scheme includes five interpersonal conflict- handling modes: competing, collaborating, compromising, avoiding and accommodating. All modes are useful and should be selected based on the situation.

This workshop will introduce participants to the instrument and to the five conflict-handling modes. Through use of a brief didactic presentation, games and role-play the participants will become familiar with each mode and be able to recognize each and begin to use them appropriately. A discussion of how our own preferences may impact teaching and assessment of learners will also be included.

Session Objectives:
At the end of this session, learners will be better able to:
1. Discuss and use the Thomas Kilmann Conflict Mode Inventory to help better teach interpersonal and communication skills.
2. Apply conflict modes (identify modes in use and select statements reflective of each mode).
3. Describe the potential impact of conflict management preferences on teaching and assessment

Instructional Methods/Content, Activities, Schedule:
1. Introduction and group brainstorm - typical conflict situations
2. Review of TKI and five modes
3. Review the TKI, the two dimensions (assertiveness and cooperativeness) and five conflict modes (Competing, Collaborating? Compromising, Avoiding, and Accommodating). Review briefly the problems with over and under use of each mode.
4. Discuss own results in dyads and debrief dyads
5. Play the "What's my mode?" game to build capacity in recognizing each mode in use. The game will be played at each table – everyone should have a chance to role-play at least one mode and to guess, "What's my mode?" for the other scenarios. Each of the five conflict scenarios will be shown on the screen as the game progresses– all tables will have the needed materials to play each of the five rounds (script for each round with Person A and Person B with options for every mode).
6. Debriefing of the game, in large group.
7. Small Group - Discussion of preference - impact on teaching and assessment/feedback
8. Commitment to change and take home messages from participants

Take Home Tool: Own detail report and guidance from taking the TKI.

Physician Role Modeling in the First 2 Years of Medical School

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Workshop Rationale:
Role modeling opportunities are emerging for physician teachers during medical students' preclinical years as more colleges of medicine strive to connect basic science didactics with clinically-based learning activities. This workshop will use fictional vignettes as examples of observed positive modeling by physician teachers that occur during the 1st and 2nd years of medical school. Using role-playing scenarios with the vignettes, workshop attendees will identify similar interactions with first- and second-year medical students at their home institutions, and through increased awareness, begin to increase the occurrences of daily positive role modeling. The vignettes demonstrate how several desired professional behaviors can be role-modeled in daily interactions with preclinical medical students.

Intended workshop participants:
Intended participants include physician teachers with critical teaching roles within the first 2 years of medical education.

Learner Outcome Objectives:
1. After completing this workshop, participants will be able to summarize best practices for role modeling by physician teachers to first- and second- year medical students in the preclinical setting.
2. After completing this workshop, participants will be able to describe how an increased awareness of positive role modeling opportunities in the first- and second-years of medical school can lead to increased occurrences.
3. After completing this workshop, participants will generate a plan for increasing positive role modeling occurrences by physician teachers at home institutions.

Instructional methods:
Role-modeling workshop based on vignettes:
1. Pre-workshop survey of role modeling attitudes, and whether attendees feel role modeling opportunities exist in the first 2 years of students' medical education. (5 min)
2. Introduction to the importance of role modeling in preclinical medical education. (20 min)
   a. Describe how students see role models as their most important way to learn professional behaviors.
   b. Review of "hidden" curriculum impact on learners.
   c. Identify positive role modeling of professional behaviors in daily interactions with students.
3. Attendees are divided into small groups of 4-5. Each group is assigned an introduction portion to a fictional vignette, which is based on a positive role-modeling behavior noted in #2c above. (25 min)
   a. The group assigns one attendee the role of physician teacher and one attendee the role of student.
   b. The "teacher" and "student" role-play the interaction for the rest of the group. Ask one member of group to video the interaction on a smartphonetablet. Then email video to workshop presenter for use during debrief.
   c. The small group reflects on how the interaction went and ways in which positive role-modeling could have been enhanced.
4. The entire group of attendees debriefs the role-playing sessions using the smartphonetablet video footage of the scenarios to observe-pause-reflect on thoughts and behaviors demonstrated during the scenarios as discussion points. Methods are reinforced regarding ways faculty can positively role model for students. (30 min)
5. Ask attendees to write down at least one professional behavior they will each commit to in order to increase their own positive role modeling occurrences at their home institutions within the next 6 months. (5 min)
6. Post-workshop survey of role modeling attitudes and whether attendees feel role modeling opportunities exist for them in the first 2 years of students' medical education. (5 min)
7. Survey attendees at 6 months to determine if they have increased incidences of positive role modeling in their daily interactions with first- and second-year students as a result of this workshop.

Take-home tools:
Attendees will receive 9 fictional vignettes for faculty development at home. Attendees will be contacted at the 6- month follow-up mark, and asked to reflect and report on whether raised awareness of these moments has increased occurrences.

Preparation, Discipline, Reflection: A Student-led Step 1 Study Program for High Risk Students

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David Geffen School of Medicine at UCLA

Innovation Idea: The USMLE Step 1 exam causes significant anxiety, particularly in students with academic difficulty. We report on a program to support these students.

RationaleStatement of Need: The USMLE Step 1 exam, taken at the end of the second year of medical school, is required for medical licensure in the United States. This score is the most commonly cited factor used by residency programs when selecting applicants for an interview. The anxiety this engenders has been shown to negatively impact performance. Most medical schools, including the David Geffen School of Medicine at UCLA (DGSOM), outline weeks of independent study time outside of the core curriculum to allow students to prepare for this exam. For many students, this protected time leads to exam success, but for others, the disappearance of regular academic guidance can lead to added stress and inefficient studying. There is a particular need to support students with a history of academic difficulty, who may struggle to adapt their study approach to such a unique exam. At DGSOM, we have addressed this by developing a guided, student-led Step 1 preparation program called PDR (Preparation, Discipline, Reflection). This program meets regularly during the independent study block and aims to support students and share exam preparation strategies while still emphasizing a student-driven study approach.

Methods: Students were selected for the program based on performance in the first two years of medical school. The nine preclinical blocks are graded as pass, marginal pass, or fail. Students who failed at least one block, or received a marginal pass in two or more blocks, were offered positions in the program. The program took place in the evenings, five days per week for four weeks. Each day, students received a 1-hour lecture from a senior student tutor covering one organ system, with a focus on high-yield study strategies, mnemonics, and student questions. Then, students met in small groups of 3-4 students and one tutor, where they reviewed Step 1-style practice questions with a focus on test-taking strategy, test reasoning skills, and time management. To assess the PDR program, students were given pre- and post-program surveys that asked about anxiety, study strategies, and program efficacy. Step 1 practice and final exam scores were obtained, and program participants were compared to non-participant controls from their class, matched based on MCAT performance. Tutors were also surveyed about the program, teaching experience, and career interests including in education.

Results: A total of 12 students participated in the program, out of a class of 160. The average Step 1 score was 210, compared to 217 for MCAT-matched controls; no students failed the exam, and there was not a significant difference in Step 1 scores between groups. At the conclusion of the program, students reported significant improvements in their test-taking strategies and additionally rated the program highly on other aspects, including help selecting study resources and providing time to ask specific content-related questions. Students highly recommended that the program continue, and provided several suggestions on how it could be improved, including increased mentoring from tutors and improvements in program structure. Finally, the participant survey highlighted several key sources of anxiety among this student population. They cited older students and facultyadministrators as key people that reduced their anxiety, while data on average Step 1 scores within residency programs was the strongest source of anxiety. These data will provide important insight into how to structure the PDR 2016 program, in particular aiming to enhance peer mentorship and one-on-one interaction with tutors.

Potential Impact: Despite a lack of significant improvement in exam scores in this small pilot study, students rated many aspects of the program as highly beneficial, particularly the small group sessions. These data have led to further development the DGSOM tutoring program as well as the 2016 PDR program, with a focus on effective anxiety reduction.

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The Family Meeting OSCE Assessment Tool: Development and Validation of a Novel Assessment Tool

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Idea/Problem Statement:
To develop and validate an observational tool to assess trainees' ability to perform and lead family meetings at end of life.

Rationale/Need:
Effective communication between healthcare professionals and patients has been considered an essential requirement for the delivery of high-quality care. While good communication is important in every physician-patient or physician-family interaction, the consequence of these interactions is magnified when dealing with seriously ill patients and in end-of-life situations. Communicating with patients in palliative care has been acknowledged to be more difficult than communicating with patients with less serious conditions. Studies suggest report the inadequacy and deficiencies in communication between the dying patient/family and the healthcare professional. / A cornerstone procedure in palliative medicine is to perform family meetings, also referred to as family conferences. Family meetings are reported to improve communication between the health care team and the patient and/or their family. Learning how to lead family meetings is an important skill for physicians, nurses, and others who care for patients with serious illnesses and their families. Family meetings require many skills, including: group facilitation, counseling, knowledge of medical and prognostic information, redirecting conversation, problem-solving, conflict resolution and mediation, and guidance in decision making. Although efforts have been made to teach family meeting skills, there is limited evidence exploring methods to assess the skill to perform family meetings.

Methods:
Building on evidence from the literature search, guidelines and competencies, the Family Meeting Objective Structured Clinical Examination Assessment Tool (FMOSCEAT) was developed by our expert panel, comprising of five palliative medicine physician faculty members at our institution, to evaluate best practice behaviors when leading a family meeting. As part of our palliative care curriculum, 4th year medical students completed a Family Meeting OSCE, where each student assumed the physician role leading a complex family meeting with two standardized family members. The OSCE scenario replicated a "true life" clinically relevant end of life situation where it would be appropriate for the physician to hold a family meeting. Two interdisciplinary evaluators were paired to observe and rate randomly chosen students' performances in the OSCE using the FMOSCEAT. Inter-rater reliability was measured using percent agreement. Internal consistency was measured using Cronbach's alpha.

Results:
133 trainees and 26 interdisciplinary evaluators participated. The FMOSCEAT was refined until the tool had acceptable interrater reliability. Overall rater agreement was 84% and Cronbach's alpha of 0.85.

Potential Impact/Lessons Learned:
Evidence and expert-based content, high interrater reliability, and good internal consistency provided initial evidence of validity for this novel assessment tool. We propose to further test the tool with trainees at various levels and of other disciplines.

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Triple Therapy: A Combination of Educational Styles Enhances Medical Student Performance of Procedures

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Idea/Problem Statement:
Medical graduates must competently perform common procedural skills. Evidence for effective procedural skills curricula needs to be investigated.

Rationale/Need:
Increasingly, hospitals require medical graduates applying for internships to supply credentialing with common procedural skills. Consequently, medical schools need to provide an appropriate program of teaching and assessment.

Since 2001, a formal procedural skills curriculum has been implemented at hospital-based campuses (Clinical Schools) of the Melbourne Medical School. In 2011, the transition from an undergraduate to a four-year post-graduate medical curriculum enabled the procedural skills curriculum to be enhanced and an extensive Competency-Based Assessment (CBA) program implemented. Many skills are included. The five most invasive, common and/or important intern-level procedural skills are assessed at both second and fourth year. The CBAs are benchmarked against best practice and affiliated University hospitals' procedural policies. Students are required to pass all steps (pass/fail hurdle assessment) to achieve a pass. Successful CBA completion is required before progression to third year or graduation.

Curriculum delivery comprises three main components: online learning (optional), practical sessions in the simulated and clinical setting (some optional) and a program of assessment underpinned by the principles of test-enhanced learning. Delivery of a comprehensive procedural skills curriculum requires significant time and expense. Delivery in both second year and the final semester doubles this. Evaluation of the effectiveness of this curriculum is crucial.

Methods:
Data was collected from a cohort of sixty six (66) students undertaking final semester in a metropolitan Clinical School, which included the Procedural Skills curriculum for final year. Data was collected on attendance at compulsory and optional classes, uptake of online resources and implementation of the CBAs. In both the simulated and clinical environments, examiners were assessment- trained, clinical experts (senior nursing or medical staff). Students who did not the CBA at first attempt received remediation and reassessment.

Male Indwelling Catheterisation (IDC), Arterial Puncture (AP), and Basic Life Support (BLS) were assessed in the simulated setting. BLS was assessed as a formal component during a whole day Advanced Life Support Course. IDC and AP were assessed under Objective Structured Clinical Examination (OSCE) conditions. Students were allocated by convenience to one of two dates.

Venepuncture (VP) and Peripheral Intravenous Cannulation (IVC) were assessed clinically on in-patients. For each of VP and IVC, students were required to complete three successful procedures without patient complications. Data was analysed with the following questions in mind:

- How many students passed each CBA first attempt, compared to those who required one or more attempts?
- How many episodes of remediation and re-assessment did the cohort require until competency was achieved?
- Was there a correlation between student results and uptake of the educational styles?

Results:
A cohort of sixty-six students is required to undergo these clinical assessments in July to October 2015. The following results refer to the IDC, BLS and AP outcomes at first attempt.

Twelve (12) students (18%) passed all three CBAs. Thirty seven (37) students (56%) failed one CBA on first attempt, with the majority of these (23,) of these being IDC (62%). Fourteen students (23%) failed two CBAs, with the combination of IDC and BLS (8) the most common combination (57%). Three (3) students failed all three CBAs (5%). / Of the 44 students who failed at first attempt, most (33 or 75%) were able to pass at their second attempt. Eleven students had more than one episode of remediation and reassessment, most commonly required for IDC (eight students, 72%). Two of the 11 students (18%) required multiple episodes of remediation and reassessment at two or more CBAs.

Results discussion will include an analysis of key steps in the CBA where critical errors were made leading to remediation and reassessment.

Clinical assessments (VP and IVC) will not be completed until October 23rd, 2015, with statistical analysis for all results to follow. The analysis of all of these outcomes compared to uptake of the teaching styles will be available in due course.

Potential Impact/Lessons Learned:
Analysis of the current procedural skills curriculum and measurable outcomes will lead to a review of the best practice to achieve intern-level competency at the five most common invasive and important skills. Potentially, patients will benefit by being treated by competent interns who have confidence in their procedural skills prior to beginning w

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Usefulness of peer-led sessions to prepare novice third year medical students for clinical rotations

Lance Lyons; Nargaraj Gabbur

SUNY Downstate

Innovation Idea: Is there a role for peer-to-peer teaching in preparing rising third year students for clerkships?

RationaleStatement of Need: The transitioning third year medical student faces understandable trepidation regarding removal from the classroom and entrance into clinical medicine. Students shift from a life of mostly self- scheduled book learning to clerkship-scheduled on the job learning with a multitude of added responsibilities and pressures. While many schools have implemented programs to facilitate this transition, data is sparse specifically as to the role of peer-teaching in this area. While expectations of students may vary by hospital site, attending physician, and specialty, the fourth year student who recently completed a clerkship is uniquely poised to share the most pertinent and useful information to a rising third year. In order to ensure student issues are addressed, with the understanding that asking certain questions to faculty members may be intimidating, dedicated peer-teaching sessions with no faculty presence during the clinical transition week were provided to help students feel better prepared.

Methods: As part of a 1 week course dedicated to preparing rising 3rd year students for life on the wards, time was set aside for current 4th years to share their experience and advice. A 2 hour student-created, student-led session was added to the pre-existing week of “Transition to Clerkship” activities. 5 rising 4th years participated in a 1 hour panel discussion in front of the 3rd year class. This discussion was divided into “Past”, “Present”, and “Future”- that is, a conversation on how the students felt before starting 3rd year, followed by reliving memorable moments during rotations, and finally a reflective look back on how they’ve changed as a person. Afterwards, students broke up into smaller groups based on their 1st rotation for the year. In these smaller sessions, a PowerPoint presented by 4th year students compiled tips from the class regarding advice on navigating life as a 3rd year student. Additionally, these presentations addressed day-to-day life on the wards and clerkship-specific points. Questions were fielded during the presentations and no faculty members were present, ensuring students felt comfortable raising their concerns.

Results: 3 surveys were sent to evaluate the effectiveness of the program- 1 before the session, 1 immediately after, and a follow up survey 2 weeks into clinical rotations. A total of 206 surveys were sent each time and the response rate was 54.9% for the 1st survey, 16.5% for the 2nd and 13.6% for the 3rd. 76% of students felt unsure or clinically unprepared before the sessions, but afterwards 79% felt better prepared. After 2 weeks of working at their hospital sites, 91% felt they were provided with pertinent and relevant information, and 97% felt they learned valuable advice from rising 4th years that they would not have learned from the faculty. Before the sessions, only 66% of respondents were able to correctly answer a question regarding hospital notes, however 88% correctly responded after the peer-teaching sessions. Finally, written feedback received regarding this session has been very positive and supportive, with several students requesting to be involved when their turn comes to teach rising 3rd years. Overall, the results are encouraging and demonstrate that peer involvement, in the absence of faculty presence, should be continued as a part of the "Transition" week.

Potential Impact: Peer-teaching is an effective method of both practically preparing and calming rising students before they start their third year clerkships. It should be carried out in a comfortable environment for students to raise their concerns and have their questions answered.

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Does Intentional Practice with Virtual Patients Lead to Performance Gains?

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Idea/Problem Statement:
Standardized patients are employed sparingly for learning, due to costs, leading to development of "Virtual Standardized Patients", who are available

Rationale/Need:
Standardized patients (SP) have become a fundamental aspect of medical student teaching and assessment [1]. Students have identified that SPs provided a safe learning environment and the feedback provided by SPs was helpful in improving performance. Students have also stated that interactions with SPs were useful in preparing students for interactions with real patients, especially with regard to communication skills [2]. Using SPs do have a cost in terms of resources, and attention has been turning to the use of "virtual patients" (VPs).

The term virtual patient means different things to different people. At the University of Southern California, the Institute for Creative Technologies and the Keck School of Medicine teamed up to develop the "Virtual Standardized Patient" (VSP). This project was funded by the Department of Defense, and allowed the creation of a virtual human, who has the capacity to carry on a conversation with a learner. The VSP is a web-based platform where medical students can practice their clinical skills by interacting with virtual human patients. The overall purpose of the research study was to begin to understand what effect using the system has on the diagnostic interviewing skills of the students, and the impact and usability of specific features of the program.

Methods:
Participants were Year 2 medical students enrolled at the USC Keck School of Medicine.

We first conducted an exploratory study where participants were randomly divided into four blinded groups prior to testing the VSP. Group 1 did not receive an after-action report (AAR) feedback that Groups 2-4 received after each of three case attempts. Groups 2-4 viewed orientation videos that varied in content: Group 2 received a basic orientation focused on how to navigate the system. Group 3 (and 1) received the basic orientation as well as language orientation. Group 4 received basic and language orientation and AAR feedback system orientation. The participants went through an orientation to the system, and answered a questionnaire. They then engaged with examination cases using the system. After engaging with the cases, the students completed a post-examination questionnaire.

Then we conducted the definitive study to evaluate the potential of the prototype to improve diagnostic interviewing skills. This study was based on the results of the exploratory study. The study was conducted with an optimized, controlled quasi-experimental design protocol that limited case attempts to five minutes and AAR feedback review to two minutes. There were four sequential case attempts by each subject.

Results:
The exploratory study was hampered by several confounding factors. First, there was a scoring exploit by which asking follow up questions triggered history of present illness open-narrative responses that inappropriately provided higher scores. Second, we did not control for time subjects spent on a case and there was a great amount of variability in effort expended by subjects; both between subjects and between attempts. Despite these factors, the exploratory study showed that the benefits of the AAR system were significantly greater than the group, which did not receive the AAR (Group 1), and only had the rehearsal effects. Group 4, which had AAR improved performance significantly, and we included the AAR in the definitive study.

There were negative consequences to the non-language orientated group (Group 2), based on system use patterns, interviewing efficiency, score progression, and survey results. Thus we included a language orientation in the definitive study.

The exploratory provided us with fourteen action items to implement for the definitive study.

The definitive study results showed that intentional practice with the VSP prototype resulted in a large training effect as evidenced by large performance score gains. Average performance scores increased by +59% on attempt three and +67% on attempt four. Subjects asked relevant questions earlier in the interview – a trend that continued with each subsequent case attempt. Subjects asked more questions to rule out alternatives.

Potential Impact/Lessons Learned:
The study showed that the system could successfully emulate a standardized patient and provide a highly accurate automated performance assessment. An independent data analysis by an outside institution found “The clear evidence supporting the virtual patient system is that there is sufficient precision of measurement to facilitate performance.

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The Art of 'Inquisition': Using questioning as a teaching tool!

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Workshop Rationale:
Adult learning theory posits that active learner engagement, as opposed to a more passive and pedagogical based approach, leads to more effective and sustained knowledge building. Questioning can be a very effective method of engaging and motivating learners, yet one that is potentially fraught with challenges. We all recall times in our education when 'pimping' during rounds was par for the course and quite frightening to experience. Creating a safe learning environment is a key factor in facilitating the progress of learners towards the achievement of competence. How then, do we balance the two?

Intended workshop participants:
Residents, Fellows and Faculty preceptors who are involved in any form of clinical or classroom teaching

Learner Outcome Objectives:
At the end of the workshop, participants should be better able to:

1) List strategies to promote learning using questioning while creating a safe learning environment
2) Discuss a framework on how to vary questions based on teaching style and objectives
3) Demonstrate the use of questioning using a purposeful and goal-oriented approach

Instructional methods:
This workshop will outline an approach that can be used to motivate and challenge learners to stretch, using a questioning strategy while maintaining a safe learning environment. Areas covered will include how to select the focus of the questions based on learner level and the learning goals (using Quirk's teaching styles). Strategies on how to pose questions in a safe manner, including when there are multiple levels of learners simultaneously present, will be reviewed. The materials discussed and presented and the tools provided during this workshop, will not only help educators use a questioning strategy themselves but also to 'teach the trainers' (other faculty, residents and fellows) on how to stimulate learning in a non-threatening manner.

Take-home tools:
Participants will leave with a toolbox of various techniques to promote learning using a questioning approach while promoting a safe learning environment.

FIME: Turning Teaching Innovations into Scholarship

Fisher, Dixie

Keck School of Medicine at University of Southern California

Workshop rationale:
"Scholarly teaching is what every one of us should be engaged in every day that we are in a classroom, in our office with students, tutoring, lecturing, conducting discussions, all the roles we play pedagogically.... But it is only when we step back and reflect systematically on the teaching we have done, in a form that can be publicly reviewed and built upon by our peers, that we have moved from scholarly teaching to the scholarship of teaching."— Carnegie Foundation for the Advancement of Teaching (Lee Shulman, President)

Intended workshop participants:
Faculty wishing to disseminate teaching innovations as scholarly work in the form of presentations, posters, or publications.

Learner outcome objectives:
Following this workshop, participants will be better able to

1. Create a plan for scholarly dissemination prior to implementing a teaching innovation
2. Choose an evaluation design that improves conclusion validity for feasibility and effectiveness
3. Choose publication outlets best suited to the type of study

Instructional methods/content, activities, schedule:
This 80-minute workshop will provide the foundational requirements for turning teaching innovations into scholarly work. The workshop will consist of three short didactic presentations followed by large group discussions and small- group activities where participants will develop a plan for scholarly dissemination of an innovation he or she has in mind. Participants should come to the workshop with a teaching innovation idea that could be implemented within a year. Participants wishing to attend but currently unable to implement a teaching innovation, can assist other participants with their ideas.

Take-home tool:
Workbook with references

Culturally Responsive Interviewing

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Department of Family and Community Medicine, University of Kentucky COM

Workshop rationale:
Cultural competency training has been suggested as a method to reduce health disparities as well as being mandated by LCME and the ACGME . The lack of cultural competency in residency education has been noted in the literature (1). It is therefore imperative that residents improve their KSA about this topic. However, most faculty also lack awareness to teach cross cultural communication/cultural competency and the ability to assess learners ability to in this area (2). This interactive workshop will discuss and teach the BATHE technique as a method of effective cross-cultural communication that can be utilized in a busy practice to assess social and environmental factors, fears and concerns.

Intended workshop participants:
All learners including students, residents and faculty

Learner outcome:
At the end of this workshop, participants will be able to:

1. Discuss methods of communication in cross cultural situations with emphasis on utilizing the *BATHE* technique: 20 mins (includes workshop rationale, handouts and discussion of commonly used cultural competency communication tools)
2. Observe and practice the *BATHE* technique: 50 mins (includes video of BATHE, role play in triads of cases using the BATHE model followed by Small group discussion)
3. Teach *BATHE* to their learners and faculty: 20mins (includes teaching method and wrap up)

Instructional Methods:
Video observation of the BATHE technique, Small group discussion, and role play. Participants will be introduced to the different cross cultural communication techniques with emphasis on the BATHE technique. A video of the BATHE technique will be shown, followed by, participants working in triads to observe, give feedback, and practice how the technique is utilized. Lastly, participants will learn to teach the technique through examples given by the instructors.

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Hedy S. Wald, PhD
Clinical Associate Professor
Warren Alpert Medical
School of Brown University

February 20, 2016
11:30 am – 12:45 pm of Family Medicine

Reflection, Resilience, Humanism:

Interactive Reflective Writing & Professional Identity Formation

Reflective skills are core to health care professional competency. A recent reframing of approach in medical education is away from an exclusive focus on "*doing* the work of a physician" toward a broader focus that includes "*being a physician.*" Join Dr. Hedy Wald to learn about the role of **interactive reflective writing-enhanced reflection** in supporting healthy professional identity formation and boosting resiliency for the "professional becoming" of humanistic health care practitioners and educators.

Mind-body medicine and reflective writing-enhanced reflection is a current research interest and she presents plenaries and experiential workshops at faculty retreats on Faculty Resilience and Vitality.

Development, Implementation & Analysis of an International Twitter-Based Journal Club in Rheumatolgy

1. Collins, Christopher / 2. Sufka, Paul / 3. Hausmann, Jonathan / 4. Jayatilleke, Arundathi / 5. Campos, Jose / 6. Bhana, Suleman

1. MedStar Washington Hospital Center, Washington, DC / 2. HealthPartners, Saint Paul, MN / 3. Beth Israel Deaconess Medical Center, Boston, MA / 4. Drexel University College of Medicine, Philadelphia, PA / 5. Puerta de Hierro Majadahonda University Hospital, Madrid, Spain / 6. Crystal Run Healthcare, Middletown, NY

Innovation Idea: Utilizing Twitter as a platform for medical journal club to facilitate conversation amongst an international population of healthcare professionals.

Rationale/Statement of Need: Twitter is an increasingly popular platform for discussion and engagement amongst healthcare professionals (1,2). Several specialty specific journal clubs are already routinely conducted on Twitter including nephrology, urology, geriatrics, radiology, and microbiology (3). Here we describe the development, implementation and analysis of a rheumatology focused journal club on Twitter which utilizes the hashtag #RheumJC.

Methods: A #RheumJC development team was created, consisting of two academic rheumatologists, two private practice rheumatologists, and an adult/peds rheumatology Fellow in Training (FIT). A needs assessment survey was conducted to gauge interest and help define the structure of the proposed journal club, including preferred times and types of articles to be discussed. Prior to journal club sessions, requests were made for temporary open-access privileges to the article as well as invites to principal authors to participate. A total of 4 different journal clubs were conducted between January 29th and May 2nd, 2015, each consisting of two “live” one hour chats, occurring during the evening hours of GMT (European centric) and EST (Americas centric) respectively, as well as a full 24 hrs to allow for asynchronous participation. An analysis of the different sessions was performed to assess participant demographics and participation rates. A content analysis of the entirety of all four journal clubs (1927 tweets) was conducted with 6 coders assessing 363 tweets each (313 unique and 50 common). Inter-rater agreement was calculated using Krippendorff’s alpha. A second survey was conducted after the 4th journal club to assess participant satisfaction and identify additional strengths or barriers.

Results: In total, 133 individuals from 31 different countries participated in at least one #RheumJC session. While the majority of participants were rheumatologists, over 8 different medical fields were represented. There were 13 FIT and other trainees amongst the participants. 38 individuals participated in at least 2 different journal clubs, 16 participated in at least 3, and 8 individuals were present at all four. The mean number of tweets during each of the live journal clubs sessions was 197 (166 unique tweets, 31 re-tweets). For 2 of the journal clubs, principal authors of the manuscript were able to participate. A content analysis of all tweets (inter-rater agreement: alpha=0.801) revealed that the majority of the conversation was relevant with 28% of the tweets addressing the article directly (in the spirit of a “traditional” journal club) and another 62% considered “on-topic” with tweets referencing personal experiences, opinions, and links to supporting literature. A survey conducted after the 4th journal club revealed that the majority (89%) of those who had participated were either satisfied or very satisfied with the #RheumJC initiative. Of interest, 11% of journal club participants indicated they had joined Twitter solely because of #RheumJC, and another 37% stated that #RheumJC had increased their use of Twitter as a tool for medical education.

Potential Impact: #RheumJC is a novel and popular approach to the traditional medical journal club which brings together people from around the globe and across specialties to discuss current medical literature in rheumatology utilizing Twitter as a medium for medical education.

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Gynecologic resident colposcopy: a revised curriculum retains educational gains

Fullerton, Morgan / Ozel, Begum / Muderspach, Laila / Dancz, Christina

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Innovative Idea: To revise and simplify a comprehensive colposcopy curriculum while maintaining resident ability to document and detect cervical abnormalities.

Rationale/Statement of Need: Colposcopy is a pattern recognition skill that is recognized to improve with the number of procedures performed. Resident training in colposcopy is critical because accurate colposcopic examination is the key to early detection and intervention for cervical cancer and precancer. It has been suggested that the recent push towards primary care provision of colposcopy has impaired the colposcopic volume referred to Ob/Gyn residency programs and may be limiting our ability to train future colposcopists effectively (1). The overall purpose of this project was to develop a colposcopic curriculum to optimize resident ability to appropriately manage, document and detect cervical abnormalities in patients referred for abnormal cervical screening tests.

We previously demonstrated that a comprehensive curriculum improves resident ability to document and detect cytologic abnormalities. Our goal was to determine whether simplification of the curriculum could retain observed gains in resident ability to document and detect cervical abnormalities.

Methods: A colposcopy curriculum was implemented for PGY1 and PGY2 residents in July 2012. In July 2013, the curriculum was shortened and this is considered the revised curriculum. The comprehensive curriculum included a directed reading list, biannual grand rounds lectures, bimonthly histopathology correlation conference, posted guidelines on recommended terminology (2), and a standardized form for documentation of findings to be reviewed with the attending supervising the colposcopy. The revised curriculum was similar, but had a shortened reading list and removed bimonthly histopathology correlation conference. Colposcopies done before initiation of the structured curriculum were compared to those done after the comprehensive curriculum and after the revised curriculum. Specifically we recorded the indication for procedure, use of standard terminology, documentation of relevant findings, number of biopsies performed, performance of indicated additional procedures and correlation between clinical impression and final biopsy result.

Results: Comprehensive curriculum: 50 cases during were compared to 24 cases pre-curriculum. There was no difference in the distribution of cytology findings before and after intervention (29.2% low grade vs. 40%, p-0.39) or in the number of biopsies performed per individual (median of 3 in both groups, p=0.5), Resident documentation after intervention was better at describing acetowhite changes (80.0% vs. 41.7%, p≤0.01), and punctations (60.0% vs. 33.3%, p=0.03). The detection rate for high-grade dysplasia increased after the intervention. For high-grade cytology (ASC-H, HGSIL), the detection rate for high-grade dysplasia increased from 17.6% to 46.7% (p=-.03).

Revised curriculum: 39 cases after revision of the curriculum were compared to the 24 cases pre-curriculum. Due to changes in referral patterns, there was a difference in cytology distribution pre-curriculum and post-revision, (29.2% vs. 84.6% low grade, p <0.001). However, there was no difference in number of biopsies performed per individual (median of 3 in both groups, p=0.63) Documentation of acetowhite lesions continued to be improved (97.4% vs. 41.7%, p<0.01), though description of punctations reverted to baseline (p=0.23). The detection rate for high-grade histology remained improved. For high-grade cytology, the detection rate for high-grade dysplasia improved from 17.6% to 66.7% (p=0.02).

Potential Impact: Implementation of a comprehensive colposcopic curriculum improved documentation of cervical abnormalities using standard terminology and resident ability to correctly identify high-grade dysplasia. A shortened revised curriculum was just as effective as a comprehensive curriculum to improve documentation and detection of high-grade dysplasia.

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A Novel Approach to Randomization of ACGME Milestones into Daily Anesthesia Resident Evaluations

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Innovation Idea: To develop an assessment tool that implemented all 25 anesthesiology milestones and rotation specific EPAs over the course of a 36 month residency.

Rationale/Statement of Need: In 2013, the ACGME and the American Board of Anesthesiology (ABA) published the Milestone Project with the charge to residency programs to use them as guidelines for tracking resident development over time to assess for readiness to graduate. The Milestones are not to be used as a primary assessment tool, but as a framework to build evaluations that assess competency progression. The Milestones are numerous (25) and verbally cumbersome but reporting to governing bodies is required throughout residency. Our program needed to create an evaluation tool that covered all of the milestones over the 36 months of residency as well as creating Entrustable Professional Activities (EPAs) for our residents to help track progression towards independent practice. Compiling an assessment tool that encompassed both EPAs and milestones and was compact enough for reliable usage by faculty was a challenge. We desired that this tool be “rotation specific” in that the document would maintain a single structure, but the content would be specific to each rotation’s goals and objectives and only include those milestones thought to be appropriate for development on that rotation. In undertaking this challenge, we also desired to retrospectively examine our assessment tool for inclusion/exclusion of all milestones which we felt would lend some validity to the anesthesiology milestone project as an appropriate framework for our resident assessment.

Methods: We have 30 offered rotations in our residency program with 25 rotation directors. We requested that each rotation director create no more than 8 entrusted professional activities (EPAs) with input from their division faculty, and pick no more than 10 milestone subcompetencies that were applicable to assess resident progression in their specific rotation goals and objectives. We did not guide rotations directors in regards to milestone choice or EPA creation. Each rotation director returned their EPAs and chosen milestones to us and then a structurally identical assessment tool was created using New Innovations Evaluation Management System. The tool was then returned to the individual rotations directors to undergo a vetting process within their division and core teaching faculty. After faculty approval and completion of all 30 rotation specific evaluations, we then mapped each evaluation and the chosen milestones to assess whether or not each milestone was utilized somewhere throughout the 30 available rotations, at which point in training a particular milestone might be assessable, and to see which milestones were most and least commonly used. We then implemented the evaluations for resident assessment in our residency program.

Results: After each rotation specific evaluation was created, we were able to create a visual map of each milestone inclusive evaluation to see if all milestones were thought to be applicable for our program curriculum assessment, at which point in the resident’s progression which subcompetency was thought to be assessable, and which milestones were most commonly and least commonly chosen. All of the 25 milestones were included by rotation directors at some point in the 30 rotation assessment tools with the most commonly used subcompetencies being SBP 1, PBLI 3, and ICS 2. The least commonly used subcompetencies were PROF 3 and PROF 5. By creating a “mock resident schedule” we were then able to identify which milestone core competencies and subcompetencies could be evaluated during different times in our residency and also identify subcompetency gaps in our training program curriculum. We noted that the 6 core competencies were equally present between all three clinical anesthesia (CA) years; however, the MK competency was assessed the least. Between CA 1-3 years, the most frequently assessed subcompetency varied. SBP 1, PC 1, and PROF 1 were most commonly assessed in the CA-1 year, with no assessment of SBP 2, PROF 2, and PROF 5. In CA-2 year, PBLI 3, PROF 4, and ICS 2 were the most commonly assessed subcompetencies with gaps in assessment of SBP2 and PROF 3. During the CA-3 year, PC 1, SBP 1, PBLI 3, and ICS 2 were most frequently assessed and there was no assessment of PC 7.

Potential Impact: We were able to incorporate the ACGME/ABA Anesthesiology Milestones into our assessments in a randomized way and evaluate both validity of the milestones for our program curriculum as well as identify gaps in our curriculum. We have also described a reproducible process for other programs to utilize when creating milestone-guided assessment tools.

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Low Cost, High Fidelity Surgical Simulation Model for Carotid Endarterectomy

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Innovation Idea: There is an unaddressed need for low-cost high-fidelity surgical simulations to provide a platform for advanced pre-operative training and teaching.

RationaleStatement of Need: It is now well-described and accepted that skills training requires focused and deliberate practice for mastery. Research in surgical outcomes has further shown the impact that a surgeon's operative volume has on patient morbidity and mortality [Pearce, 1999]. This is certainly the case in carotid endarterectomy (CEA), an open procedure that is both common (140,000 cases in 2009) and for which the complications can be devastating (stroke, death). Surgical simulations provide a safe environment for the practice and refinement of surgical skills separated from patient risk. While there is a wealth of virtual simulations available across several fields, there is a paucity of open vascular simulations for the surgeon-in-training. A search for commercially available CEA trainers reveals a single low-fidelity model priced over $500 USD. Remaining training methods include cadaver teaching, bovine vivisection, and intra-operative training. Without low-cost, high-fidelity models of this and other procedures, surgical training will remain an expensive and high-risk activity for institutions and for patients.

Methods: Using generic items, construction of a surgically accurate neck model was attempted. Required structures identified prior to the construction and deemed necessary for accuracy included the spine, paraspinal muscles, anterior scalene, trapezius, sternocleidomastoid, strap muscles, trachea, hyoid bone, thyroid and cricoid cartilage, tracheal rings, thyroid gland, mandible, vagus, recurrent laryngeal and hypoglossal nerves, internal jugular and facial veins, common, internal, and external carotid arteries, superior thyroid and facial artery, fascial layers, platysma, and skin. End-goals of the construction included (1) low cost for initial unit, (2) low cost for each unit reuse, and (3) realistic technical simulation of a CEA. Following construction, senior residents were paired with junior residents to perform a simulated CEA under standard operating conditions with full simulation of critical operative steps. Senior residents assisted junior residents in the CEA procedure after reviewing the anatomy and operative plan under standard conditions in the operating room with a vascular instrument set. Patch angioplasty times were compared in and out of the model.

Results: Original unit construction was completed in six hours with subsequent unit construction performed in two hours. All of the identified structures and model requirements were successfully incorporated. Total unit cost was under $30 USD. Unit cost for replacement parts after use was under $10 USD. A single model was used to perform a total of four CEAs prior to a need for replacement parts, indicating a first-use cost of $8 USD per CEA and a reuse cost of $3 USD per CEA. Twelve patch angioplasties were performed on three models. Average time from first stitch to completion of the patch averaged 19:46. An additional twelve patch angioplasties were performed on identical simulated vessels out of the model and secured on a table. Average total time for completion averaged 12:38. The results were analysed with a paired t-test ($p<0.05$).

Potential Impact: This low-cost, high-fidelity simulation of carotid endarterectomy provides a platform for teaching surgical anatomy, rehearsal of critical operative steps, refinement of operative conduct, mastery of surgical skills, and investigations into the impact on operative time and patient outcomes in those that train deliberately.

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Facilitating Use of Guidelines for Breast Cancer Management by General Surgery Residents

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Innovation Idea: Interactive curriculum to ensure surgery residents will be prepared to use breast cancer guidelines.

Rationale/Statement of Need: The National Comprehensive Cancer Network (NCCN) provides evidence-based guidelines for the care of all cancer patients. Nationally, many breast cancer patients are cared for by general surgeons, rather than breast specialists, so familiarity with and awareness of care guidelines is important from early training years (1). Breast cancer treatments have evolved due to advances in genetics, imaging, the use of minimally invasive biopsy techniques and more management options with equal survival benefits. Patients need thorough and comprehensive consultation before the decision for surgery or adjuvant treatments is undertaken. Literature shows that utilization and adherence to guidelines by practicing physicians is low in spite of overall positive attitudes toward usage (2, 3). Lack of familiarity and awareness has been identified as two of the main barriers of use of guidelines3. Studies also suggest that interventions are needed to increase familiarity with the guidelines. The idea is to ensure that surgery residents utilize NCCN guidelines during residency to help encourage use residents and as practicing physicians.

Methods: Participants are 40 general surgery residents at 2 institutions. The intervention has two phases: 1) an initial classroom instruction phase for all participants and 2) a clinical rotation phase to assess application in a workplace setting. Only the first phase will be reported here. Phase one is a five session interactive case-based curriculum that includes 25 practice cases. These were delivered using progressive disclosure and an audience response system to ensure active engagement in the problem solving process of utilization of the guidelines. Data collection and evaluation have two parallel phases. In phase one the focus is on awareness, knowledge and application of the NCCN guidelines for breast cancer management of classroom cases. This cross-sectional study used a pre-post design with two types of tools. 1) A knowledge test administered before + after each interactive classroom session, to determine changes in knowledge of guidelines and appropriate management. Inferential statistics will be used to compare pretest performance to posttest performance. 2) A pre-post questionnaire about the standards, familiarity, opinions about usage and any barriers to usage. It incorporates questions that require closed and open-ended responses. Closed ended questions descriptive statistics (E.G., frequency, percentages, averages and standard deviations) will be reported. Free response items will be analyzed using a combination of the top-down and bottom-up coding for data themes.

Results: Phase one of the study is currently being implemented. At present, one institution (25 of 40 participants) has completed phase one. There was a 100% response rate on the pre-questionnaire (n = 25/25) and 60% response rate on the post-questionnaire (n = 15/25). For the session pre-post assessments of knowledge all residents in attendance completed both instruments (average n= 20/25). Data analysis of most results is still underway, however some preliminary results are presented below. In the second institution phase one will be completed on November 12, 2015. A response rate of 100% was achieved on the pre-questionnaire (n=15/15); the post-questionnaire will be administered on November 12. The data for all 40 learners will be reported at the Conference and in the final abstract to be submitted in January. Some initial results for the first institution are reported below to provide a sense of the quantitative data. The qualitative data review is still in the early stages; at completion the themes will be reported. Initial Results: Initial review of data indicate an inconsistency between pre-questionnaire report of usage of guidelines (mean of 90%) and the pre-test mean correct on the actual knowledge of guideline contents (mean of 62%). This initial result is a bit disconcerting. We anticipate that the qualitative results will bring depth of understanding to all quantitative data. The workplace application will be examined in phase two, which begins in December 2015.

Potential Impact: At this early stage we have a glimmer that learners' perception of their knowledge and usage of guidelines may not be accurate, so in any clinical setting, important guidelines should be reviewed at the same time the clinician is setting other expectations for resident performance. Further lessons will be provided after all data analyses.

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Utility of using first person video in medical student education during EM clerkship.

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Idea or Problem Statement: Google glass based, first-person, video evaluation of medical student's clinical performance during their core EM clerkship.

Rationale or Statement of Need: Evaluation of medical students' performance during their patient encounters in the clinical years has always been very limited. To address the issue, nearly all medical programs rely on the use of standardized patients' evaluations during the clinical clerkships. On average, such standardized encounters tend to be limited to a one-time evaluation (per clerkship) and tend to effect student behavior. Our study utilizes first-person video recording from the patient's perspective and could potentially offer a unique insight into real-life medical student-patient interaction. When the student subsequently reviews the recording with the attending physician, the process can provide effective evaluation as well as teaching opportunities (i.e. address lack of either communication or clinical skills). The methodology itself is unique as Google Glass allows for unobstructed recording of any patient encounter. As a result, this portable technology is an extremely versatile method of recording that offers high resolution video and audio recording with minimal patient encounter interference, as shown in a pilot study using standardized patients at the University of Arizona.

Methods: Our study has already been implemented under IRB approval as part of the fourth year required Emergency Medicine Clerkship at the University of California Irvine School of Medicine. Patients that meet our inclusion criteria wear the Google Glass during their student-patient interview. Each student is asked to perform a full History and Physical while being recorded from the patient's perspective. The student then fills out a standardized validated questionnaire based on a 5-point Likert scale to address the student's perception of hisher clinical performance, interviewing skills and interpersonal skills. The video recording is subsequently reviewed by the student and an attending physician who provides the expertise to objectively assess student's clinical interview and physical exam skills. After the review, the student then fills out the same questionnaire as the pre-review one to re-assess issues and potential improvements in the categories of base knowledge, clinical skills as well as interpersonal skills. This study has already been incorporated into the core EM curriculum and every rotating student is required to participate in at least one recorded interaction. The number of enrolled students should provide an adequate number to perform the analyses with enough statistical power.

Evaluation plan: The primary outcome of the study is a comparison in students' mean scores of the individual questions for the pre-review and post-review questionnaire using a T-test, alpha of 0.05 or less is to be assumed to be statistically significant. Further analysis using Regression model can be used to assess whether there is a trend in students' scoring in the pre-review and post-review questionnaire in individual categories of interviewing skills, physical exam skills and interpersonal skills. A further goal of the study is to assess whether there is a significant difference if students undergo more than one recorded interview with a review.

Potential Impact: First-person video implemented in a real-world hospital setting carries enormous potential to allow trainees an intimate view of their clinical performance. Objective assessment and subsequent improvements in students' clinical and interpersonal skills through this project could lead to even more patient-centered care at an earlier stage.

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1. Medical Students' Self Assessment of Performance: Results from Three Meta-Analyses. Danielle Blanch-Hartigan Dept of Psychology, Northeastern University, Boston, MA, US
2. Recording Medical Students' Encounters with Standardized Patients Using Google Glass: Providing End-of-Life Clinical Education Jeffrey Tully, MD et al Academic Medicine
3. Medical Student Case Presentation Performance and Perception When Using Mobile Learning Technology in the Emergency Department Matthew Tews, DO et al

Sharing a common view- can seeing the same situation through different eyes reduce mistreatment?

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Idea/Problem Statement:
To foster a common understanding of healthy and challenging learning environments, we created a series of trigger videos demonstrating different views

Rationale/Need:
In the past decade there has been an increasing focus on the learning environment for students in medical school. Graduating students submit answers to a AAMC questionnaire regarding their medical school experience of mistreatment. It has been found via these questionnaires as well as numerous narratives and essays about the medial school experience, that student mistreatment is common and pervasive throughout all schools and all levels of training. With the increasing awareness of this problem, there many and varied attempts to combat this "bullying culture" of medicine. Similarly to other schools, we at Stanford have addressed this in a variety of ways, not all of which are effective. Most schools now have statements defining what constitutes student mistreatment. However, defining mistreatment is not always so simple. What constitutes mistreatment in the eyes of a student might be a function of trying to navigate a busy stressful work environment, where the focus is on patient care over teaching.

Methods:
We created a series of trigger videos that show common scenarios in our specialty. We show these videos to each group of incoming clerkship students during orientation week. We also show them to our residents and faculty in meetings. We facilitate discussion in order to foster a "common ground" where the same situation is seen through more than one viewpoint. Similarly to debriefing sessions after poor patient outcomes in the hospital, we avoid pointing fingers to cast blame. We emphasize that an episode of perceived mistreatment does not mean that the resident or student is "bad". We facilitate discussions among the students about what the residents and attendings may be thinking during common scenarios, and how this might affect their demeanor or behavior. When we show the residents and attendings the videos, we discuss situations where they may have unintentionally made a student feel mistreated, and strategies to reduce this perception.

Evaluation Plan:
We plan to follow anonymous reports of mistreatment accessed through our student affairs department. The reports are grouped in aggregate every six months in order to remain anonymous. We also plan to follow results in our AAMC Graduation Questionnaire.

Potential Impact/Lessons Learned:
Our goals are to have an immediate impact on the awareness of student mistreatment, and sensitivity to differing viewpoints. We hope to have decreased reports of student mistreatment while on our clerkship, and ultimately on the final AAMC Graduation Que

References:
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2. Gan, R and Snell, L. "When the Learning Environment is Suboptimal: Exploring Medial Students' Perceptions of "Mistreatment" Academic Medicine, 2014.
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Translating Classroom Skills to the Clinical Setting: Communication Skills for Neonatology Fellows

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Idea/Problem Statement:
Combining workshop and observed family meetings to enhance neonatal fellows' communication skill and to aid transfer of classroom skills into practice

Rationale/Need:
Excellent communication skills are key to family-centered care. In the neonatal intensive care unit, increased efforts to communicate long-term and future issues preterm neonates may encounter have been shown to lead to less parental anxiety and better parental interaction with their infants, as well as to a developmental advantage for the infants whose parents received the intervention (1). Learning of communication skills is a complex task. Concepts put forth in the mastery of learning theory (i.e. acquisition of component skills) with ideas of Ericsson's deliberate practice (i.e. focusing on specific learning objectives, timely and relevant feedback, self-reflection and repetition) can be the foundation to a comprehensive approach to teaching communication skills (2). The challenge for leaner performance lies in the translation of what is learned in the classroom into the workplace performance in the clinical setting (3). After conducting a needs assessment and a thorough review of the literature a curriculum plan was designed. This explicit curriculum for neonatal-perinatal medicine (NPM) fellows will incorporate a combination of workshop and simulated scenarios, paired with coaching in the clinical setting. The goal is to ensure transfer of acquired skills to the bedside, create opportunities for structured feedback and reinforcement, and facilitate lasting change in behavior.

Methods:
The target learners will be 12 neonatology fellows rotating at a children's hospital between January and May 2016. The proposed curriculum consists of a combination of workshop, standardized patient (SP) sessions and coached family meetings integrated in the clinical practice of the NPM fellows. A detailed plan for the proposed curriculum, including specific goals and objectives, educational strategies, has been created. The one-day workshop will focus on practicing basic approaches to physician-patient communication using reflection, large group, small group and individual activities, followed by role-play. Additionally, four 30-minute sessions with SPs will be used to practice skills, to assess each fellow's competence in standardized fashion, and provide structured feedback. The fellows' transfer of skills to the bedside will be aided via means of three structured direct observations of family meetings per fellow, accompanied by structured and documented feedback, and reinforcement of concepts. The research questions for this project, funded by the "Barbara M Korsch Award for Research in Medical Education", are: 1) What is the impact of the curriculum on NPM fellows' knowledge about basic concepts of patient-physician communication? 2) What is the change in behavior measured via a "prebrief" checklist and performance checklist after fellows participate in the curriculum? and 3) What is the change in parent satisfaction after fellows participation in the curriculum?

Evaluation Plan:
The evaluation addresses all research questions and includes:

1) Reaction and learning data will be collected via surveys and knowledge quizzes.
2) A reflective case based exercise will identify ability to apply the communication tools.
3) Behavioral change will be assessed using a "prebrief" checklist (assessment of fellow's ability to approach FMs in structured fashion) completed prior to each of the three structured workplace family meetings.
4) A performance checklist focused on assessment of behavior during each of the three workplace family meetings.
5) Chart documentation of prescribed elements of family meetings will be conducted for each of the three family meetings for completeness and accuracy;
6) A validated parent questionnaire together with patient feedback will be elicited by social workers after the each of the family meetings to assess parent satisfaction.

Potential Impact/Lessons Learned:
This curriculum and performance evaluation with direct observation could potentially serve as model for teaching and assessing effective communication skills of NPM fellows, and may be transferable to other specialties.

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Improving resident skills negotiating end of life care decisions using interactive guided modalities

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Idea/Problem Statement: Improve resident skills in negotiating end of life care decisions utilizing online modules, interactive workshop, and guided practice with patients.

Rationale/Need: Culture is an important factor in the way end of life discussions should be approached since different cultural groups have different views on death and dying (1). Residents often lack formal training in conducting end of life discussions, as well as in ways to approach this area in a culturally sensitive manner (3). It is often difficult for the physician to address end of life and palliative care issues due to the emotional connection to these topics as well as having to align with each patient and family's cultural influences (1). Studies have shown that minorities have lower rates of having an advance directive in place and also of discussing end of life issues with their loved ones than white patients (2). For example, black patients are half as likely as white patients to elect orders that state "Do Not Resuscitate/Allow Natural Death (DNR/AND)" (2). The study "A Status of Medical Education in End-of-life Care" provides evidence that most medical students and resident physicians do not feel prepared to provide end-of-life care (3).

Methods: The participants in this project will be the 8 second-year residents in our Family Medicine residency program. The intervention will be conducted primarily during their month Geriatric rotation and includes three phases: 1) An annual workshop (for all residents) that focuses on negotiating end of life care that includes three stations. Each station has a faculty member in the station who observes and provides feedback. Residents are debriefed at the end of each scenario. 2) Completion of four 20 minute online modules from the Center to Advance Palliative Care website. These modules allow the residents to reflect on important issues in relation to end-of-life care. They also focus on knowledge about how to negotiate care in various case-based situations related to physician orders for life sustaining treatment (POLST) and other end of life care discussions. 3) During the Geriatric rotation residents will be able to select specific scenarios to practice using role-play with the lead faculty. These encounters will be videotaped to allow reflective review. Residents will also be encouraged to consider their own views and to discuss these issues in their own families to build clear understanding of their own cultural and personal biases. Each resident will then bring in one patient to discuss that patient's end of life wishes. This encounter will either be video recorded or directly observed. Residents will complete a written reflection at the end of this training process.

Evaluation Plan: The evaluation will include: 1) tracking of completion of modules and participation in all planned activities; 2) assessment of learner reaction to the curriculum through usage of a modified rotation evaluation form; 3) tracking of module completion to determine (each has a quiz prior to generating the certificate) for assessment of knowledge; 3) direct observation of resident skill in providing the appropriate guidance in the role play and actual encounters during geriatrics; 4) follow-up with each resident to determine if and how they have incorporated these skills into their own care of patients in the inpatient and outpatient setting; and 5) periodic monitoring across time of the electronic health record to track inclusion of an end-of-life discussion.

Potential Impact/Lessons Learned: If this model is effective it could be adopted in part or total by any program that works with chronic disease, elderly patients as well as patients with terminal illness.

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Putting the 'I' in team through completion of the ICARE curriculum

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Idea/Problem Statement:
Enhancing team-based care provided by senior fellows through completion of ICARE workshop.

Rationale/Need:
Team-based care is reliant on multiple clinicians providing patient care and support. Physicians lacking skills in teamwork and collaboration can make critical mistakes in communication, which ultimately impacts patient care and increases costs.1,2,3 "Clinicians and medical educators continue to struggle to integrate team concepts into curricula" (p. 243).3 The idea being proposed here is to develop a set of workshops that together can help faculty and residents enhance their team skills. The ICARE (Inter-professional, Collaboration, Accountability, Respect, and Engagement) curriculum is being built upon a careful study of the recommendations in the business literature on team building (e.g., Lencioni's, Five Dysfunctions of a Team; Blanchard and Boles, High Five; Huszczo's Tools for Team Leadership and Team Excellence) as well as on the TeamSTEPPS Strategies and Tools designed to enhance teamwork within medicine. All of the methods to be used within the five session curriculum are being selected to utilize key learning principles (participation, reflection, motivation) and to build a positive learning community across the five sessions (Ambrose et al, 2011). The ICARE curriculum is intended to provide a novel training experience to enhance teamwork and communication skills for fellows and residents who participate.

Methods:
The initial target audience is the 30 pediatric fellows in a children's hospital. The 10 hour curriculum will be conducted over five sessions, with one session held per week for a period of five weeks. To encourage full participation in preparatory activities, 30 minutes of each session will be set aside for reviewing prior reflections, completing brief readings or engaging in structured online learning activities. The other 90 minutes will be used to apply the "new" knowledge and to integrate the materials from prior sessions, with the final 10 minutes set aside for personal reflection on learning and making a commitment to act. A multi-method approach will be used in each session including a) review and assessment of video clips of effective and ineffective team behaviors, b) participation in scripted role-play activities to practice team skills; c) use of self-assessment instruments to allow each participant to assess their own work teams and their roles in them. The goal is to foster teamwork, improve communication, and eliminate barriers to collaboration.

Evaluation Plan:
The evaluation will include standard a) a standard evaluation form will be used to assess each session, and the overall curriculum for quality and usefulness; b) a pre-post self-assessment of their own roles in teams will be conducted to include a qualitative section where they discuss their greatest strength and challenge; c) a pre-assessment of two personal learning goals for participation in the curriculum will be followed by a post-assessment of how well they feel they have achieved those goal; d) the weekly commitments to act, will be followed the next week with a personal comment about how they achieved their commitment and/or any barriers faced; and e) three-months after the end of the series, all participants will be asked to complete an online survey that will explore the groups commitments and any changes in their own team performance or that of their teams.

Potential Impact/Lessons Learned:
One goal is to submit the ICARE curriculum once fully developed and evaluated to the MedEd Portal. It could them be utilized by training programs nationally that seek to enhance the team-based skills of resident, fellows, or even of faculty.

References:
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ACIME: Challenges to Professionalism, Lapses, and Working with the Learner in Difficulty

Zia, Stephanie; Cerza, Dante; Nyquist, Julie

Keck School of Medicine at University of Southern California; Children's Hospital of Philadelphia

Workshop Rationale:
Professionalism is one of the six areas of competence incorporated into the Accreditation Council for Graduate Medical Education (ACGME) common requirements for all training programs. It is also a competency, stated in one form or another, in every health profession. In today's world there are many challenges to professionalism for all health care professionals coming from society, the business of medicine and individual challenges, as well as unique challenges facing learners at all levels. These challenges sometimes result in lapses in professionalism, and occasionally to a learner with a pattern of lapses that makes him/her a "learner in difficulty." This workshop will provide an opportunity for participants to discuss these issues and if they choose to, to share a challenge they are facing or have faced with a learner in relation to professionalism.

Intended Workshop Participants:
All IME attendees who work with learners in settings where they observe the challenges to professionalism and the occasional lapse and are interested in building knowledge and skills in this area.

Learner Outcome Objectives:
By the end of this session, learners will be better able to:
1. Address the challenges to professionalism in own program and setting
2. Work with learners with lapses in professionalism
3. Discuss a specific leaner "in difficulty" due to professionalism issues

Instructional Methods/Content, Activities, Schedule:
This workshop will allow the participants to participate in discussion of each level of concern related to professionalism and learner performance: challenges to professionalism, lapses, and working with learners in difficulty related to professionalism lapses

Session schedule and activities:
1. Introduction to session and session objectives and to some background on professionalism as a competency. (10 minutes)
2. Small group discussion on the challenges to professionalism for faculty and our learners - with large group debriefing (15 minutes)
3. Discussion of ways we can help prevent lapses (two questions - one about individual performance, one on developing a more positive culture or "hidden curriculum." Followed by large group discussion (20 minutes)
4. Lapses: large group brainstorm on lapses they have witnessed; review and discussion of new assumptions versus old in relation to lapses (10 minutes)
5. Learners in difficulty: a) Individual activity - use the worksheet to write a case example of a learner in difficulty due to professionalism issues. b) Large group discussion of tips, c) work in pairs with a worksheet to discuss ideas for diagnosing the learner and helping the learner (25 minutes)
6. Commitment to act, take home messages and assessment of session (10 minutes).

Take home tool:
Worksheet for a learner in difficulty related to professionalism.

Upgrade Your Teaching: How to Build an Online Learning System

Christman, Grant; Schrager, Sheree; Trost, Margaret

Children's Hospital Los Angeles

Workshop rationale:
D- learning, the use of digital media and communications technologies in an educational context, is increasingly being incorporated by medical teachers in their interactions with trainees at all levels. While some tools such as wikis, forums, or quizzes may be implemented in isolation using apps or websites, developing a complete e- learning system using free, open source software is within the capabilities of medical training programs other medical educators. Using an e-learning system, the educator can develop interactive learning modules, foster collaboration between learners and teachers, and formally evaluate learner progress. E-learning systems are well- adapted for use in teaching environments that include a face-to-face component ("blended learning"), as is typically seen in clinical medical education.

Intended Participants:
Faculty engaged in medical education (including but not limited to clerkship, residency, and fellowship program directors).

Workshop objectives:
1. Describe the educational theories and evidence validating the implementation of e-learning programs.
2. Convert a traditional educational presentation into an interactive e-learning course using freely available, open- source software, taking advantage of built-in learner evaluation features.
3. Develop an e-learning website in order to share courses and other educational materials with colleagues and learners.

Instructional Methods:
Using an e-learning system, medical educators can develop interactive learning modules, foster collaboration between learners and teachers, and formally evaluate learner progress. This workshop will provide participants the opportunity to develop and improve their e-learning platforms, either by creating a new website and course content from the beginning or by learning new tools to advance an e-learning platform that is already established at their institution. Facilitators will provide a brief (about 15 min) introduction to online learning management systems and the basic components of e-learning software. Participants will then rotate through three small group, interactive stations (20 min each):

1) developing, hosting, and maintaining an e-learning website;
2) converting traditional didactic lectures into an e-learning module;
3) using built-in tools and utilities to assess and track learner knowledge, conduct course evaluations, and support research.

The workshop will conclude with a summary session and Q&A panel (15 min) that will enable participants to ask questions, share their own prior experiences with e-learning, and troubleshoot their own courses and websites. Online materials supplementing the workshop will be shared at the conclusion of the session.
The majority of the workshop will be devoted to small-group, hands-on interactive sessions where participants will have the opportunity to try out the material on their own computer or computers/tablets supplied by the facilitators. Participants will be introduced to free, open-source software that will allow them to develop and maintain their own Learning Management System without significant external funding. The availability of free cloud-based hosting options and the ease of signing up for such services will allow motivated and interested participants to have an e- learning website up and running by the end of the workshop session.

This workshop has been presented at several national conferences including this year's Pediatric Academic Societies and Pediatric Hospital Medicine conferences. The workshop leaders have developed an e-learning website specifically for participants in this workshop, located at http://www.upgradeyourteaching.com. Participants will be able to experiment with the e-learning software platform during and after the workshop by accessing this website.

Participants are strongly encouraged to bring their own laptops to the session.

Take-home tool(s):
Access to the workshop website as well as any new website constructed during the session.

Development of a Child Poverty Curriculum for Pediatric Residents

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University of Southern California; Children's Hospital Los Angeles

Idea/Problem Statement:
Pediatric residents lack comfort screening for child poverty. A curriculum to recognize clinical manifestations of poverty may increase screening.

Rationale/Need:
Nearly half of all children live in low-income situations; poverty and low-income status is associated with a number of poor health outcomes, including injury, low birth weight, developmental delay, and death (Brooks-Gunn). Pediatrician recognition of poverty and advocacy may change outcomes. The ability to effectively advocate is part of physician professionalism (Satcher) and thus an essential element of residency training. However, little has been published on curricula addressing poverty in the medical education setting. A curriculum initiated at the University of Michigan Medical School incorporated small group discussion, site visits, and essay writing on poverty into its longitudinal curriculum but did not deal specifically with the issue of child poverty, nor did it show incorporation of their knowledge into practice (Doran). To further investigate, we conducted a local needs assessment survey of Children's Hospital Los Angeles pediatric residents (n=41) and found that 97.5% of the residents stated that addressing child poverty was somewhat or very important to their role as a physician. However, only 12.2% report feeling moderately or very comfortable screening for poverty on an inpatient basis, and only 26.8% feel comfortable screening on an outpatient basis. Therefore, we propose design of a curriculum presenting an integrated approach to health and illness, wherein discussion of socioeconomic determinants of health is not siloed in outpatient settings.

Methods:
We have designed a longitudinal curriculum aimed to teach the 90 pediatric interns and residents at Children's Hospital Los Angeles. All residents will attend (or be requested to view online) an hour-long noon conference dealing with the epidemiology and health effects of poverty, major legislation as it relates, and methods of screening for poverty. Following this, residents will participate in two separate small-group case discussions incorporated into attending teaching rounds and the nighttime curriculum throughout the year. With their simulated history taking, the residents will be required to uncover the root cause for the patient's hospitalization, wherein the patient's poverty is written as a major contributing factor (for example, a mother suffering from food insecurity dilutes formula, after which an infant presents with hyponatremic seizures). In addition, a monthly e-mail containing a salient fact regarding the prevalence or effects of poverty will be sent to all residents. Following the main interventions, an optional social hour will be held, during which residents will be able to share their reflections on poverty including their personal or patient experiences. Because child poverty is a social justice issue, resident physicians need to be able to approach it in an impassioned way, which the social hour will be designed to foster.

Evaluation Plan:
After all curriculum elements are complete, residents will repeat the needs assessment and these responses will be compared to pre-intervention responses by chi-squared analysis. Questions in the needs assessment survey measure resident self-assessment of their awareness of poverty's effects as well as poverty screening habits, thus allowing evaluation of knowledge and attitudinal changes.With regard to behavioral changes, a chart review will be conducted before and after initiation of the study to see if the curriculum increased documentation of poverty screening (as manifested by income, food, and housing insecurity) in admission history and physicals. Finally, a focus group will be conducted with 6-10 residents at the end of the academic year during which we will explore how effectively the curriculum changed their perceptions regarding socioeconomic impact on pediatric illness, ability to empathize when considering child poverty, and experiences with poverty screening.

Potential Impact/Lessons Learned:
Residents will incorporate poverty into their critical thinking about medical problems and screen with increased frequency for poverty in the inpatient setting. Programs may use the presentation, e-mail communication, cases, and discussion questions to pr

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Improving adolescent health literacy through an integrative school based curriculum.

Southisombath, Khamphoucanh

White Memorial Medical Center

Idea/Problem Statement:
Improving adolescent health literacy through an integrative school based curriculum.

Rationale/Need:
Heath literacy is an important public health issue given that poor health outcomes correlate with low health literacy skills (1). Studies have shown that health literacy skill predicts health status and outcomes more strongly than age, income, employment status, education level, and race or ethnicity (2). Developing these skills are crucial during the adolescent years given teens are at an impressionable state of development and many serve as the liaison between parents, community, and health care providers (3). In order to cultivate these skills, we must understand the sociological influences of health literacy from a micro, meso, and macro level (1). Our comprehensive curriculum addresses these influences through improving the student's health knowledge, changing how health information is delivered, and promoting the dissemination of information learned to the surrounding communities.

Methods:
The intervention will focus on 30 juniors enrolled in the health careers pathway at the Applied Technology Center High School in Montebello, CA from Oct 2015-Jan 2016 in the form of bimonthly teaching sessions. The curriculum has three components. The first component consists of a 1-hour didactic session whereby family medicine residents teach organ system related health topics and skill sets related to that topic. Each session will be preceded by a pre-test of the topic content. A post-test will be given one week after the completion of each topic and again at the end of 4 months. The second component comprises of an assignment in which students are broken up into groups and are to create a project that demonstrates how information learned can be used for the betterment of health in their communities. Students will be given a survey at the completion of each project addressing the value of the skills learned and ways in which they will use these skills in the future. The third component will take form of a community health fair at the end of the year whereby students will display their projects to peers, teachers, members of the community, and their families. Students will fill out a pre- and post- health literacy survey at the start/end of the study period.

Evaluation Plan:
The curriculum aims to address Nutbeam's 3 levels of health literacy: health knowledge (basic functioning literacy), development of personal skills (interactive literacy), and personal and community empowerment (critical literacy). Student's knowledge will be assessed via comparing pre- and post-tests at the end of each lesson and again at 4 months. Student's skills will be assessed via evaluation of student projects by faculty and student's own perception of improvements via self-evaluation surveys. Lastly, personal and community empowerment will be assessed via surveys of learners able to participate in the health fair. Overall improvements in healthy literacy will be assessed via comparing pre- and post-curriculum survey scores.

Potential Impact/Lessons Learned:
Successfully implementing a school-based health literacy curriculum can be a powerful tool in empowering adolescents to make educated health decisions that positively impact their communities.

References:
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Collaborative Learning through Shared Curriculum: Creating "Residencies without Walls"

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Idea/Problem Statement: Enhance learning of ACMGE Core Competencies and common Milestones for all residents in a community hospital though implementation of shared curricula.

Rationale/Need: Traditionally, each specialty creates a separate, exclusive curriculum that can deepen the separation amongst specialty groups. This culture of silos marked by autonomy, hierarchies, and competition between specialty groups inhibits the collaborative practice needed for optimal care coordination of complex patients. (1, 2) Sharing limited resources and faculty through joint educational sessions can minimize this by providing greater efficiency of the educational process, with improvements in physician engagement, communication, and care coordination through inter-specialty collaboration. (3) Models of inter-professional training abound in the literature, however little information is available regarding inter- specialty collaboration to address the ACGME Core Competencies and common Milestones together.

By the end of the year the residents will be able to identify common Milestones and support each others' achievement of them.

Methods: All programs in the target hospital are new; internal medicine (IM) and general surgery (GS) begin in 2016. A pilot will be conducted in 2016, with full implementation in July 2017. The residencies include IM (n=20), GS (n=3), Ob/Gyn (n=4), Emergency Medicine (n=6), and Family Medicine (n=8). The joint curriculum will begin in Orientation, with other elements delivered monthly during Friday afternoon conferences. The curriculum will include common Milestones in four competencies: Professionalism (professional formation, resident wellness), Practice-Based Learning and Improvement (resident as teacher, evidence-based patient care, quality improvement), Systems-Based Practice (patient safety, advocacy, cost) and Interpersonal and Communication Skills (team-based care and effective consultations, psychosocial data gathering, cultural competence). Methods in the monthly 4 hr blocks will utilize sound principles of learning including a variety of interactive techniques such as: brainstorming, case discussions, role plays and think-write-share segments. The initial year will include PGY1 residents. Selected sessions will be developed for PGY2 and above in the future.

At the end of the year, learners should be able to:

1) identify ACGME Core Competencies through sample patient scenarios and relationship to Milestones;
2) discuss key issues in team building and shared leadership and
3) reflect on the role of cultural assumptions in patient evaluation using sample patient cases.

Evaluation Plan: The evaluation includes several assessment components:

1) educational sessions will be assessed by learners using standard rating forms;
2) learner skills will be assessed through direct observation of structured clinical scenarios (using tailored rating form),
3) learner knowledge will be assessed through examination of relevant sections of the in-service examinations. Finally, learner behaviors will be assessed in two ways: a) through usage of learners' commitments to act completed at the end of session with later follow-up to determine how well they felt that they met those commitments and any barriers; and b) through tracking of resident performance on relevant milestones during their PGY1 year.

Potential Impact/Lessons Learned:
If our model of shared curricular experiences is effective it could be adopted by community hospitals with multiple specialties.

References:
1. Kirch D. Culture and the Courage to Change. President's Address; Association of American Medical Colleges Annual Meeting; November 4, 2007; Washington, DC. https://www.aamc.org/download/169722/data/kirchspeech2007.pdf
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Resident Physician Wellness and Burnout Prevention Curriculum

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Idea or Problem Statement:
To enhance wellness and prevent burnout in emergency medicine residents through participation in a longitudinal wellness program

Rationale or Statement of Need:
Burnout is defined as "a prolonged response to chronic emotional and interpersonal stressors on the job defined by three dimensions: emotional exhaustion, depersonalization, and a sense of reduced personal accomplishment" (1). Specifically in EM residents, a recent survey of 8 EM training programs demonstrated that 65% of residents were identified as having burnout using the Maslach Burnout Inventory (MBI). The following risk factors were associated with increased burnout: residents who were risk intolerant, residents with low job satisfaction, and residents who had less clinical autonomy or a lack of administrative involvement (1). The issue of burnout early in physicians' careers is not limited to emergency medicine (EM) and other specialties are facing similar burnout issues (2). Although there is limited data available from other specialties, a search of Pubmed revealed no studies on burnout prevention or intervention tools in EM residencies in the published literature (3). We aim to identify and implement viable interventions to combat specific stressors related to burnout in EM residents. Education on this topic may lead to greater levels of awareness of the issues affect

Methods:
Our wellness and burnout prevention curriculum will be targeted for 17 EM interns at a large academic level I trauma center in Los Angeles. Next year's intern class of 2016-17 will be our intervention group. The class of 2016-2017, also comprised of 17 EM interns, has not received this curriculum and they will serve as our control group. The goal of the curriculum is to proactively address issues related to wellness, fatigue and burnout. The curriculum will be developed in two phases. Phase I will involve a needs assessment whereby all 68 residents in our program will complete a Maslach Burnout Inventory (MBI) and they will also complete a survey identifying which aspects of residency they perceive as contributing to burnout. Based on resident responses, we will then target the intervention to specifically address issues identified in prior studies as well as issues identified within our own residency program. Phase II will be the intervention. A 20-hour curriculum will be implemented longitudinally during the 2016-2017 academic year for incoming interns. Interactive wellness modules will take place during protected educational time during a) orientation week (4 hours), b)

Evaluation plan:
To evaluate whether our curriculum was effective in preventing or addressing burnout we will compare next year's intern class (intervention group) with this year's intern class (non-intervention group). Both our control group and intervention group will receive a Maslach Burnout Inventory (MBI) at the beginning and end of the academic year. We will compare burnout inventories between this year's non-intervention group and next year's intervention group. In addition to quantitative data provided by the MBI, we will also collect qualitative data. The intervention group will receive a survey to evaluate how useful they found each wellness module. The survey will also ask questions regarding self-reported changes in attitudes, knowledge, and behavior as a result of participation in the curriculum. This data will function as an assessment tool and will also assist in molding future curricula.

Potential Impact:
If successful, our model may serve as a useful intervention for future interns in our residency program to address and decrease levels of burnout. Opportunity also exists for collaboration with other EM programs. Other programs and other specialties may adopt concepts and techniques from our intervention in developing their own wellness curricula.

References:
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Teaching patient centered medical home skills to family medicine residents

Tieman, Jennifer

Research Family Medicine Residency

Idea/Problem Statement: Use of an interactive longitudinal curriculum to build family medicine residents' skills required to practice within the Patient-Centered Medical Home

Rationale/Need: The Accreditation Council for Graduate Medical Education (ACGME) requirements for family medicine residencies programs mandate teaching population health concepts such as patient care coordination, quality patient care advocacy and effective interprofessional cooperation (1). Many residency programs, including our own, lack formal curriculum designed to teach such skills. Initial survey data from Research Family Medicine Residency suggest poor resident skills in population health. The Patient Centered Medical Home (PCMH) is a model of care incorporating key population health concepts. The PCMH recognizing body, National Committee for Quality Assurance (NCQA), requires the practice meet competencies in 6 standards defining a PCMH (2). Review of literature revealed limited formal curricula related to improving PCMH skills but one validated tool was found to assess perceived skills and behaviors (3). An innovative curriculum will be implemented that combines the development of the cognitive base (NCQA standards) with use of guided outpatient and community projects

Methods: Our target learners are the 12 first year Family medicine residents in our 12-12-12 program, using our 12 second-year residents as a control group. (A) PGY1s will receive an intensive introduction of 5 hours during orientation to the first three NCQA PCMH standards (enhance access/continuity, identify/manage patient populations, plan/manage care). Classroom sessions will include role playing (targeted practice with feedback) of the teach-back method and patient-centered usage of in-room computers. Residents will also conduct a community survey through usage of a scavenger hunt within our inner city neighborhood. (B) From October - May the PGY1s will pair with the family practice center care coordinator to provide chronic care management to a pilot group of Medicare patients to build care coordination skills (standard 5). (C) Residents will participate in delivering quarterly 1-2 hour case-based sessions focusing on the final 3 NCQA standards (patient self care/community resources, track/coordinate care, measure/improve performance. Learner objectives will be developed, one for each of the six standards, for example: oversee team-based care coordination for medically complex patients (standard 5).

Evaluation Plan: Baseline data on PCMH skills was collected using a validated instrument (Patient Centered Medical Home-Clinician Assessment, PCMH-CA) from our early second year resident class who had no formal curriculum on PCMH. Baseline data on resident satisfaction with their clinic experience was also obtained from the annual program survey, and an informal survey of residents focused on teamwork in the clinic setting. The PCMH-CA will be administered again to the current first year resident class when they are early second years, after they have experienced a full year of the PCMH curricular intervention. The annual program survey administered in spring will also be used to compare resident satisfaction with their clinic experience after implementation of the PCMH curriculum. Each didactic session will also be evaluated by the learners.

Potential Impact/Lessons Learned: If our model longitudinal curriculum proves to be effective it could be disseminated to all primary care residency programs implementing medical home models.

References:

1. Accreditation Counsel for Graduate Medical Education Competencies, www.acgme.org

2. National Committee for Quality Assurance Patient Centered Medical Home recognition program, www.ncqa.org/Programs/Recognition/Practices/PatientCenteredMedicalHomePCMH.aspx

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ACIME: Small "N", Big Impact Studies

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Workshop rationale:
Research conducted in medical education settings often involves limited sample size. This is especially true in the graduate medical education settings. The medical education community has begun to embrace qualitative methodologies in order to produce great impact. The purpose of this workshop is to introduce several approaches to research that involves small sample size.

Intended workshop participants:
This session is intended for participants with beginner- and moderate-level experience conducting medical education research. Individuals who hold leadership positions within their environments (e.g., program directors) will benefit from this session.

Learner outcome objectives:
By the end of this session, participants will:

1. Be able to describe the strengths and weaknesses of various data collection approaches
2. Be able to describe the strengths and weaknesses of "small N" studies (i.e., trade-off's in reliability, validity, generalizability)
3. Be able to identify the most suitable methodologies involving small sample studies

Instructional methods/content, activities, schedule:
Session facilitators will use a number of different pedagogical approaches throughout the workshop to help participants attain the learning objectives outlined above. Examples include lecture (LEC), small (SGD) and large group discussion (LGD), and hands-on activities (HOA). Use of each approach is mapped on to the session agenda that appears below.

1. Getting to Know You - LGD - 10 mins.
2. Small "N" vs. Big "N" Research - LEC - 20 mins.
   - Similarities/Differences in methods, strengths, weaknesses
3. Medical Education Research & You - SGD - 15 mins.
   - Your research questions of interest
4. Data Collection in Small "N" Studies, Part 1 - LEC - 15 mins.
   - Observation, interviews, surveys, administrative data
5. Data Collection in Small "N" Studies, Part 2 - SGD/HOA - 20 mins.
   - Develop sample survey/interview questions to address your research question of interest
   - Peer review each other’s questions
6. Session Wrap-Up/Feedback - LGD - 10 mins.

Diagnosing and Effectively Engaging the Struggling Learner and Reducing Learner Stress

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Keck School of Medicine at University of Southern California & Children's Hospital, Los Angeles

Workshop Rationale:
Medical educators are directly responsible for impacting the learning environment by appropriately balancing the demands of providing high-quality patient care and effectively engaging all levels of learners and are often left with the task of identifying, diagnosing and assisting the learner in difficulty.

1. Recognition of each learner's needs and establishing an effective learning environment can help identify the struggling learner and reduce learner stress
2. This highly interactive workshop will explore challenges of teaching learners in the busy clinical environment, utilize strategies to create an effective learning climate, adapt techniques to reduce learner stress, and explore tactics to develop remediation plans, promote diagnostic reasoning and move beyond the "feedback sandwich"
3. Participants will then apply this through reflection, role-playing and case-based scenarios. At the end of the workshop, participants will acquire skills and develop their own teaching tool-kit.

Intended workshop participants:
Medical educators, clerkship and program directors, clinicians and trainees in the academic setting

Learner Outcome Objectives:

1. Define the challenges of teaching learners in a variety of stages & strategies to effectively engage all levels of learners (medical students and post-graduate trainees).
2. Delineate strategies to create an effective learning environment for all learners & learn tactics to reduce learner stress & promote wellbeing.
3. Describe ways to identify, diagnose & assist a struggling learner by effectively promoting diagnostic reasoning, developing remediation plans & incorporating effective feedback.
4. Apply effective teaching techniques through small-group exercises and case-based scenarios.

Instructional methods:
The workshop will first start off with large group discussion to introduce facilitators and ask the audience to reflect on challenges of teaching in a clinical environment (5 min). Next, a 10 minute didactic on diagnosing the struggling learner will take place. For the next 60 minutes, each table will undergo 3 small breakout sessions:

1) Promoting and utilizing clinical reasoning for the struggling learner via case-based scenarios, and participants will develop a remediation plan for their learner;
2) Learn ways to promote a healthy clinical learning environment and reduce learner stress utilizing jigsaw technique;
3) Learn ways to provide effective formative feedback to assist the struggling learner via role play.

The last 5 minutes will re-join as a large group and recap learning objectives, answer questions, write a "mission statement" and review teaching toolkit folder. Large group presentation= 5 min: Introduction - Introduce facilitators; informal poll of where participants are from; brief audience reflection of teaching challenges (all facilitators) Didactic= 15 min: Diagnosing the struggling learner- Brief didactic presentation beginning with workshop objectives and overview of breakout session (facilitator: Kira Molas-Torreblanca) Small breakout groups*= 20 min: Diagnostic reasoning- Promoting and utilizing clinical reasoning for the struggling learner→ tools will be given and participants will learn how to incorporate these tools via scenarios (facilitator: Michelle Essig) Small breakout groups= 20 min: Learning climate and reducing learner stress: Learn ways to promote a healthy clinical learning environment and reduce learner stress → utilizing jigsaw technique small group will break up into pairs and come up with a strategy and then teach others in group. Finally review of strategies suggested by facilitator will be shared and discussed and points can be compared (facilitator: Yassi Zarrabi) Small breakout groups= 20 min: Feedback- Ways to provide effective formative feedback to assist the struggling learner →role play with scenarios and think-pair-share (facilitator: Jennifer Cannon) Large group= 10 min: Wrap-up- Recap learning objectives, share experiences with breakout sessions, ask questions, write a "mission statement" and review teaching toolkit folder (All facilitators) *the facilitators will rotate to a different station after each breakout group is done (20 minutes)

Take-home tools:
Each participant will be given a folder of all the resources and scenarios reviewed in the workshop so that they can take home to use at their institution.

Lively and Lucrative Billing and Coding Curriculum

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Sioux Falls Family Medicine Residency Program, University of South Dakota Sanford School of Medicine

Idea/Problem Statement:
Family medicine residents will learn to bill and code more accurately through a longitudinal, game-show-style, interactive curriculum.

Rationale/Need:
Residents in our family medicine program significantly "undercode" outpatient visits compared to Medical Group Management Association (MGMA) benchmarks in family medicine. Specifically, from October 2014 to May 2015 our residents billed only 15% of their visits with the Evaluation and Management (E&M) code 99214 compared to the MGMA benchmark of 34.2%. A recently published study of 16 family medicine residency programs in five states found that residents are consistently undercoding compared to MGMA benchmarks (1), indicating that this problem is not isolated to our residency program. This study determined that the 16 programs had an estimated revenue loss of $481,654 per year due to undercoding (1). There is limited published data regarding effective family medicine education in billing and coding. A study from the University of Iowa showed that while residents' coding did improve with time, structured auditing and feedback did not seem to contribute to this improvement (2). Research has shown that, in general, interactive teaching sessions improve physician knowledge retention compared to lecture-based formats (3).

Methods:
The participants will be the 27 residents in a community-based, university-affiliated family medicine residency training program. Three one-hour sessions will be presented in this format over a three-month period, starting in October 2015. Prior to each session, residents will be provided with three to five articles on billing and coding that have been selected for their relevance and clarity. During the sessions, the residents will be divided into their four clinic teams. The teams will compete in a game-show-style competition where the residents will be required to apply knowledge and skills learned from the articles to simulated outpatient cases. This will provide direct coding and billing practice with feedback. This game-show-style competition has proven successful in teaching our residents other medical topics. Although the prizes are small, they seem to promote fun and healthy competition. Team members encourage each other to read so that their team can win. The focus of this intervention is improving knowledge of billing and coding, and, more importantly, changing coding and billing behavior in the clinic.

Evaluation Plan:
Evaluation will include: 1) assessment of learner reaction to the session through usage of a standard session evaluation form; 2) results of the games indicating the percent of cases billed and coded correctly (knowledge and skill); 3) follow-up with the residents to determine what percent report changing their coding practices; and 4) examining the coding in comparison to MGMA benchmarks for three time periods: the three months prior to the intervention, the three months of the intervention, and the three months following the intervention.

Potential Impact/Lessons Learned:
If this curriculum model is effective, it is easily scalable such that the educational benefits can be realized at family medicine residency programs across the country, as well as residency programs in other specialties. Additionally, this curriculum has

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Preparing for Comprehensive Caregiving: Increasing Interprofessional Exposure in Prehealth Curricula

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Idea/Problem Statement: Teaching pre-health students elements of interprofessional education informs them about its importance and applicability to future work as clinicians.

Rationale/Need: Interprofessional clinical care and coordination has been shown to be both more efficient and cost-effective, as well as improving the overall standard of care patients receive. As more Americans seek health care since the passing of the Affordable Care Act, interprofessional care has taken on new importance, and professional schools are working to integrate or expand interprofessional experiences in their curricula accordingly. Incorporating interprofessional course work and ideologies in pre-health education, especially through diverse faculty exposure, prepares students to serve society in concert with clinicians across the spectrum of care, regardless of the role each eventually assumes.

Methods: Students in a one-year master's degree program aimed at a broad pre-health student population were given the opportunity to enroll in elective course work that examines global health concerns from the perspectives of dentistry, psychology, and non-infectious diseases, which incorporates basic elements of pharmaceutical care. Taught by clinicians in each of these respective fields, students were able to enroll in the courses as part of course work needed to meet the unit requirements of the degree, but had the freedom to select courses of interest to them personally. Additionally, a diversity of professional and educational backgrounds among students also makes the program unique among programs aimed at pre-professional students. Students with backgrounds as teachers, Peace Corps volunteers, pharmacy students, Teach for America volunteers, EMTs, medical scribes, small business owners, entrepreneurs, engineers, and scientists have all matriculated through the program, bringing unique perspectives to classroom discussions and student group work.

Evaluation Plan: Course enrollments in courses with a focus beyond strictly clinical medicine have been consistently high, and many students have included elective course work in professional areas that they do not intend to pursue in their professional school study. Course evaluations and reports of experiences with faculty have been favorable, with many students listing one or more of their instructors for courses with an interprofessional focus as among their favorites from the program, citing them as great resources for academic and professional advising. Many students seek recommendation letters and further information about a given professional area from these faculty members and instructors, gaining firsthand information from those engaged in a profession about the profession itself. Such expertise informs the student perceptions of the clinical work that each profession requires and grants students a respect for the capacities and specialties each area of care provides to patients, as well as how they integrate with other care areas.

Potential Impact/Lessons Learned: Expanding pre-health programs' traditional teaching corps to incorporate interprofessional education through exposure to instructors from diverse clinical areas gives students an advantage in understanding the benefits of interprofessional collaboration and the many ways that patients' health is affected by the full range of their care providers.

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High School Students and Research: Utilizing Autonomous Learning Theory in Biomedical Education

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Idea/Problem Statement:
Efforts are needed to expand the national biomedical workforce. However, there are limited biomedical research opportunities for high school students.

Rationale/Need:
There is a national commitment to support activities that encourage students to pursue medical and research careers. Efforts have been made to introduce high school students to science disciplines and professions. Enabling students to have access to high quality learning opportunities is a priority of academic programs that promote teaching and learning in science. However, there are limited programs that offer pre-college biomedical research opportunities.

Research programs for high school students typically offer educational experiences through observational activities and specific, pre-determined research tasks. However, various approaches are needed to encourage interest in biomedical education to the broadest range of students. This unique high school summer research program was based upon autonomous learning theory which focuses upon goal-directedness, an active approach to problem solving, action-orientation, persistence and demonstrating the ability to self-start. (1) The students were incorporated into research teams, directly supervised by faculty, and were given the opportunity to comprehensively engage in research activity. This program was developed to assess whether autonomous learning theory could be utilized in pre-college biomedical education.

Methods:
High school students were selected for this unique research program based upon expressed interest in medical or public health research. Introductory lectures created a foundation of knowledge for the high school students. Lectures were given on the conduction of human research, the significance of protecting health information through the Health Insurance Portability and Accountability Act (HIPAA), and the importance of Institutional Review Boards (IRB). Research design, data collection, statistical analysis and preparation of abstracts were also reviewed through didactic lectures and case studies. The high school students were subsequently embedded into newly established research teams and challenged to develop research ideas and protocol design. IRB-approved studies were conducted, data analyses were performed and abstracts were written by the high school students.

Evaluation Plan:
The high school research program was evaluated based upon the generation of research ideas, development of protocols and performance of studies. Multiple survey studies were designed and the faculty supervisor facilitated IRB approval. The high school students administered the surveys, performed data collection, developed databases and conducted statistical analyses. The students were the primary authors of 8 abstracts that were submitted to a national medical conference with other abstracts from the departmental research program. The conference organizers were not informed that the research was primarily conducted by high school students.

All of the abstracts were selected for poster presentations at the national conference and published in a medical journal. The research was also presented at the university research day, a business journal article discussed the results and a Letter to the Editor was published.

Potential Impact/Lessons Learned:
This unique educational program demonstrated that high school students can actively engage in substantive research in an appropriately structured and supportive academic environment. Autonomous learning theory can be utilized in the development of pre-col

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Teaching culturally responsive interviewing techniques to Family Medicine residents

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Kaiser Permanente Fontana

Idea/Problem Statement: Promote cultural competence in health care among Family Medicine residents through culturally responsive interviewing techniques.

Rationale/Need: There is a lack of cultural competence in practicing physicians in the United States. This impacts their ability to provide optimal care to underserved and underrepresented populations, resulting in alarming disparities in health care [1]. A 2013 report from the CDC found that Hispanics and Blacks have lower rates of controlled blood pressure than Whites, and that though there was a decline in preterm birth rates of Black infants, the rate is still 60% higher than that of Whites and Asian/Pacific Islander infants [2]. Similar disparities are seen in the community served by our residency program. Educating residents about these disparities and teaching them skills to address cultural differences will not only meet ACGME requirements, but may also improve patient outcomes. Our intervention builds on previous models, by introducing a longitudinal curriculum based on scaffolding of didactic and clinical learning that could result in improved cultural responsiveness and health equity [3].

Methods: In 2016-17, PGY-1 Family Medicine residents (N=9) will start with a 2-hour orientation that reviews the concepts of cultural biases and stereotypes and the impact they have on specific populations. The remaining 9, 1-1.5 hour sessions will include formal presentations, videos, role play, and small group activities. During each session, residents will explore different belief systems and reflect on how those systems impact residents' ability to understand and motivate patients. Skills, tools, and strategies will be introduced to facilitate culturally responsive interviewing, and residents will have opportunities to practice with feedback. In the second year of the program, there will be a total of 10, 1-1.5 hour faculty-facilitated small group sessions. PGY-2 Family Medicine residents (N=9) will present cases demonstrating how they applied the interview skills, tools, and strategies presented in the first year of the program, to promote culturally responsive patient care. Additionally, faculty will observe each resident at least once in the clinic via video or direct observation with feedback.

At the end of the two year program, residents will be able to:

(1) identify their own cultural biases;
(2) discuss how cultural biases and stereotypes impact health equity;
(3) integrate culturally responsive interview techniques to collaborate with a patient; and
(4) demonstrate the ability to manage culturally sensitive issues for a variety of populations.

Evaluation Plan: At the beginning of the PGY-1 year, Family Medicine residents will complete a pre-survey to assess their confidence at providing culturally responsive care to specific patient populations. At the end of the PGY-2 year, residents will complete a program evaluation as well as a post-survey. Learning and behavior will be assessed through feedback on residents' case presentations as well as direct observation in the clinic with formative feedback. A retrospective review of health care gap data will be performed to assess reductions in health care disparities of patients that were part of residents' patient panels.

Potential Impact/Lessons Learned: A key to addressing health care disparities lies in the ability of the physician to skillfully collaborate with the patient to affect measurable change. This curriculum introduces culturally relevant interviewing techniques that could transform physician

References:

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Transhealth Turfland: Certificate Track in transgender care for Family Medicine residents

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Idea/Problem Statement: Residents in this track will improve their knowledge and skills in transgender patient care through clinical experience, reflection, peer teaching.

Rationale/Need: Transgender patients struggle with access to quality care, as well as disparities in risk behaviors and health outcomes.(1) Despite relevant curricular guidelines from the American Academy of Family Physicians (AAFP) and the Association of American Medical Colleges (AAMC), structured training on transgender care remains minimal nationally.(2) Locally, the transgender community report difficulty finding competent medical care. This gap is expected to become more acute as societal acceptance of diverse sexual and gender identities expands and a greater number of transgender patients seek care. At the University of Kentucky, Family Medicine residents do not receive any transgender care curriculum despite the need and desire for training.

The Transhealth Turfland track aims to address this gap through a curriculum designed to meet AAFP LGBT Health guidelines and AAMC standards. Residents have demonstrated interest, and those completing the track will earn a certificate in modeling existing curricular programs demonstrating feasibility and acceptance.(3)

Methods: Up to two Family Medicine residents per class will self-select to participate in a three-year track focused on transgender patient care (n = 6). Across each academic year, five didactic sessions will be held in our program office or online. Session content will informed by the results of a needs assessment of local transgender patients and community members, specific knowledge and skills gaps of the residents, resident interests, and issues encountered in the clinical setting. Teaching modalities will include reflection on clinical encounters, discussion of topical readings, case vignettes, video clips, and role-play. Each session will conclude with assessment of the track according to a Plan-Do-Study-Act (PDSA)/Quality Improvement (QI) cycle. Four additional annual requirements include: 1) view/read and reflect on an approved film or book from a transgender patient perspective 2) submit a reflection after attending one TransKY community support group meeting; 3) develop and present a transgender care topic at a faculty/staff development session; 4) participate in programmatic evaluation and the PDSA/QI improvement cycle.

Evaluation Plan: Accountability will be measured via attendance, completion of assignments and certificate, clinical encounter data, and scholarly work. Learner reaction will be assessed after each session according to a PDSA methodology. Summative end- of-year questionnaires will also incorporate learning and behavior outcomes of knowledge, confidence, and change in practice as compared to the needs pre-assessment. Learning and behavior will also be measured through a rubric-guided instructor review of resident reflections.

Future evaluation will be informed by the PDSA cycle with an aim to directly measure behavior through video review or standardized patient encounters and to assess impact through surveys of knowledge and attitude changes in faculty and staff, as well as changes in access and health outcomes measures for transgender patients.

Potential Impact/Lessons Learned: Transhealth Turfland aims to improve resident training and transgender patient care, with program evaluation and dissemination providing a generalizable model for all health professions training programs.

References:

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Firearms Safety and Cultural Competence in Anticipatory Guidance

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Idea/Problem Statement:
Improve resident skills in discussing firearm safety through use of didactics, discussion, role-play, and optional hands-on experience.

Rationale/Need:
The US has the highest rates of firearm ownership in the world (estimates as high as 300 million privately owned firearms in the US), and there were 33,636 deaths attributable to firearms in 2013 (505 unintentional); yet, firearm safety is missing from some common anticipatory guidance forms, and physicians often have difficulty discussing firearm safety in the non-judgmental manner with which they would discuss car seats or bicycle helmets. In the wake of some mass shootings, national organizations on both sides of the firearm ownership debate were so focused on the disagreement that the ultimate goal of firearm safety, something that all can agree upon, was lost in the arguments. Regardless of how physicians feel about firearm ownership, safety is an essential element of anticipatory guidance that should be provided in a culturally respectful way.

Methods:
All residents in a 4-4-4 Family Medicine Residency Program in rural KY (high prevalence of firearm ownership) will participate in a two hour classroom workshop regarding firearm safety and incorporating this in standard anticipatory guidance. A pre-workshop questionnaire is administered to assess current knowledge of firearms, nomenclature, firearm safety, security options, and the residents' own biases. The questionnaire is used as a guide for discussion rather than submitting it. Interactive methods utilizing brainstorming, demonstration, role play, and multimedia modalities are then carried out to introduce residents to the how and when to provide gun safety information. Various means to discuss firearms in a credible and non-judgmental manner will be modeled. All residents will practice and receive feedback on providing anticipatory guidance for firearm safety until they can discuss it with the same tone and inflection with which they educate regarding the use of bicycle helmets, child car seats, and booster seats. A post-test will be used to assess their learning. A field will be added to the electronic health record (EHR) to check off gun safety along with other anticipatory guidance. Preceptors in our outpatient clinic will use reminders in relation to this guidance along with other important anticipatory guidance.

Evaluation Plan:
Evaluation will include:

1) assessment of learner reaction to the session through use of a standard session evaluation form;
2) pre-post quiz on content;
3) direct observation of resident skill in providing the appropriate guidance in the mock setting;
4) follow-up with each resident to determine if and how they have incorporated these materials into their anticipatory guidance with parents;
5) periodic monitoring across time of the EHR to track inclusion of this item in their usual anticipatory guidance.

Potential Impact/Lessons Learned:
If the model is shown to be effective, it could be adopted by any interested primary care residency program in the United States.

References:
1. See BATFE, "Annual Firearm Manufacturers and Export Reports" (www.atf.gov/statistics)
2. National Vital Statistics Report (NVSR) "Deaths: Final Data for 2013, Table 18." http://www.cdc.gov/nchs/data_access/Vitalstatsonline.htm.

Increasing identification of patients with low literacy at Family Practice Center by Family Medicine

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Idea or Problem Statement:
Increasing the identification of low literacy patients by Family Medicine (FM) residents at the Family Medicine Center thru the regular use of Single Item Literacy Screen (SILS) during patient encounters.

Rationale or Statement of Need:
A systematic review of literature in Journal of Internal Medicine found that low literacy is associated with increased mortality, hospitalizations, poor control of chronic health conditions and various other adverse health outcomes. (1) Various studies have shown that Low literacy is a contributing factor in the communication gap that exists between physicians and patients. The American Medical Association Ad Hoc committee for the Council on Scientific Affairs, the National work group on Literacy and Health and the Institute of Medicine each called for greater efforts in educating physicians about issues related to health literacy. (2). The Single Item Literacy Screener (SILS) is a low literacy screening tool which has been found to help in ruling out limited reading ability in adults (3) aiding in the identification of a population at highest need for intervention to improve communication. We provided a Health Literacy awareness survey to Family Medicine Residents at our institution and found that 80% were not familiar with the term "health literacy" and were not familiar with methods for identifying or communicating with patients with low health literacy. This pilot will provide instruction and incorporate the use of SILS screening tool into residents daily patient care sessions in order to increase identification of patients with low literacy and encourage use of improved communication techniques such as the Teach back technique.

Methods:
A presentation on health literacy will be provided during resident re-orientation at the beginning of the academic year and again late summer at our Family Practice Center. This presentation will utilize multiple modes of teaching including lecture, video and small group activities in order to introduce low literacy and its direct relationship to poor health outcomes. The presentation will introduce SILS (Single Item Literacy Screen) as a practical screening method for identifying patients with low literacy and will include practical techniques for improving communication with patients who have low literacy. A presentation made to faculty preceptors in July which will include techniques for incorporating assessment of health literacy into regular precepting sessions with residents. Reminders will be incorporated into the monthly Faculty Preceptors meetings to ask preceptors to incorporate assessment of health literacy and encourage the use of SILS into regular precepting. Preceptors will be asked to remind residents to screen for low literacy during the individual "huddles" that occur at the beginning of each clinical session. Signs containing the SILS will be clearly displayed on all patient care and precepting rooms at the Family Practice Center. Residents will be provided with a 5-hour session in their Practice Management andor Community Medicine rotation to complete the HRSA online module on Effective Communication Tools for Healthcare Professionals.

Evaluation plan:
1. We will provide health literacy awareness questionnaires to FM residents pre and post each of the above mentioned presentations and then again at 3 and 9 months post presentations. Each individual responses will be compared during this timeline. Our goal is to bring at least 80% of our FM residents into the "I am confident about my knowledge" category. 2. We will conduct sporadic "spot checks" where each preceptor will be asked to quantify the number of times an identified resident utilizes SILS in patient encounters during a given precepting session. 3. Upon completion of the HRSA online training module on Effective Communication Tools for Healthcare Professionals, FM residents will be asked to write a 1 page reflection essay of their reactions to the training module and will be asked to make a commitment to the use of SILS during patient encounters. A "follow up" questionnaire will be provided at 1 and 6 months intervals to asses use of SILS during patient visits.

Potential Impact:
The goal of this activity is to increase residents' knowledge of low literacy and its impact on patients' clinical outcomes while allowing them to incorporate low literacy screening into their every day practice.

References:

DeWait D. A et al. Literacy and Health Outcomes: A systematic Review of the Literature. J. Gen Intern Med. 2004 Dec; 19(12): 1228-1239.

Kripalani S. et al. Teaching about Health Literacy and Clear Communication. J Gen Intern Med. 2006 Aug: 21 (8): 888-890.

Morris N. S. et al. The Single Iterm Literacy Screener: Evaluation of a brief instrument to identify limited reading ability. BMC Family Practice 2006, 7:21. (Electronic version available: http:www.biomecentral.com1471-2296721).

Improve Resident Satisfaction Working with the Underserved to Decrease Disparities in Access to Care

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Idea/Problem Statement: Increase rate of FM residents choosing careers in underserved communities with a longitudinal experiential learning curriculum in cultural medicine.

Rationale/Need: Despite cultural competency being one of the ACGME six core competencies, many residents report feeling less confident in treating patients from different racial, ethnic and socioeconomic backgrounds. This lack of confidence could be contributing to a widening shortage of physicians choosing careers in community health centers. Data from a local needs assessment of 21 family medicine residents demonstrate that 70% plan on working in a community health center after residency and over 70% felt ethnic, racial and socioeconomic factors were relevant in clinical care of patients. However only 50% of residents from the 2014 graduating class went on to work in community health centers. Residents have requested more instruction on providing culturally competent health care.
Studies show that greater exposure to working in community- based clinics during residency training is the most influential factor in whether a resident chooses a career in community medicine. Programs fall short in offering residents a way to apply the knowledge they acquire through cultural competence core curricula. We propose a cultural competence in health care curriculum that integrates the core with longitudinal experiential learning opportunities in community-based settings. Our hope is that by improving residents' self-efficacy in interacting with diverse patient populations, they will choose careers as primary care physicians in community health centers and underserved areas.

Methods: 21 PGY 1 – 3 Family Medicine residents will engage in six, two-hour sessions across the academic year during the monthly scheduled core curriculum on cultural medicine. They will also participate in a longitudinal experiential learning opportunity consisting of six sessions that alternate monthly with the scheduled didactics. The experiential learning component includes engagement in a community project that will culminate in an enduring contribution to the community as well as a capstone presentation. The residents will work with a faculty mentor to design and implement their community project. The core curriculum will be delivered on-site and will incorporate active learning techniques such as role play, multimedia presentations, and guided self-reflection with feedback.
By the end of the program, residents will:
1. improve their knowledge, skills, and attitudes towards the principles that determine health equity,
2. develop self-efficacy working with diverse patient populations

Evaluation Plan: Learner reaction will be assessed through an evaluation at the end of each didactic session to assess satisfaction with content and instruction, as well as an evaluation at the end of the program. Results of session and program evaluations will help inform areas of focus for the curriculum. Resident learning will be assessed through review of self-reflections. Learner behavior will be assessed through commitments-to-change with follow-up and direct observation in the community setting with targeted feedback.

Potential Impact/Lessons Learned: If effective, this curriculum could be used in residencies nationwide to foster culturally competent health care and decrease health disparities.

References:
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Facilitating Culturally-Responsive Healthcare in Rural Family Medicine Residents

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Idea/Problem Statement: Facilitating culturally-responsive healthcare in Rural FM residents through interactive media, reflection, and small-group learning.

Rationale/Need: The contrast between the cultural backgrounds of patients and providers may hinder health care delivery, thereby increasing health disparities. This phenomenon appears to be common to Family Medicine training programs across the nation [1]. Studies have demonstrated insufficient training related to delivery of culturally responsive care [2]. Residents at our program report that they experience certain patient and family interactions as being difficult due to cultural differences and that they struggle to navigate this challenge. Closing the gap between FM residents' current and level of cultural competence recommended by the ACGME through active learning techniques, small-group discussion, and guided self-reflection [3] could promote cultural competence and ACGME milestone achievement, specific to culturally responsive care—PC-2, SBP-3, Prof-3, C1, & C2.

Method: 18 PGY1-3 Rural FM residents will participate in two half-day sessions across the academic year. The PGY1 residents will also participate in an "Introduction to Cultural Competence" session during orientation including an immersion experience within the community. By the end of the year-long program, residents should appreciate how cultural responsiveness influences healthcare delivery and demonstrate confidence in their interactions with patients of different backgrounds. Residents will be instructed to engage with online media focused on cultural competence and awareness, will complete guided self-reflections, and participate in small-group discussions and debriefings comprised of learners across the post-graduate years, with senior residents and faculty assuming a facilitator role.
Evaluation Plan: Learner reaction to each session will be assessed through an anonymous paper-based questionnaire to gauge satisfaction with the content and delivery of the material. Learning and behavior will be evaluated through:
1. Pre and post-program guided self-reflections assessed with a rubric
2. Assigned readings with reflections completed between sessions
3. Direct observation of residents with an ACGME Milestones-based checklist in various patient care settings

Program assessment will include tracking of attendance, feasibility of program logistics and scheduling, and achievement of programmatic and session objectives.

Potential Impact/Lessons Learned: If we want to facilitate culturally-responsive healthcare among rural FM residents, we must provide tools for residents to navigate novel challenges in culturally competent healthcare delivery. Our curriculum is designed to provide these tools and if successful could be a model for teaching cultural responsiveness in Rural FM programs nationally

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The Unspoken Diagnosis – An Intervention in the Identification and Care of the Depressed Patient

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Idea/Problem Statement: Use interactive classroom sessions and clinic reinforcement to enhance depression screening and treatment conducted by Family Medicine Residents.

Rationale/Need: Depression affect 8% of all Americans in any 2-week period with approximate 80% of those going undiagnosed and untreated (1-CDC website, accessed Sep 10, 2015). It has been shown that the use of Patient Health Questionnaire-2 (PHQ2- a questionnaire with 2 specific yes/no questions that have a high index for depressed mood) can enhance routine inquiry about the frequency of depressed mood over the past two weeks (2-Kroenke K, Medical Care 2003). By using educational resources, self-evaluation, enforcement and reevaluation with PHQ 2, there is a higher outcome of improving the care of depression in patients (3-Thase ME, 2014). In our isolated rural setting we have four residents per year in our 1-2 family medical program. Our proposal is to use a case study method to examine the impact of our multi-modal project to enhance depression detection, initial management, patient education, resource utilization and follow-up.

Methods: Family Medicine Residents (N=4) will start implementing yearly PHQ-2 for depression detection in their continuity clinic. The PHQ-2 will be discussed initially at the start of the visit. If any of the questions answered are positive, the resident will further evaluate the patient.

The initial management will begin with educating the residents about depression identification and management using focused monthly lectures incorporating multiple presentation techniques that will be lead by Family Medicine faculty and Behaviorists. The yearlong longitudinal series will consist of interactive didactic sessions using attention grabbing video clips to identify depressed patients, implementing skill building techniques, such as role playing and one on one simulated patient interactions to build the skills to identify and manage depressed patients. We will do quarterly chart reviews to help engage and reinforce the screening tools and evaluate management techniques. We will also incorporate motivational interviewing skill sessions that will consist of real time recordings of the residents in the clinic setting. This will be followed by one on one debriefing sessions with the resident about their interactions and care of the depressed patient by faculty and behaviorist. Lastly we will follow up on residents' use of the screening tools by conducting quarterly EMR percentiles of phq 2 screenings per resident.

Evaluation Plan: Learner reaction will be assessed by a pre test prior to the start of the lecture series and a post test at the end of the year. The resident will also complete evaluations after each lecture session throughout the year. Resident use of screening tools will be assessed through chart reviews, obtaining quarterly resident specific usage of phq 2 percentiles, as well as real time evaluation during continuity clinic.

Potential Impact/Lessons Learned: To encourage an increase in depression screening and recognition it must be implemented as standard of care during the "learning" phase of a physician, specifically residency training. If we can train our residents about depression and implement depression screening they will likely continue this practice when they graduate.

References:

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Creating a 3-Year Longitudinal Cultural Competency Curriculum For Hanford Family Residency

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Adventist Health

Idea/Problem Statement: How to develop a meaningful longitudinal cultural competency curriculum through integration in didactic curriculum and wellness program.

Rationale/Need: Cultural competency is a vital component of every residency training. Because of significant increased in ethnic diversity among patient population, cultural competency is an essential skill for family physician to develop. There are no standardized national curriculum for cultural competency for family medicine and every program creates its own. Our program serves a highly diverse patient population but our cultural competency curriculum is perceived to be inadequate and does not cover wide range aspect of cultural competency. In order to provide a meaningful cultural competency training, our program will incorporate 3 years cultural competency to our structured longitudinal didactic curriculum and wellness program. The curricular goal is to increase self-awareness about cultural influences on both the physicians and on the patients, and improve multicultural skills in clinical settings. This will therefore enable residents to provide quality care to patients with diverse background.

Methods: Selected cultural competency related lectures, activities and workshop annually for 3 years will be incorporated in the didactic sessions and wellness program longitudinally. Topics will consist of family systems theory, family-oriented skills, socio-cultural awareness and sensitivity and cultural exercises. The cultural competency curriculum will utilize *Curriculum for Culturally Responsive Health Care* by Ring and Nyquist as reference and guide. Our didactic session is protected every Tuesday PM and the curriculum is highly structured. 1st Tuesday of the month is protected for Behavioral Medicine. 2nd and 3rd Tuesdays are dedicated to family medicine and specialty topics. 4th Tuesdays are dedicated to Journal Club, workshops, office procedure skills lab, practice -management, ITE/BOARD Review, QI, SAM and METRICS. 5th Tuesday is dedicated for residents' wellness where residents engage in activities that will include cultural exchange amongst themselves. Cultural competency activities will be incorporated on the 4th Tuesday every other month for total of 6 months annually. The activities will be evaluated using our current didactic evaluation system. In clinical settings, specific and timely feedback will be provided, as well as allowing time for deliberate practice for skills to accrue gradually with increasing time spent practicing. / All residents will perform self- assessment before the end of third year and the results will aid in modifying and improving the curriculum.

Evaluation Plan: Residents' cultural knowledge, cross-cultural communication skills, and level of cultural competence and sensitivity is expected to increased significantly after participating in a multicultural curriculum. The overall impact of this project will be reflected on the overall development and performance of the residents through direct observation, 360 evaluation, self- evaluation, patient's satisfaction survey and in expected developmental milestone. This will also will impact overall quality of care and patients' compliance through a meaningful relationship between physicians and patients of various cultural background.

Potential Impact/Lessons Learned: Residents with strong foundation of skill in cultural competency will be able to provide safer and effective patient care to the growing multicultural clientele.

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3. Does Cultural Competency Training of Health Professionals Improve Patient Outcomes? A Systematic Review and Proposed Algorithm for Future Research

A Four-Year Ethics Pathway at Baylor College of Medicine: A Twenty-Year Review

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Innovation Idea: Medical ethics curriculum that involves firsthand clinical case experiences and group discussions integrated throughout medical school longitudinally.

Rationale/Statement of Need: Physicians frequently face ethical dilemmas in clinical practice, highlighting the importance of medical ethics training in medical school and residency. The American Association of Medical Colleges (AAMC), the Liaison Committee on Medical Education (LCME), and the Accreditation Council for Graduate Medical Education (ACGME) have established core competencies in medical ethics which medical students and residents are expected to master prior to graduation. However, the current standardized ethics curricula in medical schools and residency programs may be too limited to adequately prepare medical professionals for opportunities to become involved in medical ethics committees or clinical ethics consultations. A more specific and in-depth approach to providing instruction in medical ethics, such as the Baylor College of Medicine (BCM) Ethics Track, may be necessary to better prepare medical students to manage clinical ethical issues and provide more humanistic patient care. The BCM Ethics Track, which consists of a first-year introductory lecture series, a second-year bioethics seminar, a third-year “Introduction to Clinical Medical Ethics” elective, and a fourth-year capstone research project, was initiated by members of the Class of 1992 as the first medical ethics track in any medical school in the United States. Other medical schools have used the BCM Ethics Track as a model in developing their own medical ethics track.

Methods: All 135 individuals who graduated from BCM and successfully completed the four components of the Ethics Track in 1993-2014 were invited by mail or email to participate in our cross-sectional survey. Responses were collected July 29, 2015 through September 29, 2015. We analyzed the proportion of respondents who agreed or strongly agreed that the BCM Ethics Track changed their ethical beliefs and behaviors, improved their ethical reasoning skills, and prepared them to manage patients with ethical issues. We also identified the Ethics Track components that respondents perceived to be most useful for practicing clinical ethics.

Results: Response rate was 44% (59/135). 37.3% of respondents agreed or strongly agreed that the Ethics Track changed their ethical beliefs, 44.1% that it changed their ethical behaviors, 96.7% that it improved their ethical reasoning skills, 94.9% that it helped them to address clinical ethical issues during residency, and 83.1% that it helped them to address clinical ethical issues after residency. Small-group case discussions (71.2%), small-group discussion of assigned readings on ethics-related topics (66.1%), didactic sessions on medical ethics research methods (64.4%), the introductory lecture series (62.7%), and individual mentorship (57.6%) were most frequently perceived to have the greatest utility. Multiple-choice examination (1.7%), clinical case examination essay (3.4%), exhibit of Ethics Track research projects (3.4%), and reflection papers on assigned readings (11.9%) were least frequently perceived to have the greatest utility.

Potential Impact: Medical ethics training has greater perceived utility in preparing students to manage clinical ethical issues when it is longitudinally integrated and includes group discussions of clinical cases that reinforce material from lectures or readings. Improving teaching modalities in ethics curricula can enhance ethical knowledge and reasoning skills.

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1. Carrese JA, Malek J, Watson K, et al. The Essential Role of Medical Ethics Education in Achieving Professionalism: The Romanell Report. Acad Med. 2015;90(6).

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Making Medicine Equal: A Student-Run Health Inequities Conference at UC San Diego School of Medicine

Agahan, Yasmin; Prabhu, Sandeep; Stone, Jordan

UC San Diego School of Medicine

Idea/Problem Statement:
A student-run conference designed to promote collaboration and create advocacy among health professionals to tackle a spectrum of health inequities.

Rationale/Need:
As the fount of medical knowledge continues to expand, so, too, do the demands of educating California's health care workforce of the future. Achieving appropriate depth often requires a narrowing of the curricular aperture to emphasize the physiological principles, technical expertise, and professional skill sets required to succeed with patients at the point of care. In the process, we give short shrift to the highly complex but nonetheless critical set of forces besetting California patients around the point of care—those that give rise to disparities in access to and utilization of health care services.

To be sure, there are opportunities for students to receive a structured education in health disparities. University of California's Program in Medical Education (PRIME) is one such opportunity that enriches the education of a subset of medical students with a concurrent curriculum throughout medical school, plus a 5th year masters degree, to prepare them in caring for California's underserved. There are routes, too, for the broader medical student body to engage with inequities in our health system; the UCSD Student-Run Free Clinic Project, for example, supports over 100 first and second-year students every quarter in providing health care to the uninsured

To build upon and unify efforts taking root across the state, we, the student body of the UCSD School of Medicine, are hosting an interdisciplinary conference, Making Medicine Equal (MME), on October 24, 2015.

Methods:
Mission: Making Medicine Equal (MME) is a regional conference designed to spark conversations, promote collaboration among health professionals, and create the advocacy necessary to tackle a spectrum of health inequities for our current and future patients. The conference will equip health professionals with actionable tools to implement change in their training and careers.

Content: The conference, taking place on October 24, 2015, convenes over 250 clinicians-in-training and health care scholars from around the state to attend workshops designed and run by expert clinicians and researchers in the manifold subcategories within health disparities In addition to a keynote and closing speech, conference attendees select 3 workshops of their choice to attend across the day, with subjects ranging from acting upon the social determinants of health to LGBTQ care delivery. Distinct from lecture series and one-way didactics, these workshops are intended to supply attendees with an interactive learning environment within which to absorb, contemplate, and practice the skills required to address health disparities in practice. Workshop leaders (clinicians and health scholars) were selected with this purpose in mind.

Logistics: The conference will take place at the UC San Diego School of Medicine on October 24, 2015. The conference is free for all attendees, including all workshops and materials, along with breakfast, lunch, post-conference refreshments.

Evaluation Plan:
To assess the impact of the MME conference, we will administer a pre- and post-conference survey to attendees to gauge successes of the program as well as areas for future improvement.

The attendee survey will assess the following outcomes:

- Health care disparities knowledge before and after attending the conference
- Intention to engage in health care disparities and public health work before and after attending the conference
- How well equipped participants feel to take action, through research, advocacy, or other means, as a result of the conference
- Intention to attend a second iteration of the conference the following year
- Open ended section for comments on the strengths and areas of improvement of the conference

We will also collect evaluations for each workshop. We would be delighted to share the survey template in full if desired. Outcomes will be reported in a broader conference summary to be distributed to all attendees and supporters.

Potential Impact/Lessons Learned:
Beyond supplementing didactic and clinical training with powerful workshops, MME empowers rising clinicians to organize and execute a regional conference of their own. We anticipate institutions nation-wide will organize similar conferences, convening in

References:
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A Bridge to Safety: Creating a Curriculum to Improve Outpatient Safety

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Idea/Problem Statement:
Create a curriculum for residents to critically analyze safety events in the outpatient setting using a process successful in aviation.

Rationale/Need:
Medical patient safety has been the subject of much research and discussion in the last few years. "While patient safety events may not be completely eliminated [through monitoring and intervention programs], harm to patients can be reduced and the goal is always zero harm."1 A meta-analysis published by the Boston Medical Journal of Quality and Safety estimates that 12 million adults are affected by outpatient diagnostic medical errors annually 2. We performed a needs assessment and found that our residency does not provide a method to address safety events. An initial safety attitudes questionnaire showed residents and faculty graded the clinic safety climate at 72%, or just above neutral. 3 With our goal of zero harm to patients and the high prevalence of medical errors outside of the hospital, we are creating a curriculum to encourage residents to more critically analyze safety events in the outpatient setting.

Methods:
We will utilize the Threat and Error Management (TEM) conceptual framework to understand the relationship between safety and performance. TEM has been successfully used in the airline industry. It promotes a proactive philosophy and provides techniques to maximize safety margins despite complex decision making.

The focus of the program will be six PGY-1 family medicine residents. They will keep self-reflective journals of recent medical errors which will be submitted to the facilitators one week in advance of the sessions. The facilitators will select specific events from these journals to discuss. The sessions will be one 30-minute afternoon per month throughout the academic year where all available residents and rotating medical students are invited to participate. They will be held on-sight within the FM residency program offices.

During each session the learners will be divided into small groups. Each group will have 10 minutes to discuss the event and then have 5 minutes to present to the room using the TEM model.

By the end of the year-long curriculum, learners should be better able to:

1. Apply TEM to understand the importance of examining near misses for potential process improvements
2. Improve situational awareness and self-modifying behaviors within outpatient clinical practice /

Evaluation Plan:
Study participants will fill out pre/mid/post surveys on safety attitudes and level of safety in the practice environment. We will perform a contextual analysis to measure the change, if any, over time for each of them. We will send an anonymous online questionnaire after each session to all those present to gauge reactions. We will collect comments during group discussions so that we can analyze knowledge gains and assess efficacy of the curriculum. Finally we will have the nursing staff record the errors they have to address throughout the day to see if that rate drops during the year.

Potential Impact/Lessons Learned:
If successful, this model could be taught at the UME level, with impact at GME and CME levels, ultimately decreasing medical error rate.

References:
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Improving the Breast Cancer Screening Rate in a Family Medicine Residency Program Outpatient Office

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Mercy St. Vincent Medical Center

Idea/Problem Statement:
Resident-initiated quality improvement project to improve breast cancer screening rates in our Family Medicine Residency Program outpatient office

Rationale/Need:
The August 2015 screening rate for our FM office was 40% with an institutional target goal of 90%. Screening components include documentation of education and completion of self-breast exam and mammogram per recommended guidelines. Our goal is to increase the percentage of patients ages 40-80 at average risk who successfully complete mammography screening. reducing morbidity and mortality rates associated with breast cancer.

Methods:
Our initial QI interventions include

1.) An intensive educational program for all staff members and
2.) A redesign of our office patient encounter system including all team members. When a female patient of 40-80 years of age checks in for her routine appointment, the front desk will provide her with an educational brochure about mammograms. In the examination room, the nurse will go through the patient's health maintenance and inquire and documented if she had her yearly mammogram and if not, what barriers prevented her from doing so. A mammogram order would be generated and pended for the resident to sign. The resident discuss with the patient the importance of routine breast cancer screening, and provide education on how to perform a self-breast examination and what to do if they suspect any abnormality. If the purpose of the visit is a well-woman exam, all females will receive a clinical breast examination.

Evaluation Plan:
All data will be documented in an Excel spreadsheet. Baseline data and the results of any interventions will be re-evaluated in 3 month cycles. Primary method of follow-up will be QI tracking of identified patients using an investigator-developed tracking tool.

1. How often ordered mammograms are actually completed
2. How often mammograms were not offered/ordered for women meeting the inclusion criteria with no documentation why it was not done.
3. Clinical office staff will assist patients in scheduling an appointment and/or follow up with the patient to ensure a mammogram was scheduled IF this was not done, the team will track.
4. Mercy Women's Care Centers send their own letters to patients and contact them directly to return if there are any abnormalities. This may vary if they go outside the Mercy system. We will track number of normal and abnormal results. 5. Routine yearly screening for those with a negative exam will be continued.

Potential Impact/Lessons Learned:
Breast cancer is the most common female cancer in the United States. By improving breast cancer screening rates, there is hope to promote early discovery of the disease in the treatable stages and therefore reduce the morbidity and mortality rates.

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2. Knutson D, Steiner E. Screening for breast cancer: current recommendations and future directions. Am Fam Physician. 2007 Jun 1;75(11):1660-1666

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Multidisciplinary Development and Utilization of a Standardized NICU Handoff Process

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Idea/Problem Statement:
Enhancing handoff skills for neonatology fellows and nurse practitioners through joint development of a standardized NICU handoff procedure.

Rationale/Need:
The 2003 ACGME restrictions in duty hours for resident and fellow trainees resulted in an increased number of patient handoffs, which interrupts the continuity in patient care. This has led to more medical errors and adverse patient events due to miscommunications including lack of transfer of important information or the transfer of erroneous information (1). Due to the risks in patient safety as a result of poor quality handoffs, the Joint Commission and the ACGME have mandated that training programs develop a standardized approach to structuring, teaching, and evaluating patient handoffs (2). The sickest patients have been shown to be at higher risk for error, and the NICU (neonatal intensive care unit) setting is particularly prone to more handoff errors due to the larger volume and high complexity of patients (3). Currently there is no curriculum for neonatal-perinatal fellows in the process of patient handoffs and no standardized subspecialty-specific handoff process utilized in the NICU at our institution.

Methods:
The participants will be neonatology fellows (n=9) and neonatal nurse practitioners (NNPs), (n=10). The intervention has three phases: 1) needs assessment; 2) education and development of NICU-specific handoff procedure; 3) pilot testing and evaluation of the new procedure. In phase one fellows and NNPs will complete a questionnaire to evaluate current knowledge about patient handoffs, prior education on handoffs, any previous usage of standard handoff methods (e.g. SBAR, I-PASS, SIGNOUT?), and their personal experience with miscommunications in handoffs in the NICU. These data will be used to refine the next stages. In phase two, educational sessions will be developed to: a) share the results of the survey, b) discuss the varying standardized methods available and the research on their efficacy, c) select or develop the NICU-specific handoff procedure and c) practice using the selected process through role-playing fellow-to-fellow, fellow- to-NNP, NNP-to-fellow, and NNP-to-NNP handoffs. Prior to phase three, an observational rating form to assess handoffs with the process will be developed and pocket cards with the new procedure will be distributed to all fellows and NNPs as reminders. During phase three, direct observation of handoffs and evaluation of the procedure will be conducted.

Evaluation Plan:
The evaluation of the intervention will include the following: 1) monitoring participation of the 19 fellows and NNPs in the phases one and two; 2) assessment of the usefulness of the education sessions in phase two by all participants using a standard session evaluation form; 3) direct observation of workplace handovers (at least one per participant) using a standard rating form to assess skill in usage of the form; 4) follow-up assessment by the participants of the new procedure after 2 months of pilot testing. This would be done with a combination of questionnaire and focus group discussion.

Potential Impact/Lessons Learned:
The introduction of a curriculum for neonatology fellows and NNPs in patient handoffs could provide a model for interdisciplinary work to reduce communication errors and enhance patient safety.

References:
1. Kitch BT, Cooper JB, Zapol WM, et al. Handoffs causing patient harm: a survey of medical and surgical house staff. Jt Comm J Qual Patient Saf. 2008; 34(10):563-570.

2. ACGME Common Program Requirements Currently in Effect: https://www.acgme.org/acgmeweb/Portals/0/PFAssets/ProgramRequirements/CPRs_07012015.pdf

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Improving Safe-Prescribing Pain Medication Practices in Residency Training

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White Memorial Medical Center Family Medicine Residency Program

Idea/Problem Statement: Enhance Family Health Center provider's prescribing practices of controlled substances to chronic pain patients through a multi-step intervention.

Rationale/Need: Opioid medications are over-prescribed in the U.S. leading to overdoses and addiction. The number of prescription painkillers prescribed and sold in the U.S. has nearly quadrupled since 1999 (1), yet there has not been an overall change in the amount of pain that Americans report (2,3). For providers, barriers to adequate chronic pain care include lack of decision support, overburdened primary care providers, and negative attitudes toward chronic pain patients. (4) Residents and providers in our program see the need for a cultural and structural change to how we care for our chronic pain patients. The state of California has instituted a Controlled Substance Utilization and Review Evaluation System (CURES), which is a state-run electronic database that tracks controlled substance prescriptions. Our intent is to implement guidelines for safe opiate prescribing specific to our family medicine clinic including tracking of prescriptions.

Methods: This intervention will focus the 21 family medicine providers and chronic pain patients in the Family Medicine Center and take place September 2015 through June 2016. The intervention will include: 1) creating a clinic safe prescribing policy and guidelines based on state and federal recommendations; 2) Implementation of clinic safe prescribing guidelines; 3) cased based classroom sessions to practice implementing guidelines using example cases and to allow providers to ask questions and concerns; 4) have attendings and residents agree to follow and teach safe prescribing guidelines by signing an agreement; 5) having 80% of licensed providers register for CURES and by tracking utilization of CURES before and after providers have received instruction. 6) track the number of calls for (opiate, benzodiazepines, controlled substance) refills and urgent care visits for pain medications by our chronic pain patients before and after the implementation of the guidelines.

Evaluation Plan: To encourage usage and understanding of current guidelines the proposed interventions will evaluate the residents' knowledge and approach to safe prescribing behaviors by creating a pain clinic within the Family Health Center. The pain clinic is intended to serve as a practice-based environment in which the resident will precept with a medical and behavioral science attending to enhance learning and practice integrative type care. This will also allow the learners to have immediate exposure and practice in incorporating the proposed guidelines to help manage chronic pain conditions. To evaluate the learners level of comfort and confidence in managing safe prescribing practices, the residents will be asked to fill out a self-evaluation/assessment before, during, and at the end of their experience. Additionally, changes in resident behaviors will be tracked by measuring the use of CURES and evaluate the number of urine drug screens by conducting random chart reviews.

Potential Impact/Lessons Learned: By facilitating the patient/provider alliance through implementation of safe prescribing guidelines, we hope to enhance the quality of treatment, decrease morbidity and mortality for patients who suffer from chronic pain and hope that other residency programs can use our model to create similar programs

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Increasing Routine HIV Screening in the Primary Care Setting

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Idea/Problem Statement:
Despite clear benefits in performing routine screenings for HIV, screening rates remain low without any discernible trend toward improvement.

Rationale/Need:
In September 2006, the CDC published recommendations for routine HIV screening in the healthcare setting. The Revised Recommendations for HIV Testing of Adults, Adolescents, and Pregnant Women in Health-Care Settings (Morbidity and Mortality Weekly Report, 2006), outlines HIV screening be a part of routine clinical care in all health-care settings. Yet it appears many institutions have yet to implement routine HIV screening as part of general health maintenance strategies.

Despite the hesitancy, we see that HIV infection meets all generally accepted criteria to justify screening: 1) HIV infection is a serious health disorder that can be diagnosed before symptoms develop; 2) HIV can be detected by reliable, inexpensive, and noninvasive screening tests; 3) infected patients have years of life to gain if treatment is initiated early, before symptoms develop; and 4) the costs of screening are reasonable in relation to the anticipated benefits.

Thus, the CDC moved from a targeted testing approach, where testing was done based on identified risk behaviors, to a more open approach, where testing is offered as part of a routine health screening. This move has been aimed to reduce the stigma associated with risk-based testing, as well as identifying substantial numbers of persons with HIV that do not perceive themselves to be at risk or may not disclose their risks upon initial evaluation.

Methods:
In this study, we strive to improve routine HIV screening rates in the primary care setting by implementing interventions aimed at encouraging providers to perform these screenings during routine physical exams. Currently, there are no formal protocols in regard to routine HIV screenings at Family Care Specialist (FCS) Clinics. Baseline data suggests that FCS Clinics are underwhelmingly executing routine HIV screening, performing well below goals set out by Healthy People 2020.

The proposed intervention will include a formalized protocol be introduced at the clinic site of FCS Clinic, Suite 230. The formalized protocol will be implemented through multi-pronged communication efforts, including written and verbal instructions, as well as quarterly feedback sessions, to enhance and improve rates for routine HIV screening done at FCS Suite 230.

The formalized protocol will be in alignment with both CDC recommendations, as well as USPSTF recommendations: all patients aged 15-65 without significant risk factors for HIV should be screened for HIV at least once in their lifetime, and annually if considered high risk (i.e. active injection drug abuse, MSM). Thus all patients aged 15-65 presenting to clinic for a routine physical exam will undergo HIV screening, unless documented otherwise (i.e. already had HIV screening done in the past, refused, etc.).

Evaluation Plan:
Efficacy of intervention will be assessed on a quarterly basis. Patients with demographics noted above will be retrospectively identified through electronic medical records and appraised for whether or not routine HIV screening was performed. Documentation for reasons why routine HIV screening was not performed on that particular visit (i.e. already done, refused, etc.) will be considered.

Thus, routine HIV screening rates will be calculated by: # of patients screened for HIV during their physical exam visits # of patients presenting to clinic for routine physical exams

Note: “# of patients screened for HIV during their physical exam visits”, will include those patients with HIV screening tests ordered during that particular visit, as well as those patients with HIV screening tests already performed and documented as such.

Potential Impact/Lessons Learned:
After improvements are made in routine HIV screening rates, plans will be made to scale up the intervention to involve other clinic sites, and eventually expand routine HIV screening to White Memorial Medical Center as a whole; with the ultimate goal of f

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The Impact of Prompted Clinical Journaling at the Intern Level to Address PBLI and SBP Milestones

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Idea/Problem Statement: Regular prompted clinical journaling could be used to address PBLI and SBP milestones at the intern level.

Rationale/Need: Residency programs must establish educational interventions and curricula that provide opportunities for residents to meet the ACGME Milestones. A recent review of the literature contains few suggestions of curricula specifically for interns in addressing the Practice Based Learning and Improvement (PBLI) and Systems-Based Practice (SBP) competencies. Thus, a non-traditional approach to PBLI and SBP curriculum for interns may offer a suitable alternative to current themes in graduate medical education.

Methods: Following a needs assessment, a prompted clinical journaling program was introduced to one program's anesthesiology interns. Each week, the eight interns received a topic related to quality improvement, systems-based practice, safety, or patient care, and they were required to submit their observations and reflections via journaling. The residency program director and co-chair of the departmental QI/QA program guided follow-up sharing and discussion about the journaling topics during scheduled intern academic time. Pre- and post-intervention, the interns' survey-rated perceptions about the intervention and their knowledge, attitudes, and behaviors were recorded. Family medicine interns at the same institution, without a structured PBLI and SBP curriculum, served as the control group of residents and were surveyed at the beginning and end of their intern year.

Evaluation Plan: Statistical analysis of survey data is currently in progress. The change in Likert scores will be compared between the intervention and control groups using a Chi-Square test. Test-retest reliability will be examined using Cronbach's alpha. A value of Cronbach's alpha > 0.70 will be interpreted as acceptable test-retest reliability.

Potential Impact/Lessons Learned: Prompted clinical journaling was an easy intervention to implement and a practical approach to introducing interns to concepts related to PBLI, SBP, quality and patient safety. The residents found the exercise to be engaging, educational, and to stimulatesystem and practice awareness along with opportunities for personal and system improvements.

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Quality Improvement Curriculum: Survey Assessment of Residents and Program Directors

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Kaiser Permanente San Diego Medical Center Emergency Medicine
Kaiser Permanente Southern California GME

Idea/Problem Statement: To evaluate the residency QI curriculum through survey assessment of experiences, perceptions, and recommendations of residents and program directors.

Rationale/Need: A strong emphasis on quality improvement (QI) training for residents is more critical than ever today. The 1999 Institute of Medicine's "To Err is Human" report raised awareness of the impact of medical errors in the US resulting in a national response to address patient safety. The expansions of federal and international organizations including Agency for Healthcare Research & Quality and the Institute of Healthcare Improvement have further facilitated the movement for promoting quality and patient safety.

As a result, the Accreditation Council for Graduate Medical Education (ACGME) and the American Osteopathic Association integrated systems-based practice and practice-based learning and improvement as two of the six core competencies in medical education. Participation in interdisciplinary QI and patient safety programs became part of ACGME Common Program requirements for all residency programs.

At Kaiser Permanente Southern California (KPSC), the QI curriculum varies by specialty and medical center resulting in inconsistent resident expectations, experiences, and ultimately learning of QI and patient safety. Our aim is to evaluate the current QI curriculum of KPSC's residency programs through online surveys that assess the experiences, perceptions and recommendations of residents and program directors.

Methods: The KPSC Graduate Medical Education consists of 18 residency programs in 12 specialties.

In this descriptive study, we will conduct cross-sectional online surveys of KPSC residents and program directors to assess the current curriculum, experiences, perceptions, and recommendations. The survey questions are adapted with permission from a published study that assessed the QI curriculum of pediatric residency programs nationwide.

Survey questions measure six domains: 1. Current QI Curriculum / 2. Resident Experience / 3. Resident Perception / 4. Resident Preferences / 5. Program Director Perception / 6. Program Director Preferences

We will randomly sample current residents based on a formal sample size calculation. We will conduct a census of all program directors to obtain comprehensive data on the current QI curriculum. We expect a 50% response rate for residents and an 80% response rate for program directors. Incentives in the form of $5 gift cards per survey completed and a lottery for a grand prize of $50 gift card will be provided.

Exclusion criteria include residents who are in fellowship programs and those who have already graduated from a residency program.

The expected study dates are December 2015 to November 2016.

Evaluation Plan: We will estimate percentages for categorical variables, and means for continuous variables to analyze: 1. Demographics of participating residents & program directors (e.g. specialty, geographic location, PGY status, previous experience in QI) / 2. Components of QI curriculum (e.g. dedicated didactic, Six Sigma Training, IHI certifications, QI evaluation tool) / 3. Summaries of Open-Ended Responses and Recommendations / 4. Resident reported QI activities (e.g. measured outcomes, made an AIM statement, used PDSA cycle, presented the project) / 5. Perceived attitudes towards QI curriculum (e.g. organization of the curriculum, preparedness, overall satisfaction) / 6. Perceived effectiveness of the QI curriculum (e.g. access to QI experts, exposure to hospital QI, administrative support, dedicated QI time)

We will also test for differences in perceived attitudes towards QI based on level of training (PGY 1-2 vs PGY 3-5) and specialty (Medical vs Surgical) using the chi-squared test.

Potential Impact/Lessons Learned: Potential implications include tailored QI curriculum to improve learning and experience for residents, an evaluation tool for QI projects to measure impact, and catalog of QI projects to cultivate collaboration and demonstrate value of residents. Results of the study will be shared with KPSC GME and also at national healthcare QI forums.

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Improving patient handovers using simulation training to reduce patient errors

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Idea/Problem Statement:
Improving patient handovers using simulation training for all residents to reduce patient errors at Saint Barnabas Medical Center.

Rationale/Need:
An unintended, however not unexpected result of the implementation of the duty restrictions from the Accreditation Committee for Graduate Medical Education (ACGME) has been an increase in the number of hand-offs or transitions of care1,2. Both frequent and poorly performed hand-offs are directly associated with poor patient outcomes e.g. longer lengths of stay, delays in diagnosis and intensive care unit readmissions3. In 2010 the ACGME mandated that structured hand-offs be a priority for sponsoring institutions. Despite this, there has been a lack of uniform consensus about the ideal structure for hands-offs across multiple specialties. In 2014 St Barnabas had a CLER visit with a comment on the lack of uniform system and lack of resident training on handovers. Training in hand-offs has been shown to lead to improved patient outcomes. The curriculum being proposed will use both classroom instruction and simulation training for all residents across all GME programs.

Methods:
The participants will ultimately include all 171 residents across 10 programs at St. Barnabas Medical Center in New Jersey including general surgery, internal medicine, obstetrics/gynecology, anesthesiology, neurosurgery and ENT surgery. The initial group will be the rising senior residents in all programs who will participate in May 2016 (n=50). The next group will be the incoming residents (n=35) to be trained at the end of June. Over the next six months a standard mechanism for conducting handovers for residents will be devised using input from the 10 GME programs and from nursing. The initial curriculum will be four hours in length and include interactive classroom instruction, simulation training and direct observation of learners. This will be followed up by direct observation of each learner in their home programs between July and October. These observations will use the same rating form used during training. The activities with residents will be accompanied by training for faculty to be held within the normal faculty meetings of each department.

Evaluation Plan:
The evaluation will have multiple components. First, we will track activities to ensure that all planned activities take place within the projected time. Learners will also be tracked to ensure that they have participated in all the activities. Learner reaction to the activities and to the use of a common handover system will be gathered using a) a standard rating form, b) a focus group of senior residents to be held in October 2016 to discuss the entire change to a standard handover procedure. Resident ability to use the handover process will be assessed during the training and their skill in using it in the clinical setting will be assessed with direct observation using a standardized rating form. Finally, we will be tracking the faculty and resident responses on the annual ACGME survey to note any changes form the 2015-16 surveys to the 2016 - 17 surveys on relevant items.

Potential Impact/Lessons Learned:
If our process of making the transition to a uniform handover system works it could provide a model for other community hospitals.

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Longitudinally-integrated Quality Improvement Curricula in a Family Medicine Residency

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Sioux Falls Family Medicine Residency Program and University of South Dakota Sanford School of Medicine / Sioux Falls Family Medicine Residency Program and University of South Dakota Sanford School of Medicine

Innovation Idea: ACGME requires a QI project; Family Medicine Resident interest and motivation for research, QI, and other scholarly activities can be suboptimal.

Rationale/Statement of Need: The Accreditation Committee for Graduate Medical Education mandates that Family Medicine Residents should complete two scholarly activities during their graduate educational program, one of which should be a quality improvement (QI) project. Resident interest and motivation in research and other scholarly activities can be suboptimal in the discipline of Family Medicine which has historically focused on application rather than discovery of medical knowledge. In our program, prior efforts at QI projects, while meeting "the letter of the law", did not encapsulate the intent; the projects were often viewed as merely hoops through which to jump rather than educationally valuable activities.

Methods: We have implemented a longitudinal curriculum at our 9-9-9 program which includes both didactic instruction and completion of a quality improvement project.

PGY1s receive formal instruction on topics such as QI in Practice, Research Design, Data Collection and Analysis, and Human Subjects Protection. By the end of their first year in residency they are expected to select, develop, and formally propose a QI project to an internal peer review committee. Following the Plan-Do-Study-Act cycle, residents' project may complete a single cycle, follow through multiple cycles, or address a single step as part an on-going, collaborative, long-term QI project.

During the PGY2 year the project is implemented by the resident, collecting and analyzing the data. This activity takes place integrated with their other activities on rotations throughout the year. Dedicated time for the QI project is not built into the residents' schedules, as our goal is to get them in the habit of participating in QI while immersed in a busy practice such as they will encounter once out of residency.

Early in the PGY3 year, residents are required to present a poster of their project and its outcomes in a local annual symposium. They are also encouraged that year to present their data at regional or national meetings and/or submit a manuscript with their findings to a peer reviewed journal, when appropriate.

Results: In the three years since implementation, the new curriculum has resulted in an increase in meaningful and academically rigorous QI projects, increased resident enthusiasm for QI and scholarship, abstracts at regional meetings by six residents, and the publication of a resident's QI project in a peer-reviewed journal. In addition, an interest in scholarly "output" beyond QI has developed and led to multiple peer-reviewed journal publications both by residents unrelated to their QI project, and articles written after graduates are in practice.

Potential Impact: A longitudinally-integrated QI curriculum has the potential to affect the culture within a Family Medicine Residency as it relates to both QI and scholarly activities.

Lemonade from Lemons: A Curriculum to Maximize Competency in Systems-Based Practice and Practice-Bas

Welniak, Tedd

Maimonides Medical Center

Idea/Problem Statement:
This innovation provides a template for institution of a supportive, ACGME competency-based morbidity and mortality conference curriculum.

Rationale/Need:
The use of M&M conference has long been ubiquitous as a quality improvement and educational tool in graduate medical education. Despite this, significant variability exists in regards to types of cases, presence (or absence) of error identification, presenter, and demographics of attendees of M&M conferences produced by EM training programs. At the time of this writing, only one standardized model has been suggested for use in EM M&M, and no standardized curricula have yet been proposed in the literature for EM M&M conference that directly assess achievement of core competencies/milestones in SBP and PBLI by the participant.

Methods:
PRIMER: A 90-minute interactive group didactic session will introduce learners to the principles behind the presentation of a successful M&M conference. After an introductory pre-class assessment, learners will discuss the purpose of M&M conference as a tool for improving resident education and overall quality of patient care. Teaching methods used will include the use of 1) Brainstorming, 2) Think-Pair-Share, 3) Facilitated Discussion, and 4) Formal Presentation. Learners will then be asked to perform a root-cause analysis (RCA) of a sample case, paying special attention to the identification of suboptimal outcomes, identification and organization of contributing factors/error, and opportunities for improvement. This will be followed by a 10-minute debriefing session to solidify understanding of the key principles. PREPARATION: Upon selection to present his/her case for M&M, the resident presenter will be asked to begin preparation for their case by filling out M&M Preparation Worksheet and Template. The presenter will review the case with a designated “M&M Faculty Mentor” in consultation with the primary attending provider involved in the case, if available. PRESENTATION: The resident will present the case and his/her analysis to the department during the first hour of regular weekly didactic. POST-PRESENTATION: A debriefing session between the presenter, mentor, and administrator/quality committee representative will immediately follow the M&M presentation.

Evaluation Plan:
Attitudes towards SBP, PBLI, and the M&M process will be assessed immediately before and after the initial “primer” session, after presentation of his/her individual M&M conference, and prior to graduation. Knowledge of key concepts of SBP and PBLI will be assessed at the same times. Perceived quality of the M&M presentations by the audience will be assessed from evaluations completed both retrospectively and prospectively to implementation of the curriculum. Composite assessments of residency achievement in SBP1 and PBLI milestones/competencies will be assessed prior to and after completion of the curriculum.

Potential Impact/Lessons Learned:
The curriculum proposed is designed for integration into the standard competency training in systems-based practice (SBP) and practice-based learning and improvement (PBLI) provided by an emergency medicine residency program. It supports thoughtful analy

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Enhancing care provided by family medicine residents for Latino patients with depression

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Idea/Problem Statement:
To enhance care provided by family medicine residents for Latino patients with symptoms of depression: overcoming barriers.

Rationale/Need:
Depression is one of the most common diagnoses encountered by primary care physicians (1). Currently at the family medicine clinic in Boyle Heights (an area of Los Angeles), patients frequently score ≥10 on a standardized screening test (PHQ-9), indicating at least minor depression or report multiple symptoms indicative of depression but are reluctant either to try an anti-depression medication or to go to therapy even when in-house free counseling if offered . This can lead to under-treatment of symptomatic patients, which can negatively impact management of other chronic diseases. (2) Residents have also reported that these barriers to can may impair provider-patient dynamic. Given that a patient's acceptance of a treatment regimen is crucial to efficacy, techniques including motivational interviewing and using a "Stages of Change" approach to treating depression may improve patient trust in providers and eventually lead to greater acceptance of care and enhance the patients' lives. Our goal is to educate Family Medicine residents on common barriers to treatment of depression in Latinos and to provide them with techniques for improving patients' acceptance of possible interventions.

Methods:
The intervention will focus on both the 21 family medicine residents in a community hospital and will take place over three months, November 2015 - February 2016. The intervention will include the following: 1) didactic session for residents that incorporates an initial overview of diagnosis of depression and interpretation of the PHQ-9 screening tool, and discussion of anti-depressants, and successful strategies for guiding care of Latinos with depression (citation). Motivational Interviewing techniques will be reviewed, with time for practice of specific techniques. This session will fall immediately after a series of board review lectures on mental health and motivational interviewing delivered by faculty and guest lecturers. 2) Implementation a patient/ physician worksheet to guide development of a joint plan to improve mental well-being in between doctor visits. 3) Solicit commitments from resident participants to try these tools with their patients with follow-up after six weeks to determine usage rates and barrier. 4) Sequential monitoring of patient PHQ-9 scores across time, medication/therapy acceptance, and medication/therapy compliance to track impact on patient outcomes.

Evaluation Plan:
Efficacy of the lecture for residents will be measured via a standardized lecture feedback survey. Resident usage of the MI intervention and patient/physician worksheet and barriers to its usage will be assessed using a survey monkey questionnaire administered 6 weeks into the intervention. The ultimate long term impact of this intervention would be assessed through tracking of the number of patients who have successfully been started on and remained adherent to an antidepressant medication (when deemed appropriate given the patient's symptomatology and PHQ-9 score) and/or to other forms of therapy. Patient PHQ-9 scores will also be assessed across time with a goal for reduction of individual scores by ≤10 (previously screening 10-14) or <14 (previously screening 15-19) or ≤20 (previously screening >20.

Potential Impact/Lessons Learned:
Implementation of this program will create a deeper understanding for residents of the challenges of treating depression in a Latino population and provide tools, which may facilitate treatment and enhance outcomes.

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Development of an educational handoff tool for use in the pediatric hospital learning environment

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Idea/Problem Statement: The quality of resident teaching is affected by wide variability in handoff information exchanged from one attending physician to another.

Rationale/Need: One of the core principles of effective teaching is being able to acquire knowledge about a learner's strengths and weaknesses in order to adjust teaching to meet the learner's needs. This can be particularly difficult in the clinical inpatient setting with frequently rotating attending physicians.(1) As a learning environment the clinical inpatient setting also offers the unique dynamic of requiring a balance between the two components of trainee autonomy and patient safety, which can lead to the changing attending physician greatly restricting autonomy in favor of the other when they are unsure of a trainee's abilities.(2) Attending physicians in the clinical inpatient setting often have no more than a week with a particular group of trainees and can spend the majority of that time gaining the knowledge required to feel confident that granting autonomy will not compromise patient safety. Many attending physicians have already recognized the need for an educational handoff to help balance this dynamic; however, there is wide variability in what handoff information is exchanged. Although the literature has already explored the effectiveness of using a clinical handoff tool to improve patient care, the use of a tool for educational handoffs to improve clinical teaching is as yet a relatively unexplored topic.

Methods: A tool was developed to help facilitate educational handoffs between attending physicians. The tool mirrors the pediatric milestones established for evaluation by the Accreditation Council for Graduate Medical Education,(3) but with revisions intended to make the tool useful in the specific setting of an inpatient resident physician team. The handoff domains utilized in the tool include Clinical Decision Making, Work in Interpersonal Teams, Interpersonal Communication with Patient/Family, Evidence-Based Medicine, Teaching, Rounding Efficiency, Supervision of Team, Trustworthiness, Insight and Ability to Accept and Incorporate Feedback. Domains have a scoring range from 0 to 6 with identified milestones for values of 0, 2, 4 and 6. A pilot study will be conducted to evaluate the effectiveness of this tool, which is intended for use by attending hospitalist physicians at Children's Hospital Los Angeles when handing off a resident physician team to another attending hospitalist physician. There are approximately 20 general pediatric hospitalist physicians at Children's Hospital Los Angeles who work with the resident teams and will be included in the pilot study. The tool would ideally be used by these attending physicians following several consecutive days of working with the same resident team in order to maximize its effectiveness and is meant to be used in identification of the strengths and weaknesses of the senior resident specifically.

Evaluation Plan: A baseline survey of participating attending physicians would be administered before use of the educational handoff to assess their perceptions about the current learning environment and their baseline teaching behaviors. Following implementation of the handoff tool a follow-up survey would be administered to assess perceptions of the attending physicians as to the usefulness and effectiveness of the tool, specifically with regards to whether or not it altered their teaching or improved their confidence working with and granting autonomy to trainees.

Potential Impact/Lessons Learned: Use of an educational handoff tool in the clinical inpatient setting has the potential to greatly improve two of the more difficult teaching hurdles presented by that learning environment, the lack of continuity for attending physicians with learners and

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Cultivating a Community of Budding Researchers with Online Discussion tools: From Lab and Lecture to

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Idea/Problem Statement: A blog model for online discussion board to simulate a scholarly discourse, increases rigor, improves writing quality, and a disposition for dissemina

Rational/Need: There is no limit to the literature extolling the virtues of scientific thinking that develop as a result of engaging in authentic research, but even graduate students may function passively to please an instructor rather than seek knowledge in order to enlighten the public. Their research projects may be a grueling experience with a disappointingly turgid result, with many relieved to survive the ordeal and firmly committed to avoiding any further investigations. By using a 'community of learners' model in an online blog environment, research concepts and skills are taught while simultaneously supporting a more rigorous inquiry and building confidence to participate in scholarly discourse. Several learning theories support this combination of techniques, conveniently integrated into Social Interdependence Theory which has been widely researched (Johnson & Johnson, 2005); Writers Workshop literature has clearly identified the advantages of different types of interactions throughout the writing process (Calkins, 2011), and the Institute of Medicine's 2013 policy summary specifically points to the need for better methods of learning for health workers to be more effective communicating as practitioners. Another component of this innovative approach is to extend the traditional assignment to four distinct products, each for different purposes: 1) a formal proposal, 2) a final report, 3) a colloquium presentation, and 4) an outreach product to be disseminated to the general public

Methods: This approach can be used in a content-specific research class or a generic one, undergraduate or graduate. This is a hybrid model, that is, meeting face to face in class at least weekly but then requiring more engagement on the class website. / First, define research in a social context and set course goals of communication. Conduct immediate interactive and engaging exercises in class and a community-building online assignment. / 1. Structure the blogs with a routine format, as directed in this 5 step protocol: / a) Prepare. Introduce the Blog focus. Discussion during class is a rehearsal for the thoughts shared on the blog. / b) Compose. Provide a checklist for each blog. Students draft their blogs in a Word document, incorporating reference to scholarly literature. There is no minimum length but it should only be long enough to address the necessary points. / c) Post. Set a routine target for posting, e.g. by 5PM Friday the week it is due. Set conventions, for example: Clearly label post with the Blog letter and title, last name in parentheses, e.g. [Blog A Rationale (Squarepants)]. Copy and paste text into the box. Set discussion board to allow no attachments. / d) Read & Comment. Structure response expectations to assure each student receives several, for example: By Tuesday, reply to the two people before and two after on the roster; By Wednesday, synthesize replies and be ready for discussion Thursday. Establish criteria for professionalism. / e) Reflect. After the discuss

Evaluation Plan: Formative assessment: Each blog is assessed for general writing proficiency, specific research skills, and community engagement, A formal research proposal undergoes a standard human subjects review protocol. / Three final products to demonstrate the research skills: 1) The Final Report, a formal scholarly paper prepared for publication; 2) A presentation of the findings in a scholarly colloquium, with a poster or PowerPoint; and 3) an 'outreach product' that highlights a focused discovery of interest to the general population. Rubrics are provided. / Self-Assessment is routinely experienced with reflective components infused in all assignments and performances, focused on the identified outcomes the event is intended to demonstrate. A rubric is provided. / Instructor evaluation and self-evaluation is focused on the students' engagement with the research process as well as the budding research community. Student end of quarter satisfaction is measured by survey.

Potential Impact/Lessons Learned: The "Community of Researchers" experience is more than a means to an academic end of mastering research methods. The students must also reflect on the experience itself and consider what it means to become a producer, rather than merely a consumer, of knowledge. The potential impact of using the "Community of Researchers" model is for its students to

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Residents as Teachers in the Pediatric ED: An innovative addition to the Pediatric Core Clerkship

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Idea/Problem Statement: A model of guided practice paired with direct observation and feedback to improve the clinical teaching skills of pediatric senior residents in the ED

Rationale/Need: ACGME and LCME require that residents receive training on how to teach as part of the core competencies. Most teaching done by pediatric residents occurs in inpatient settings, not in the pediatric emergency department (PED) where teaching must be targeted and succinct. While residents-as-teachers curricular interventions in the ED have been described in the Emergency Medicine literature, similar studies for pediatric residents in the PED are limited. This is particularly important as pediatric core clerkship students rotate through the PED to enhance their ambulatory experience. Introducing a model that improves pediatric senior residents' teaching in the fast-paced PED allows a unique opportunity to (1) develop their skills in teaching with limited time and (2) facilitate the incorporation of pediatric core clerkship students into the PED.

Methods: The intervention focuses on the pediatric senior residents who rotate through the Children's Hospital Los Angeles PED from November 2015-May 2016. Prior to rotating through the PED, each senior resident will receive an online tutorial on the One-Minute-Preceptor (OMP), an email describing their role as a preceptor in the PED, and a small laminated badge with the a list of the 5-microskills of the OMP. During this same period, third year pediatric clerkship students will be assigned 2 shifts, eight hours each, in the PED as part of the ambulatory portion of their core clerkship experience. Students will be pre-matched with 1-2 senior residents to act as their preceptors during their shift. Each resident, therefore, may be matched with 0-5 students during their month in the PED, based on scheduling overlap. While in the PED, students are asked to work with their resident preceptor to find appropriate acuity patients for their level of training, and then present directly to the resident preceptor. After appropriately reviewing the case, the senior resident will present the case to the attending, thus role-modeling for the student succinct presentation skills and higher level decision making. Twice per 8-hour shift, the attending will directly observe the senior resident teach the student, and provide formative feedback on the senior resident's teaching skills. A knowledge, attitudes, and practices framework was used. /

Evaluation Plan: The primary aim of the study is to evaluate the senior residents' skills teaching third year medical students in the PED setting. To measure this outcome, the PED faculty will complete a real-time formative evaluation based on direct observation of the residents' teaching. Additionally, participating residents will complete an anonymous self-reflection survey of their experience utilizing the OMP technique. The secondary outcome of the study addresses the feasibility of incorporating the third year pediatric clerkship students into the PED utilizing the residents-as-teachers model. For this, the students will receive an anonymous survey assessing their experience with the resident preceptorship in the PED, and the PED faculty will receive an anonymous survey assessing their perception of work flow and quality of patient care when utilizing this residents-as-teachers model. These valuation tools are in the process of being developed.

Potential Impact/Lessons Learned: This approach serves as a strategy for pediatric residency programs to develop resident teaching skills in a fast-paced ED setting.Our model can be adapted for use in other outpatient clinical settings where residents can further develop their ambulatory

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From Learner to Teacher: An educational skills workshop for first year residents

O'Neil, Amy

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Idea/Problem Statement:
Implementing a workshop for PGY1 residents to prepare them for clinical teaching using simulation, self-reflection and small group role-playing.

Rationale/Need:
As part of Practice-Based Learning and Improvement the ACGME expects residents to develop skills in the education of other physician learners, health professionals, patients and families. Residents report approximately 60% of learning comes from other residents; however, they often receive little if any education in how to effectively teach each other [1]. When residents do teach clinically, they can be ineffective if not appropriately trained [2]. At Hennepin County Medical Center (HCMC) we are developing a program, "From Student to Teacher", to incorporate education in clinical teaching.

Methods:
The four-hour workshop will be held in the HCMC Simulation Center with 82 PGY1 residents from all HCMC programs: emergency medicine, internal medicine, family medicine, pediatrics, surgery, podiatry, psychiatry, and transitional year. The workshop consists of a large group session and two breakout sessions. The large group session includes a self-reflection of what fears each learner has on becoming a teacher and characteristics of previous exceptional teachers. Learners will discuss their concerns and the characteristics they hope to emulate. Each student will take the VARK survey to identify different learning styles [3]. A large group discussion will review what educational techniques are available for each learning style. Break out sessions consist of small groups observing a clinical interaction, then practice giving feedback. Groups will review the key components of effective feedback. A second simulation session will be a medical student presenting a case to a resident and require the resident guide the student through the case. The case will be debriefed to identify what prior knowledge the learner has, how to develop a framework of understanding and how to help the learner reflect on his/her plan. Upon completion, learners should be able to: 1) list different approaches to clinical teaching and identify when each approach is best used 2) give constructive feedback 3) assess learners' frames of thinking and 4) help the learner self-reflect on performance.

Evaluation Plan:
A pre- and post-workshop survey will assess resident comfort in becoming a clinical educator. Resident knowledge of content will be assessed using a computer-based assessment. Resident behavior will be assessed using a retrospective pre-post survey of clinical teaching behaviors.

Potential Impact/Lessons Learned:
Resident physicians will spend the remainder of their careers teaching others. In order to effectively teach others, learners need a basic understanding of adult learning. If this program is successful, it could be used in other aca

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Pilot to Co-Piilot: Residents Coaching Interns on Day One, a Pilot Study

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Innovation Idea: What happens if upper level residents (not on the same rotation) volunteer to coach interns on their first day of internship?

Rationale/Statement of Need: Many industries provide one-on-one coaching for new employees during an initial probationary period of training. One example is a new sales associate who is learning how to use a cash register with an experienced cashier. Another example is a co-pilot who is intensively mentored in the cockpit by an experienced pilot. In medicine, one-on-one mentoring at the beginning of a rotation is often limited by the need to take care of sick patients or heavy clinic schedules and simultaneously provide coaching. Currently, most interns receive a hospital orientation during June, and a ward team or clinic orientation on the first day of their rotation. Some residencies conduct “boot camps” which consist primarily of skill-building exercises. There are limitations to these orientation sessions: 1) instruction may be separated in time from actual clinical events, affecting their relevance and as well as intern attentiveness; 2) instruction may be general rather than specifically tailored to clinical situations, reducing effectiveness; and 3) one-on-one coaching may be variable due to competing clinical responsibilities. In this project, ward teams and clinics were augmented by upper level residents on the first day of internship. The residents coached new interns in a set of competencies that included clinical, information technology, and management tasks.

Methods: The setting was a 225-bed US Army teaching hospital. New interns and upper level residents in a 36-person internal medicine residency program were invited to participate. Study participation was voluntary; coaching was provided to all interns. The project was approved by the institution as a quality improvement project.

The design was a pre/post survey. The intervention was one (or two)-on-one coaching sessions of common clinical tasks by upper level residents for interns on their first day of internship.

Upper level residents and the chief resident brainstormed common clinical tasks appropriate for PGY1 trainees, and 57 tasks were selected for inclusion based on consensus.

Interns were asked to complete a questionnaire regarding their self-confidence to perform the selected tasks. The residents coached the interns, and interns and residents completed a follow-up survey.

The survey asked, “How confident are you performing this task” using a 5-point Likert scale (1=no confidence, 3=reasonable confidence, 5=high confidence), and “How was this task coached?” (I did it, I watched it, I discussed it, not covered). Participants were also asked to evaluate whether they benefited from the project (1=not all, 2=a little, 3=neutral, 4=somewhat, 5=very much) and whether the project was worth their time (1=not all, 2=a little, 3=neutral, 4=somewhat, 5=very much). Results were analyzed using descriptive statistics and paired t-tests for dependent variables (GraphPad 2015).

Results: A convenience sample of interns and residents on accessible rotations was obtained, and 10 resident-intern pairs were studied.

The interns reported that they “did” 65% of the tasks, versus watching or discussing the tasks 20% of the time. Fifteen percent of the tasks were not done.

The tasks were grouped by Ward Rounds Tasks (4), Post-Rounds Tasks (10), Cross-Cover Tasks (5), Clinic Tasks (7), General Tasks (14), and Optional Tasks (17).

Self-Confidence Surveys: Average self-confidence scores improved significantly for each group of tasks:

Group of tasks, n, pre/post, mean change (95% CI) / Scale: 1=no confidence, 3=reasonable confidence, 5=high confidence

Pre-Rounds: n=10, pre/post=1.9/4.3, mean change=2.3 (1.7 to 2.9) / Ward Rounds: n=10, pre/post=2.6/4.1, mean change=1.4 (0.57 to 2.3) / Post-Rounds: n=10, pre/post=1.4/3.7, mean change=2.3 (1.6 to 2.9) / Cross-Cover: n=10, pre/post=1.6/4.1, mean change=2.5 (1.9 to 3.1) / Clinic: n=7, pre/post=1.3/3.5, mean change 2.1 (1.3 to 2.9) / Optional: n=7, pre/post=1.8/3.8, mean change=1.9 (1.2 to 2.6)

Value Surveys / Scale: 1=not at all, 5=very much

Four interns responded that they benefitted from the coaching (mean=3.75) and the time was well spent (3.25). Five residents responded that they benefitted from coaching (mean=4.0) and that the time was well spent (mean=4.0). Comments included included “it was fun”, “...had enough time to go over the basics”, and “interns had good feedback and appreciated the help.”

Potential Impact: “Personalized medicine” customizes healthcare to individual patients, and this project customized clinical education to individual interns. The project applied adult learning principles such as immediacy, teamwork, and deliberate practice with immediate feedback. Other opportunities for Pilot-to-Copilot coaching in residencies should be explored.

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What do different professional students learn from an interprofessional student-run clinic? A Focus

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Innovation Idea: Interprofessional learning within student-run clinics (SRCs) remains under-examined. We explored, compared and contrasted views from four professions.

Rationale/Statement of Need: The SRC is a volunteer activity operated by students under the guidance of faculty. SRCs offer clinical placements while providing services to the underserved. SRCs have proliferated in the USA. Half of accredited US medical schools reported over 110 clinics in 2007. Evidence for the benefits for interprofessional learning and for meeting accreditation requirements for interprofessional education (IPE) remains scarce and limited to survey studies. While attitude change about other professions and health systems have been shown to be among the educational outcomes, the questions of process of learning and whether learning differs across professions, have not been previously addressed. Focus groups permit open-ended questions, shared views and debate to elicit new ideas and responses from participants. Our goal was to identify what and how learning occurs in a SRC and to elicit commonalities and differences among four health professions. We explored whether SRC exposure changes attitudes about working with underserved patients and a career in in primary care. The study setting was an urban Los Angeles SRC serving diverse uninsured/underinsured patients. Each interprofessional care team consisted of one student coordinator, two preclinical medical students, two pharmacy students, one preclinical physician assistant (PA) student, one clinical medical/PA student, one occupational therapy (OT) student, overseen by one physician or PA, one pharmacist, and one OT faculty.

Methods: Focus group participants were first, second or third year students from four health professions: medicine, PA, pharmacy and OT, who had participated in at least two SRC half-day sessions in the prior two years. We used purposive sampling and snowballing for recruitment. We invited all eligible students to participate by email, and also asked student coordinators and leaders from each profession to recruit in person. We constructed a question guide with probes, using open-ended questions based on a literature review, to solicit opinions about interprofessional and health systems learning, patient care and future career preferences. Sessions were moderated by experienced faculty with no evaluative role among students. We audiotaped and transcribed sessions. Transcripts were independently coded by two faculty who constructed a code book to extract major themes. Coding disagreements were adjudicated by two additional faculty. We identified common major themes for medicine, PA, pharmacy and OT professions, as well as themes unique to each profession. We used grounded theory to apply our findings and generate a theoretical framework for how learning occurs among professions in an interprofessional SRC setting. We concurrently administered an exploratory two-question survey (5-point Likert scale response from 1=strongly disagree to 5=strongly agree) asking participants about likelihood of serving underserved patients and entering primary care in their future careers.

Results: Thirty-six students (27 female) representing the four professions participated in eight focus groups. Theme saturation was reached within two groups for each profession. Six common themes were: role recognition (one another, self, overlapping scope); team-based care (dynamics, communication, leadership, error prevention); positive patient experience (client satisfaction, holism, improved access); advocacy and systems-based care; personal clinical skills (knowledge application); and future career choices (openness to primary care and underserved settings). The traditional hierarchy of medical practice and medical dominance was acknowledged by all professions. OTs had unique themes of professional self-advocacy and integration into primary care. The themes of leadership and recognition of other professionals were unique to medicine. Themes reflect a potential positive impact on service to the underserved, and increased awareness of health policy issues. For the two survey questions, response rate was 100% (36/36). The self-rated mean pre- to post-SRC exposure score difference for the question on interest in working with underserved patients ranged from +0.1 (Pharmacy) to +0.8 (OT); the mean score difference for interest in working in primary care ranged from 0 or no change (PA) to +1.3 (OT). All differences were in the direction of more positive attitudes. The OT profession showed the greatest self-rated change in attitude (more positive) for both questions.

Potential Impact: Interprofessional SRC participation promotes learning ‘with, from and about’ each other, leadership and social responsibility. Students value holistic care and recognize power structures. Attitudes to serving the underserved and primary care remain robust. Future studies will explore value and impact of offering SRC opportunities to all students.

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Improvement in sports ultrasound skills with cadaveric labs and procedure clinics

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Idea/Problem Statement:
To improve ultrasound skill development of sports medicine fellows through implementation of cadaveric labs and procedure clinics.

Rationale/Need:
The American Medical Society of Sports Medicine has advocated that sports ultrasound be implemented into Sports Medicine fellowship curricula starting academic year 2016-2017. After review of 124 studies, Finoff et.al. (2010) concluded that sports ultrasound has been shown to improve accuracy, efficacy and cost-effectiveness of injections and procedural interventions (1). Our sports ultrasound curriculum currently includes monthly lectures, hands-on demonstrations and clinical mentoring. Studies in emergency medicine and anesthesiology training programs have shown improved ultrasound skills by practicing and learning ultrasound techniques on cadavers (2). In order to improve musculoskeletal ultrasound skills of sports medicine fellows our intention is to develop a cadaver lab and implement weekly interventional ultrasound clinics (2,3)

Methods:
The subjects for this pilot project are the two sports medicine fellows at Kaiser Los Angeles. Each fellow will participate in two, four-hour long cadaver labs as well as one procedure clinic per week. In these interventional ultrasound clinics, the fellow will have a concentrated opportunity to practice with feedback provided. The cadaver lab will include seven sports medicine fellows from 3 sports medicine programs (Kaiser Los Angeles, Kaiser Fontana, and UCLA-Harbor) who will participate in a four hour cadaver lab (a) learning introduction to ultrasound techniques, diagnostic shoulder and hip ultrasound, and ultrasound guided injections into the shoulder and the hip in August 2015, and (b) the wrist and ankle in March 2016. Since the sports medicine fellows will have hands-on practice time immediately after a focused lecture and demonstration, the hands-on practice session will provide immediate practice to allow learners to incorporate what is learned in the classroom. There will be two expert observers providing the feedback. The weekly procedure clinic will provide opportunity for the Kaiser Los Angeles fellows to see approximately 9 patients each week and be able to utilize, under supervision, all of the techniques taught in each of the workshops

Evaluation Plan:

1) assessment of learner reaction to each lab, the clinic, and all additional workplace practice opportunities using a standard rating form for activities;
2) comparison of number of procedure completed for each of the seven fellows;
3) questionnaire to examine fellow self-reported confidence in utilizing ultrasound; and
4) assessment of skill in ultrasound usage for diagnosis and guided injection through a brief clinical assessment conducted at the March 2016 lab.

The evaluation will include looking at each of the seven fellows as a case study. Since only the Kaiser Los Angeles fellows have the concentrated on the job practice each week in clinic, we will explore if their self-reported competence and expressed confidence on each skills is any different from the control group (other five fellows).

Potential Impact/Lessons Learned:
Sports ultrasound is a newly required skill within sports medicine and this pilot may provide a model that could be utilized by others in teaching diagnostic ultrasound, and other image-guided interventional procedures.

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Increasing Pediatric Resident Competency in Resuscitation Skills

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Idea/Problem Statement:
A resident-driven initiative to improve resuscitation skills through the design of a mock code program for senior pediatric residents.

Rationale/Need:
The ability to provide appropriate resuscitation to critically ill patients is an essential skill to be attained during pediatric residency. This skill consists of acquired medical knowledge as well as crisis resource management expertise (leadership, problem solving, situational awareness, resource utilization, and communication) (1). Opportunities for pediatric residents to practice resuscitation are limited, however, due to the infrequency of pediatric cardiopulmonary arrests (CPAs). This paucity of experience inevitably leads to decreased resident confidence in resuscitation skills (2), as well as decreased quality of patient care during resuscitations themselves (3).

Establishing a structured simulation-based pediatric mock code program for pediatric residents could accomplish multiple goals:

- Fulfillment of a residency competency
- Addressing a gap in both medical knowledge and crisis resource management skills
- Improvement in patient safety

Methods:
A needs assessment will incorporate a survey of pediatric residents that measures exposure to CPAs (both real and simulated), competence and confidence in serving as code captain, and desire to increase exposure to resuscitation simulation in the residency program. Using the results of the needs assessment and Kern's six-step approach to curriculum development, we plan to design a comprehensive experience for senior residents that addresses all aspects of pediatric resuscitation. The foundation for our curriculum will be the Pediatric Advanced Life Support (PALS) guidelines, cases based on CPAs reviewed in M&M sessions, a handbook for pediatric mock codes, and various debriefing guides. / The intervention will focus on second- and third-year pediatric residents and will take place over one year. Mock codes will be scheduled biweekly so that all senior residents have multiple opportunities to participate. We have targeted a step-down unit where medical staff would benefit from routine review and practice of resuscitation skills. Faculty consisting of hospitalists and pediatric intensivists will implement the curriculum.

We hope that by soliciting resident input and demonstrating high levels of interest to program leadership, we can improve attendance, enhance the learner experience, and instill a higher level of confidence with regards to resuscitations.

Evaluation Plan:
We will evaluate the effectiveness of the program along the following domains:

Satisfaction: participant evaluation of individual simulation sessions, faculty facilitators, and overall curriculum effectiveness
Learning: self-assessment and objective assessment of knowledge, crisis resource management and other resuscitation skills, attitudes, and confidence in content areas at the beginning and end of the program
Behavior: direct observation with checklist and immediate feedback of learners performing relevant predefined tasks in resuscitation simulation exercises to assess competency in principal domains
Results: patient outcome measures (time to chest compressions, recognition of life-threatening arrhythmia, etc) will be recorded prospectively and compared to historical performance benchmarks at our institution; anecdotal impressions from colleagues and ancillary staff of residents' performance in resuscitations after the year-long curriculum was implemented will be collected

Potential Impact/Lessons Learned:
Our re-design of the resuscitation curriculum has potential to improve resident knowledge, satisfaction, and ultimately patient outcomes. If successful, the curriculum could be replicated at other pediatric training programs.

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Improving Inter-Residency Transitions to Senior Roles: A Course for Emergency Medicine Residents

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Idea/Problem Statement:
The purpose of this study is to develop and implement an educational intervention to improve emergency medicine residents transitions to senior roles.

Rationale/Need:
Transitions in medical education can be very stressful and can contribute to physician burnout (1). Transition periods have been shown to be particularly dangerous times for patients, with increases in morbidity and mortality, across all specialties and in multiple different countries (2). Within emergency medicine (EM), the most challenging transition is that from junior to senior resident, when the resident takes on the role of team leader, responsible for the care provided by other residents as well as their own patient care. Additionally, they take on patients of a higher level of acuity. Poor resident performance related to the stress of transitions can be improved by a focused transition course, which could benefit residents, faculty and patients (3). This proposed intervention will attempt to facilitate the transition of EM residents from junior to senior resident roles. There is currently no transition curriculum at our institution for EM residents, and to our knowledge, there is no national standard for year to year transition education in EM residencies in the United States.

Methods:
The participants in this intervention will be 12 PGY2 residents in our 4 year EM program at Washington University in St Louis. The course will run in May through August over a period of 4 months, consisting of 3 phases. A needs assessment survey will be sent to hone the resident and faculty needs prior to the intervention. In phase 1, EM faculty will direct a 30 minute discussion session with the PGY2 residents, which will include a review of the residents' expectations and responsibilities in their new role. In phase 2, realistic multi-patient simulation sessions will be held in the emergency department (ED). Residents will take turns as team leader in a simulation run with critical simulated patients to mimic the actual care environment, and each resident will have a chance to go through several times to practice team leadership in a safe context, followed by extensive debriefing. The main objectives for the residents will be to assign team roles, delegate, follow critical care algorithms, demonstrate closed loop communication, determine appropriate patient dispositions and demonstrate respect for all team members and patients. Struggling residents can be identified prior to phase 2, and will have the opportunity to participate in additional sessions. In phase 3, faculty will be given notification of the residents' first senior shifts and provide focused supervision and directed feedback of the residents' performance.

Evaluation Plan:
Resident participation in each phase will be accounted for, including the number of times the attend the simulation sessions. They will complete a self assessment form on performance and confidence at the end of each simulation case. They will be able to express their reaction to the course in a post-simulation survey and a 2 month post-course follow up, after which time all of the PGY2 residents should have had a minimum of one senior ED shift. EM faculty will be surveyed 2 months after the intervention on their impressions of how the new PGY3 residents function on their initial shifts.

Potential Impact/Lessons Learned:
While there has been research on the transition to increased levels of responsibility as students become residents, to our knowledge there have been no studies addressing inter-residency transitions.

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The Use of Simulation to Improve Pediatric Critical Care Skills and Management

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Idea/Problem Statement:
Implementing a monthly simulation for residents caring for pediatric patients to develop pediatric critical care knowledge and skills.

Rationale/Need:
The early recognition of critical illness initiation of appropriate treatment without delay improves patient outcomes. Currently the ACGME requires residents to have two units of critical care experience. Previous surveys have found many residents have reported minimal experience caring for pediatric patients during a code or in critical condition. They also report feeling uncomfortable managing critical patients and have performed poorly in assessments of their knowledge base of critical care [1,2]. Prior studies have found increased resident satisfaction and improved procedural skills for residents who partake in simulation education [3]. This program will seek to improve pediatric critical care management and skills through monthly simulation sessions.

Methods:
The curriculum will consist of a monthly one-hour simulation for PGY 1-5 pediatric, family medicine and combined internal medicine/pediatrics residents rotating at Hennepin County Medical Center (HCMC) on a general pediatric or pediatric critical care rotation. Up to twenty residents will be present each month and will break into groups of no more than ten students for each simulation. The simulations will be held both in the HCMC simulation center and in situ in the critical care unit. Each simulation will focus on a chief complaint for each organ system and associated procedures including central line placement, intubation, and cardioversion. The simulations will be debriefed to discuss relevant pathophysiology, management and procedural skills.

Evaluation Plan:
At the end of the simulation, each resident will complete a retrospective pre and post survey to assess their level of comfort and behavior changes in the management of each chief complaint and procedure planned during the simulation.

Potential Impact/Lessons Learned:
Residents who care for pediatric patients need to have a foundation of knowledge for caring for patients with critical medical conditions. If this curriculum is successful, it may be implemented at other hospital sites to coordinate multiple simulations

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Multidisciplinary Training in Cardiac Surgery Using Advanced and Integrated Real Tissue Simulation

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Idea/Problem Statement:
Cardiac surgery training requires a multidisciplinary approach, historically performed in real-time situations with inadequate trainee preparation.

Rationale/Need:
Improved education and training are needed to adequately prepare residents, students and nurses for the skills that are necessary for the safe and successful conduct of cardiac surgery procedures. Historical training by the Halstedian "hands-on" approach, the current standard for resident education, does not provide the optimal environment for instruction and does not offer the time for deliberate practice to obtain expertise. In specialties that require highly refined technical abilities such as cardiac surgery, real-time training is a suboptimal approach, particularly for junior trainees. Proficiency must be established before a trainee should be allowed to perform real-time.

Simulation training is a proven method used to teach technical skills that require intense concentration and practice. The military and aviation industries have use simulation for decades as a foundation to the education and training of their personnel. Trainees in the specialty of cardiac surgery rarely experience simulation as a component of their training curricula. And the trainers used in the training programs consist primarily of basic or carve out models. High fidelity, comprehensive simulators that can replicate the true global operating room experience have not existed.

In recognition of this need, we developed a novel simulator that coalesces the key personnel involved in OHO and CPB.

Methods:
Using a porcine thoracic block, we created a beating, perfused heart model, integrated a cardiopulmonary bypass (CPB) simulator with a heart/lung perfusion machine, and developed a computer generated cardiovascular anesthesia module to establish a comprehensive cardiac surgery simulator. Most components of a cardiac surgery procedures can be replicated and can be practiced in conjunction with perfusion and anesthesia training. In addition, crisis scenarios, key surgical algorithms, and team training are taught in a safe, controlled environment where deliberate practice with immediate constructive feedback can occur.

Evaluation Plan:
We have successfully used this model that can be readily replicated for regular and consistent use. As experience with the simulator grows, an increasing number of clinical scenarios will be created using the proprietary simulation software that can be adapted to each situation. Programmed cases have been created, and we will continue to be generate scenarios that, importantly, can be immediately altered during each session to provide flexibility in training.

Cardiac surgery residents, cardiovascular anesthesia fellows, and perfusion students are the primary beneficiaries of this simulation program. But team training, to include all operating room personnel, is the ultimate goal.

We plan to increase exposure within our institution and will collect data to assess progress and proficiencies.

We plan to use our simulator during the early phases of trainees' experiences with the goal of compressing the learning curve to springboard a more productive real-time experience.

Potential Impact/Lessons Learned:
Such a model can be an impactful tool for all institutions where cardiac surgery is practiced and taught.

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A Cost-effective Realistic Interactive Cricothyrotomy Model: The CRIC Model

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Idea/Problem Statement:
The creation of an inexpensive, realistic, reusable bleeding cricothyrotomy simulation model that can be easily made at home.

Rationale/Need:
Emergency cricothyrotomy (cric) is a high risk, low frequency procedure that may mean the difference between life and death for some patients. It is a time critical procedure that does not afford the the luxury of looking up the steps prior to procedure. Owing to the rare opportunities in clinical practice to perform a cric, training residents and ensuring proficiency remains a significant challenge. Although the invention of new airway techniques, video laryngoscopy, fiber optics and the bougie have led to a decrease in the number of “can’t intubate, can’t ventilate” airways, it is estimated that approximately 0.5 to 2.5 per 10,0000 patient intubated in the Emergency Department will require a surgical airway.(1) Given the low number of surgical airways performed, nearly 50% of all EM residents will never see a cric during their training, and less than 25% will perform one.(2) For this reason many programs use simulation and task trainers to teach the cric. High-fidelity simulation models, and cadavers offer a realistic approach to the procedure, however they are expensive and do not replicate the bleeding encountered when performing a cric.(2) Many others have created simple, easy to make airway models for training in emergency cric.(2, 3) Our aim is to expand on existing models and to create a “Cost-effective Realistic Interactive Cricothyrotomy” (CRIC) Model, that is low cost, easy to make with readily available products, and recreates the reality the anatomy and bleeding.

Methods:
To make our CRIC Model we used readily available products from the hospital and online retailers. First a base was created, we used a Styrofoam wig model with a neck and carved out a tunnel in the anterior of the neck to place our trachea, however cardboard or wood are also great bases. A trachea was created out of approximately 18cm of ventilator tubing, a 1cm tall by 2cm wide hole was cut approximately 3.5cm from the top of the vent tubing, to simulate the area of the cricothyroid membrane. The cricoid and thyroid cartilage were created using a hot glue gun, and the full trachea is placed in the styrofoam head’s neck. Next we created “skin” using Smooth-On Dragon Skin, we mixed as directed and then poured into a home-made jig to create 2mm thick skin (this can also be done by pouring the material on to a cookie-sheet). 10cm by 10cm and 5cm by 5cm squares of skin were cut out. The 5cm squares were laid, centered, on top of the 10cm squares and then 3 sides of the 5cm squares were glued down onto the 10cm using “SIL poxy” glue. We inserted a small amount of polyfill stuffing into the pocket, and then injected about 3-4cc of theatrical blood into the pocket before sealing the fourth side shut with glue. After drying, the skin packs are placed, glued side down, so the blood pocket overlies the cricothyroid hole, the 5cm square acts as the cricothyroid membrane. The skin is attached around the mannequin neck using elastic clips, or stapled to the cardboard or wood.

Evaluation Plan:
We plan to evaluate our CRIC Model by holding a “Surgical Airway Simulation” course for the UCI Medical Students and Residents. During the course we will have 3 Cricothyrotomy Simulation modes available to test: Our CRIC Model, the traditional Cricothyrotomy Task Trainer Sim Man and an iPad App Based Cric Simulation available via Touch Surgery. We will include participants who have performed <5 Crics on patients, they will be given a short introduction on how and why a Cricothyrotomy is performed and then the participants will be able to perform the procedure on all available models. We will ask each participant to numerically score each model on a Likert scale. We will also compare the cost of each of these simulations, as well as the time it takes to create/purchase/set up each one. We will use the results of our Likert Scale, as well as the cost analysis to compare each in a non-inferiority model to see if there is a difference in cost, realism and learner preference.

Potential Impact/Lessons Learned:
Given the low number of emergency surgical airways performed it is important that medical professionals get adequate training on such procedures. Having low-cost simulations that teach cricothyrotomy is important to aid in this training. If effective our

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Supporting Ourselves: Peer Led Debriefing Sessions after Distressing Patient-Care Events

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Idea/Problem Statement:
An interactive workshop designed to improve pediatric residents' confidence with leading debriefing sessions after distressing clinical events.

Rationale/Need:
As a field of medicine, pediatrics is uniquely positioned to provide care for some of the most vulnerable members of society. Recognizing that while many illnesses can be cured or ameliorated while retaining a child's quality of life, clinical circumstances all too often arise in the care of children that go beyond the limits of modern medicine. The harsh reality for pediatric care providers is that not all children can be spared discomfort, disability, and even death through the care that they provide. When confronted with a distressing clinical event, pediatricians experience heavy emotional burdens, and often report feelings of failure (1, 2).

Despite this, and with the knowledge that these distressing events impact trainees' clinical experiences, most residency programs provide little in the way of preparation for distressing patient care events prior to their occurrence (3). Even the most robust of bereavement programs rely on scheduled group bereavement sessions, often many hours after the distressing event, during which to address care providers emotional reactions. A need exists in the quiet moments after a distressing patient care event- when trainees have a multitude of other clinical tasks and responsibilities to tend to and heavy emotional burdens to process. This interactive workshop is designed to educate pediatric resident trainees on the skills of leading debriefing sessions to provide immediate emotional and tangible peer support.

Methods:
This educational workshop will be open to attendance by all pediatric residents at the Children's Hospital Los Angeles, held Spring 2017, with follow-up data collection up to 12 months after the workshop. The workshop will be allotted 1 hour as part of the regularly scheduled resident educational curriculum.

The goals of this workshop are: 1- to educate pediatric resident trainees on the skills of leading bereavement sessions; 2- to empower trainees' to check-in on the distress experienced by a colleague 3- to recognize the need for both emotional and tangible support in times of care provider distress, and 4-to encourage referral to available resources for ongoing assistance, in a peer support model.

The workshop will include a large-group session where strategies for leading a debriefing session are discussed, followed by a small-group breakout session for residents to share their experiences with personal and professional distress in patient care, and opportunities to practice leading a small group through a series of hypothetical distressing patient care scenarios, with faculty and peer feedback. The workshop will incorporate audio-visual elements to simulate distressing events. Residents will have the opportunity to gain experiences with leading debriefing sessions in a safe, non-judgmental setting, with the hope that the skills learned from the session will translate into more consistent and frequent peer-led debriefing sessions by the pediatric residents.

Evaluation Plan:
Prior to the workshop, a needs assessment will be conducted of pediatric residents to quantify their level of experience with distressing patient events, and the frequency with which they have been involved in, or led themselves, a peer debriefing session. The needs assessment will also inquire as to the barriers and motivations that, respectively, limit and encourage residents to lead these sessions.

Pre and post surveys will be provided to the residents to rate their confidence level with leading a peer debriefing session and perceived educational value of the workshop, as well as updating prior experience data from the needs assessment. Feedback for the workshop structure will also be requested in the post-survey. A follow-up survey of all pediatric residents will be conducted 6-12 months post intervention, to quantify the frequency of peer-led debriefing sessions, evaluating for behavioral change in those residents who have attended the session.

Potential Impact/Lessons Learned:
This study will highlight the need for more robust training in peer-support surrounding distressing patient care events, and provide a model for pediatric resident peer-led debriefing training that may be implemented by other residency programs to better

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"Too busy to teach"- An innovative model to enhance teaching and learning

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Idea/Problem Statement:
Over the past decade, multiple factors have created barriers in the ability to effectively teach Year III Clerkship students in d

Rationale/Need:
While there is an expressed desire by clinical faculty to provide robust teaching experiences, the realities of meeting the needs of complex patients within the constraints of time and resources creates an almost prohibitive teaching milieu. Expectations for attending faculty to evaluate resident performance and residents to evaluate students becomes a daunting task amidst the rapid pace of patient care settings, and more so in areas such as the Emergency Department. The ACGME and LCME have clearly emphasized the importance of providing the learner with feedback that is timely and useful for improving performance and practice. Traditional teaching strategies are no longer effective, and the "see one, do one, teach one" method leaves significant gaps in observation, feedback, evaluation and proficiency. Constructing a resident as teacher- "triad for teaching" model allows the resident to gain the knowledge, skills and attitudes of being an effective educator, enables the student to have a direct and focused learning experience and provides the attending faculty the opportunities to evaluate and coach residents as they develop requisite professional competencies.

Methods:
This innovative teaching model was initiated in the Emergency Department at Children's Hospital Los Angeles by the Pediatric Core Clerkship Director. Prior to implementation, the clerkship director solicited the support of the residency program director and the ED faculty and leadership. Residents attended a didactic workshop that focused on clinical teaching and evaluation strategies. Additionally, attending faculty and fellows received coaching on delivering effective feedback. All faculty were apprised of ED related competencies that are part of the Year III Core Clerkship. Students were pre- assigned to residents and attending faculty also received the schedule prior to the beginning of the rotation. Students were assigned to the ED for 2 days. Key features of the pilot included the direct contact of students with patients, direct observation of student performance by the resident, and direct observation of resident teaching and feedback by attending faculty. Appropriate patients were identified by the resident for the student for the 10 minute encounter. Students then present their findings to the resident, including the chief complaint, 3-5 key history components and findings on the organ specific examination. Residents used the "1-minute preceptor" strategy. Residents completed their own patient history and physical examination. Finally, the resident presented the patient to ED attending or fellow while the student observed the resident (role modeling). Attendings rec

Evaluation Plan:
The initial implementation led to 3 primary outcomes:

1) students had direct, focused, patient contacts,
2) residents were able to listen and critique students' focused presentations and
3) attending faculty were able to evaluate the resident as teacher.

Students, residents and faculty were surveyed for feedback and comments. There were no reported concerns of a decrease in productivity or increase in patient "wait" time. There were positive comments related to increase in students' direct patient contact and resident teaching satisfaction. An evaluation tool is in the process of being formalized and will include quantitative and qualitative measures. The "Evaluation of Clerkship" and final wrap-up session may also assist in garnering additional information.

Potential Impact/Lessons Learned:
This model was recently initiated in a busy pediatric county-based continuity clinic setting with similar preliminary findings. While formal evaluation and analyses are being explored, the model holds promise in addressing the continuous evolution of cha

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Interactive Video Technology: A Creative Approach to Augmenting Clinical Anesthesia Education

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Idea/Problem Statement:
The development and use of interactive video can augment clinical education and ensure a more consistent delivery of course content.

Rationale/Need:
Teaching in the clinical setting presents the unique complexity of providing quality and safe medical care, maintaining efficiency, and incorporating meaningful education for learners. A consistent and predictable clinical experience in the operating room creates an additional challenge to medical student education. During a clinical anesthesiology course, learning opportunities are unpredictable and often depend upon patient factors (surgical procedure and underlying co-morbidities), individual faculty and resident teaching efforts, and degree of student initiative and engagement. Finally, teaching certain concepts or procedures such as induction of general anesthesia and endotracheal intubation is often more effective as a demonstration rather than in lecture format.

Recent evidence published in higher education literature supports the use of interactive and technology-enhanced approaches to promote active learning. Potential benefits of interactive video technology as a teaching method include consistent delivery of course content, fostering self-directed and self-paced learning, enhanced knowledge acquisition, and favorable learning experiences. During an anesthesiology course where medical students often have varying clinical experiences, interactive video instruction of key anesthesia concepts could ensure a more uniform learning opportunity.

Methods:
Using HapYak interactive video platform we are developing interactive videos of key anesthesia concepts. Example topics include intraoperative monitoring, induction of general anesthesia, and routine airway management. The interactive videos will be incorporated into the curriculum of medical student clinical anesthesiology courses. HapYak Interactive Video is a web-based video platform that consists an annotation editor, an annotation player, and a web portal. Each video is customized with quiz questions, synchronized text, hyperlinks to web-based resources, and image overlay. Videos created using HapYak can be embedded into web pages, placed in learning management systems, or accessed directly from the video's landing page. Our videos will be integrated into Vanderbilt University School of Medicine's VSTAR learning platform, allowing for consistent delivery of course material and flexible student learning. Another important feature is data capture from the learning platform. Data from answers to quiz questions and comprehensive engagement reports will facilitate analysis of student usage and teaching effectiveness. A demonstration of this interactive video technology will be made available to conference participants during the presentation session.

Evaluation Plan:
Student satisfaction and perception of their learning experience will be evaluated using a series of both closed and open-ended survey questions. Data capture from the learning management platform will allow for evaluation of student usage and engagement. Factors that can be directly measured include the number of times each video was played, the frequency of viewing and/or interactive with each annotation, and the number of correct and incorrect answers to quiz questions. After the interactive videos are formally incorporated into the course curriculum, a comparison of student performance on the end of course examination will be conducted.

Potential Impact/Lessons Learned:
Through the Society for Education in Anesthesiology, this project may be shared with other medical schools to promote clinical anesthesia education on a national level.

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Impact of an EHR template on resident care of patients with shoulder pathologies

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Idea/Problem Statement:
How will a brief intervention, including a new EHR template for shoulder pain, impact resident care of patients with shoulder pain?

Rationale/Need:
The direct and indirect economic burden in the US for musculoskeletal complaints is estimated at $874 billion in 20111. Musculoskeletal complaints represent a significant portion of complaints to a primary care physician, accounting for nearly 50% of visits. Shoulder pain is one of the most common musculoskeletal complaints with an estimated prevalence of 4-26% increasing as patients' age2. The shoulder represents one of the most complicated joints in the human body due to its impressive range of motion resulting in injuries and chronic conditions. Given the prevalence of this common pathology and its impact on patients and the overall community, it is crucial for primary care physicians to be well versed in diagnosis and management of common shoulder complaints. Unfortunately, musculoskeletal medicine is an underemphasized aspect of graduate medical education. A study assessing musculoskeletal competency in testing of non-orthopedic residents showed that 79% of residents failed the exam, with an average score of 50%3. It is very challenging to add new topics to an already dense educational curriculum. The advent of the electronic health record (EHR) provides a unique method to reach residents in primary care across all stages of their training. A pilot study at an internal medicine residency, which focused on a different topic (kidney disease), showed a significant improvement in early staging of chronic kidney disease leading to earlier interventions.3

Methods:
The participants are the 24 family medicine residents in a community based residency-training program. The objective of this new curricular element is to enhance resident diagnosis and management of patients with common shoulder pathologies utilizing an evidenced-based template integrated into the clinic's electronic health record. The intervention will begin with administration of a pre-test on common shoulder pathologies, diagnosis, and appropriate management. This will alert residents to key gaps in their knowledge. The next step is a formal teaching session to review the steps in an evidence-based history and physical exam, and discuss management and treatment options. Residents and faculty will then practice the conduct of an appropriate shoulder exam on each other. Following this the shoulder pain template for the EHR will be discussed. The template will then be integrated into the EHR to be used during any clinic visit having a complaint of "shoulder pain." The faculty preceptors will reinforce usage of the template during discussion of relevant cases. The goal is to integrate evidence-based care into resident practice for patients with shoulder pain.

Evaluation Plan:
1) Completion of all planned activities will be tracked to determine any issues with implementation.
2) To assess resident knowledge, a pre-test exam will be provided to all residents prior to implementation of the intervention. Resident skill in conducting the shoulder exam will be informally assessed by faculty in the training session.
3)The inclusion of the template into the clinic's EHR system will allow extraction of data on each patient encounter in which it is utilized. With each encounter, we will be able to evaluate the initial presentation, exam maneuvers used, and management decisions by the resident. Any follow up encounters will also be followed to ascertain trends in patient outcomes. Patient outcomes measured will be pain scores, medications used, physical therapy prescriptions, imaging, and referrals to specialists. 4)Following the nine-months, a follow up post-test exam will evaluate the knowledge level of residents in shoulder pathology, diagnosis, and management.

Potential Impact/Lessons Learned:
The integration of EHR into resident education could potentially improve competency in diagnosis and management of shoulder pathologies. Also, better recognition of appropriate interventions for patients could provide decreased costs and enhanced patient

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Effectiveness of Ultrasound Instruction in Ethiopia Using Podcasts,Study Guides and Hands on Session

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Innovation Idea: In July 2015, UC Irvine (UCI) School of Medicine students traveled to Wolaita, Soddo, Ethiopia to assess the short term efficacy of a 4•week introductory ultrasound course taught to medical students at Ottona Medical School.

RationaleStatement of Need: Ethiopia is one of the poorest countries in the world with very limited resources. Ultrasound technology is becoming a more useful diagnostic tool in developing countries because of it's portability, real-time diagnosis, and relatively cheap equipment. By teaching Ethiopian Medical Students, we hoped to provide a lasting impact so these students can better their communities.

Methods: The course was based on the UCI 1st year ultrasound (US) curriculum developed by John Chrisitan Fox and covered knobology, cardiac, pulmonary, abdominal, eFAST, pelvic, and MSK US. The course was taught in English, and included podcast lectures, study guides and hands-on training with 3 Sonosite Nanomaxx and 1 Sonosite EDGE US machines. Students were evaluated by written and practical examinations. 113 medical students participated in at least 1 session, but only 77 students completed the course by taking the pretest, all 7 quizzes and the final assessment, and were included int eh study. To assess prior knowledge of the material, the students took a pretest evaluation on Day 1 that consisted of 21 multiple choice questions and a practical portion that required them to obtain 6 different US views. The teaching sessions consisted of 2 parts: a recorded podcast viewing with associated study guide and a hands-on session with US machines. After each teaching session, students took a 5 question quiz on the material. At the ned of the course, a final assessment that was identical to the pretest was given to evaluate students knowledge and skills acquired from the course.

Results: The means for the written and practical pre•tests were 45% (SD=11.7%) and 12.9% (SD=6.9%), respectively. The means for the written and practical post•tests were 88% (SD=11.7%) and 74.5% (SD=17.9%), respectively. Using a paired t•test analysis, the results showed a statistically significant difference in the pre•test and post•test for both the written and practical portions (written: $p<.01$, practical: $p<.01$). Results were also compared to students self-assessment language proficiency, and a significantly significant difference was correlated with language ability and their scores in the final Written Exam but not the pretest ($p<.01$).

Potential Impact: These results suggest that the medical students in Ethiopia have successfully learned introductory ultrasound through the course taught by UCI medical students. The curriculum model of podcast lectures with study guides in addition to hands-on training can be implemented as an effective teaching method in a developing country with limited resources

References:

Inspiring the adoption and use of web-based communication between physicians.

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Idea/Problem Statement:
Web-based consultation services increase the quality of patient care by facilitating communication between Family Medicine Physicians and Specialists

Rationale/Need:
Web-based medical consultation is new technology that promises to facilitate physician-to-physician communication by reducing the delays in communication between Family Medicine physicians and specialists being consulted. However, adoption and utilization of web-based medical consultations by family medicine physicians should not be assumed. It is important to assess physicians' perceptions of web-based medical consultation. A safe learning environment where family medicine physicians are able to explore and discuss, as well as learn of, the benefits and potential risks involved with web-based medical consultation may increase its adoption, as well as enhance its usage. A training session is needed on web-based medical consultation services for family medicine physicians. This would address how to establish family medicine physician-to-physician specialists partnerships, patient privacy, and payment.

Methods:
The target participants are approximately 30 family medicine faculty and residents from a single training program. This is a single group pre-post test study designed to measure a change in knowledge, attitudes and intended behaviors of Family Medicine Physicians in the use of web-based consultation services from local medical specialists. Our intent is for residents and faculty to adopt the new technology in order to reduce consultation delays, optimize the coordination of care, and enhance communication between providers.2 The training will use multiple methods including 1) brainstorming of reasons to use (or not to use) a web-based consultation platform, 2) demonstration of a no-cost example platform, and 3) multiple practice opportunities. During the practice portion, each physician participant will submit two questions that they have had about care of a patient, and will receive real-time answers (within 30 minutes) to gain a sense of the benefits of usage and ease of usage (several consultants will be standing-by during the session to provide real time consultation). Following this exercise, the participants will be engaged in a debriefing of the experience and discussion of how, when and why to use web-based consultation platform. At that point they will have the opportunity to be guided through the registration process for usage of the platform.

Evaluation Plan:
Participants will rate the usefulness of the training session on a standard session evaluation form. A change in knowledge, attitudes and intended behaviors in physician participants will be assessed by responding to 13 items (questions) in the three domains (attitude, knowledge and intended behaviors) using a 5- point Likert scale. The tool was developed from a review of the literature. The pretest and posttest will be shown in the poster presentation. We will note the percent of participants who registered to use the tool, poll all participants one month after the training session to query them on the number of times they used the tool, and their satisfaction with results and any barriers to usage.

Potential Impact/Lessons Learned:
This workshop could be used a model for other primary care residencies or practices that want to increase the utilization of web-based consultations services.

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The Use of Google Glass as a Feedback Tool for Instructor Effectiveness

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Innovation Idea: The purpose of this study was to assess whether Google Glass recordings could be used as a reliable tool to identify weaknesses in teaching medical procedures such as intubation.

RationaleStatement of Need: Medical education is in constant need of revision and innovation in order to continue to engage future physicians most efficiently and effectively. Google Glass is an example of technology that allows for numerous advantages in medical education (recording of both audio and visual content).

Methods: Google Glass was worn by medical students who taught randomly assigned undergraduate students how to intubate using Laerdal Airway Management Trainers. All instructors received the same training on how to teach the intubation workshop. Google Glass video recordings were analyzed to determine whether questions and comments that arose during the hands-on teaching session were related to visualization of the airway, placement of the laryngoscope, placement of the endotracheal (ET) tube, or other devices. Instruction intervals, student attempts (successful and unsuccessful), instructor assists, and instructor demonstrations were also noted during each session.

Results: A total of 205 comments were collected from 15 encounters. Of these 205 comments, 68.57% (161 comments) were comments that related to visualizing the airway. The average rate of total comments per minute was 2.29 (± 1.11). The average rate of vision related comments per minute was 1.65 (± 0.66). The average number of minutes per intubation attempt was 2.24 (± 1.01).

Potential Impact: Glass was a tool that helped successfully identify that the most frequent questions and comments regarding teaching intubation were associated with airway visualization. Our findings suggest that Google Glass recordings can be useful not only for direct teaching but also to allow instructors to discover the problem areas in the teaching procedures.

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Assessment of Google Glass as an Adjunct to Neurosurgical Resident Education

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UC Irvine

Innovation Idea: Our purpose is to explore the uses of Google Glass ("Glass"), a novel wearable device, in Neurological Surgery at UC Irvine Medical Center. Although Glass has been employed in various acute, medical and surgical settings, evaluation of Glass in neurosurge

RationaleStatement of Need: From imaging tools to monitoring devices, technology within medicine is becoming increasingly ubiquitous. These devices have made it easier for healthcare delivery to improve patient care. With the advent of the internet, video conferencing, and now Glass, technology is proving to be useful in medical education as well. We assess the advantages and utility of using Glass in improving postoperative surgical review and augmenting medical education for resident physicians.

Methods: This prospective cross-sectional study was performed at UC Irvine Medical Center (UCIMC). Subjects are the patients of the Neurological Surgery physicians at UCIMC. Resident physicians received a pre-survey immediately following a surgery, but prior to the debrief using Glass. This survey assessed residents' level of comfort with the procedure, the utility of education given by their attending physicians, and their confidence in repeating the surgery. Residents and attending physicians then debriefed by reviewing Glass's video feed of the surgery. Attending physicians used the feed to discuss with the residents their surgical skills and communication, as well as to provide instructional feedback. Finally, a post-debrief survey was administered to residents that consisted of the same questions while also asking if they believed postoperative review using Glass was useful in improving their understanding and training.

Results: Six surveys were collected. The first three questions of the pre- and post-survey assess (1) the residents' comfort level with the procedure; (2) the utility of education given by their attending physicians; and (3) their comfort level in repeating the operation. The scale ranged from 1 to 5. The lower the score reflecting a higher level of comfort, utility of the device, and for repeat potential use. For the first three questions, the average pre- and post- survey scores were 1.33 and 1.25, respectively, with no statistically significant change in response score. The post- surveys consisted of an additional question assessing the residents' confidence that Glass debriefing aided with understanding and training. For the fourth question, the average post-survey score was 1, indicating residents felt that the postoperative Glass feed improved their understanding.

Potential Impact: Though useful, we found that Glass did not significantly improve neurosurgery residents' comfort level and quality of training. Additionally, the Glass technology bears some limitations that need improvement: the battery life is insufficient; image quality is inferior to comparable devices; non-sterile hands are required for recording.

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Assessment of an iPhone Otoscope in Medical Education

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UC Irvine

Innovation Idea: This project seeks to determine the utility of CellScope®, an iPhone-enabled otoscope, in the education and training of medical students, residents, and physician assistants (PAs). CellScope is an innovative tool that digitally improves optical clarity of

RationaleStatement of Need: CellScope allows the capture of HIPAA-compliant images of the tympanic membrane which may be subsequently reviewed with the attending physician. In this study, we compare the ease- of-use, fidelity, reproducibility, and utility of the CellScope compared to the traditional otoscope in teaching medical professionals and patients in a neurotrauma clinic. We also examine the efficacy of CellScope in assisting students and residents in making medical diagnoses. Finally, we describe the perspective of attending physicians in the Cellscope's ability to aid trainees. In particular, the CellScope's utility in a neurotrauma clinic was examined due to the possibility of ear-related symptoms following head trauma.

Methods: Medical students and residents were surveyed before and after using CellScope to assess their comfort and skill in completing an otological exam, as well as their opinion on the utility of CellScope in their medical training. We also examined the utility of CellScope in enhancing medical training from the standpoint of the attending physician.

Results: 18 medical professionals were surveyed before and after use of CellScope. Surveys indicated a 31% greater preference for the CellScope (versus the otoscope) for the purpose of visualizing the tympanic membrane. Second, individuals had a 38% greater preference for the CellScope for medical education. Third, surveys showed 25% greater preference for Cellscope in identifying abnormal pathology. In assessing the overall score, there was a 42% preference for CellScope. Medical students and residents exhibited a 19% higher preference for CellScope versus attending physicians and physician assistants. Physicians identified six ear-related abnormalities amongst 45 total patients using CellScope.

Potential Impact: Smartphone-enabled medical instruments have vast potential in continual technological refinement, accuracy of diagnosis, inter-professional collaboration, and remote implementation. All medical professionals in this study showed preference for implementation of CellScope within medical education.

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Activating well-being through a cognitive behavioral curriculum in family medicine residency.

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Idea/Problem Statement:
"Activating well-being" behaviors in family medicine residents through a wellness curriculum to improve mood, communication, and approach to health.

Rationale/Need:
Meta-analytic studies on wellness and burnout in family medicine residency programs have demonstrated great need for implementation of wellness curricula in residency training to help improve mood and psychosocial function. Research strongly supports implementation of a well-being program during the intern year when decreased sleep, feelings of isolation, and overall adjustment to their new experience can lead to increased incidence of depression and thoughts of death, especially during the first three months of training (1,2). / Data from a needs assessment conducted within our family medicine residency program demonstrate a perceived need for a curriculum addressing burnout, motivation, communication skills, and creation of a supportive educational environment. / To address the identified need and meet ACGME core competencies, we will implement a well-being program focusing on how residents think, feel, and behave already proven effective in similar programs/cohorts (3). Our goal is to increase understanding, engagement, and implementation of wellness. /

Methods:
PGY-1-3 Family Medicine residents (N = 21) will attend seven one-hour large-group sessions across the 2016-17 academic year on psychoeducation/experiential well-being, facilitated by behavioral science faculty. Residents will participate in on-site "Activating Well-Being" sessions, topics will include: resilience, perception/appraisal of well-being, mindfulness, burnout/depression, sleep hygiene, conflict resolution, giving/receiving feedback, motivation, and the advisor/advisee relationship. Session activities will include: journaling, videos, mindfulness/meditation, music/art, role plays, pair/group exercises, and processing discussions. / Learners will also develop an Individual Learning Plan (ILP) with accountability to their advisor to track progress in the areas of: self-reflection, goal setting, and goal achievement. / Approaches to well-being activation will include: mindfulness/meditation exercises, communication skills and creation of supportive communities. / By the end of the program, residents should be able to: 1. Develop a plan on how to achieve well-being and promote it in others; and 2. Explain how their well-being influences their approach to healthcare. /

Evaluation Plan:
Residents will complete surveys at the end of each session and at the end of the program to assess reaction in the areas of content, perceived quality of instruction, and relevance of activities to their practice. Residents' learning and behavior will be assessed through discussion of self-reflective journals, feedback from advisors, and progress on ILP goal. As a surrogate marker of program efficacy, residents will complete the Maslach Burnout Inventory (MBI) pre- and post-intervention.

Potential Impact/Lessons Learned:
Recognizing that physician wellness has a direct impact on patient care, we need to focus on healing the healer. It is essential that we help residents develop the capacity to engage in reflective practice, enhance coping, and activate their well-being.

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What's Next?- A professional transition curriculum for pediatric residents

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Idea/Problem Statement:
A professional transitions curriculum for pediatric residents to prepare them for all steps in the transition from residency to work or fellowship.

Rationale/Need:
From 2000 to 2012 the number of residents entering subspecialty training dramatically increased.1 These residents, as well as those entering general care, do not feel well prepared for the realities of practice.1 Literature has shown that these transitions in medical education are difficult times filled with stress and frustration.2 These stressors are both personal and professional and can lead to burnout, depression, and anger.3 When asked, former residents have endorsed feeling unsupported in their fellowship application process. In addition, they felt unprepared for the change in personal expectations, responsibility, and change in learning level inherent in transition from residency.

Methods:
This two-part program will be piloted in 2016-2017. The participants will include 30 PGY2 and PGY3 pediatric residents. Part 1 (3 sessions) prepares residents for 1) selecting a fellowship or job; and 2) for preparing a successful fellowship or job application. Residents would begin by exploring their own values, current network, and professional strengths and weaknesses. Residents would then develop a professional mission statement and build their actual personal statements, curriculum vitae, and outline for letters of recommendation as well as building skills required for a success interview process. This will be offered in December-January for PGY2 residents seeking fellowships and PGY3 residents seeking jobs. Part two (four sessions), held in March - May for all PGY3 residents will focus on the actual transition to fellowship or work. These sessions will focus on 1) the core issues of career management (self-knowledge, knowledge of own specialty and target institutions, selecting mentors, establishing or enhancing professional networks, career planning) and 2) issues of transition (expectations, roles, stress, conflict management, resilience and metacognitive skills). Teaching methods would all be interactive and focused on each resident's plan and needs.

Evaluation Plan:
A pre-intervention survey of the learners will be utilized to identify additional content for individual teaching sessions. For each session, feedback for formative evaluation of the program elements will be elicited using rating forms. Accountability will be further assessed by a summative program evaluation at the completion of each section of the course. Evaluation of learner reaction, attitudes, and impact on behavior will be longitudinal and will include 1) post-survey about usefulness of intervention; 2) follow-up with individual learners about fellowship and job placement; and 3) follow-up at six months after completion of residency, to explore experiences with transitions both individually and through focus group discussion.

Potential Impact/Lessons Learned:
It is our intention to make the materials available in one of the repositories like MedEd Portal for usage by leaders within pediatrics and any others in health professions interested in easing professional transitions.

References:
1. Pershing S, Fuchs V. Restructuring Medical Education to Meet Current and Future Health Care Needs. Acad Med. 2013;88(12):1798-1801.

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3. Blackmore C, Austin J, Lopushinsky S, Donnon T. Effects of Postgraduate Medical Education "Boot Camps" on Clinical Skills, Knowledge, and Confidence: A Meta-Analysis. J Grad Med Educ. 2014;6(4):643-652.

Modernizing the Medical Intern: A Framework.

Kaplan, Michael

Yale New Haven Hospital

Idea/Problem Statement:
How can we modify a traditional role, and the rounds that reinforce it, to minimize intern burnout, minimize redundancy, and improve patient care?

Rationale/Need:
The burden of intern year is significant. Inexperience is partly to blame, though the weight of inexperience is also too often compounded by sleep deprivation, lack of exercise, poor diet, and a gnawing sense of self-doubt. And despite the nation-wide implementation of work-hour restrictions, support systems, and wellness programs during this transition, intern year—for many—remains an unbearable source of strain. Many studies have validated this sentiment. A 2006 study demonstrated the “rate of burnout” over the course of intern year increased from 4.3 to 55.3%.

1 Several other studies have found increased rates of mood disturbance in interns (i.e., anger, depression, irritability), with the suicide rate of interns being twice that of residents.
2 I believe that we must carefully re-examine and redefine the role of the medical intern to maximize meaning and satisfaction. Strategic modification may also help minimize system inefficiency and improve patient care, if efforts are focused on mentorship and team-based collaboration with interns rather than intern performance. More specific direction for innovation should be driven by data. Preliminary data from our own institution (n = 75; PGY 1-3 surveyed) suggest that rounds may be an ideal process upon which to intervene. It is my hope that revisiting tradition could help usher in a cultural shift towards meaning, mentorship, and improved mental health.

Methods:
A more exhaustive survey regarding pre-rounds and rounds will be completed by our residency staff. Qualitative data will be gathered through interviews with key informants in our hospital system. IRB approval will then be attained to implement a new work-rounds structure on an internal medicine teaching service of Yale New Haven Hospital (30 beds) for a period of 4 academic blocks. Exact schedule details will be dependent on the data as above, though will generally appear as follows (*Ideally visually presented):

8AM: Attending rounds. Notes: Reward 93% of house-staff (pilot data) who enjoy the educational aspects of rounds. Start day with collaborative problem solving while getting sign-out from night-staff.

9AM-11AM: Team Rounds. Notes: Truncated pre-rounds (15-20 min vitals check at 7:40 AM). Team rounds focus on team-based collaboration with nurses, MAs, house-staff and senior faculty and involve computer-baed rounding and bedside discussion grounded in Smith's evidence-based patient centered interviewing. 3 Interns present events day prior, nurse presents overnight events, intern reads and interprets labs from the AM with guidance of resident, leads in formation of plan with guidance as wanted or needed. Bedside patient-centered interviewing could afford the opportunity for patients to express themselves and re-claim a sense of agency in the suffering process, while allowing house-staff to humanize their work.

Evaluation Plan:
Measures of depression and satisfaction will be measured in all house-staff at the initiation of the implementation and at its conclusion. Small, concrete aspects of the workday will be modified and re-implemented based on ongoing feedback (in accordance with the “Plan-Do-Study-Act” model). Scores will be compared to 4 comparison blocks where the standard workflow was in place.

Depression/Depressive symptoms will be measured using the validated CES-D questionnaire, and question 2i from the PRIME-MD survey asking about suicidal or homicidal ideation. There will also be a blank space for participants to share their personal thoughts.

Satisfaction Measures/A custom survey (1-5; 1 = Unhappy, 5 = Very Happy) will be created to specifically measure satisfaction with unique variables of the new workday for physicians, nurses and patients.

Efficiency/Daily Rounds will be measured from beginning to end. Number of re-admissions will also be measured.

Potential Impact/Lessons Learned:
Modernizing the role of the intern to be couched in a culture of mentorship and teamwork has the potential to improve satisfaction at work, minimize system redundancy and sincerely improve patient care.

References:
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2. Goebert, D. Thompson, D. Takeshita, J. et. al. 2009. Depressive Symptoms in Medical Students and Residents: A Multischool Study. Academic Medicine. 84(2)-236-241.

3. Fortin, AH. Dwamena, FH. Frankel, R. Smith, R. (2012). Smith's Patient Centered Interviewing: An Evidence-Based Method, Third Edition. McGraw-Hill.

Enhancing Patient Care: Integrative Medicine and Student Wellness in Medical School Curricular

Austin, Armaity Vaghaiwalla; Hagos, Manna

Keck School of Medicine of the University of Southern California

Idea/Problem Statement:
Expose medical students to CAM/IM modalities and wellness mediating behaviors to better serve increasing patient use of CAM/IM for their healthcare

Rationale/Need:
At least one third of Americans seek out CAM/IM for their well-being and healthcare [1]. Our goal is to better serve our patients and community in a holistic manner and become non-judgmental, compassionate, physician healers and for medical students to develop their own wellness behaviors and resilience. Educating future physicians to mitigate stress, emotional exhaustion and burnout by exposing medical students to various healing modalities in a clinical setting, assessing scientific evidence for CAM approaches and learning safety and effectiveness of various CAM/IM modalities[2].

Methods:
Four week elective initiated at KSOM of USC in December 2013 to expose medical students to various modalities of Integrative Medicine with the objective to assess scientific and historical evidence for allopathic and CAM approaches to specific diseases. Upon completing a wellness assessment, students develop self-care and wellness behaviors that they can incorporate into their lifestyle as residents and future physicians. Curriculum provides ample opportunities to facilitate students' behavior changes on stress reduction, nutrition, physical activity, sleep and social connections. Students are required to complete the on-line evidence-based curriculum on" Prevention and Wellness" from the University of Arizona Center for Integrative Medicine. In addition, medical students participate in experiential exposures to facilitate patient behavior changes through motivational interviewing and to learn about appropriate referrals to CAM practitioners. Moreover, these exposures foster collaboration with inter-professional health team members. Students rotate with USC and affiliate faculty as well as at clinical sites with local Integrative Medicine practitioners. Requirements include creating self-care goals, submitting weekly activity logs, and submitting reflections of experiential healing modalities.

Evaluation Plan:
The effectiveness and sustainability of the Integrative Medicine curriculum will be evaluated by student responses to the curriculum and faculty. In addition, we plan to survey the medical students as residents during their Intern Year in order to assess if wellness behaviors implemented during the Wellness/Integrative Medicine elective in senior year of medical school are sustained in residency. Demand for this optional IM elective exceeds capacity annually. Preliminary data review of 50 fourth year medical student participants from December 2013 to present utilizing a Likert Scale of 1 to 5 maximum yielded the following: Objectives were clear and achievable 4.75, Assigned activities/projects helped me develop knowledge/skills/ confidence needed to meet objectives 4.75., Overall rating of experience and willingness to recommend to other students 4.75. Some student comments were "phenomenal rotation" and "I developed healthier habits [..] which I hope to continue into residency".

Potential Impact/Lessons Learned:
Overall responses to the optional IM elective USC has been very favorable among all 50 medical students making it a highly rated and sought-after elective; this response encourages the integration of IM content into medical school curricular to enhance a

References:
1. Maizes M, Rakel D, Niemiec C. Integrative Medicine and patient-centered care. Explore. 2009; 5: 277-289.

2. Lebensohn P, Dodds S, Benn R, et al. Resident Wellness Behaviors: Relationship to stress, depression, and burnout. Fam Med. 2013; 45(8): 541-549.

Thank You Reviewers

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Keynote Speaker Bio

Hedy S. Wald, PhD is a Clinical Associate Professor of Family Medicine at the Warren Alpert Medical School of Brown University where she directs the reflective writing curriculum in the Family Medicine Clerkship and was honored with the Dean's Excellence in Teaching Award. She served as a Fulbright Scholar in medical education for the Ben Gurion University of Health Sciences Faculty of Medicine in Israel and is a Gold Humanism Foundation Harvard-Macy Scholar. She conducts interprofessional faculty development workshops internationally on the use of interactive reflective writing to foster reflective capacity supporting professional identity formation in health care professions education and has published widely on this, including recently guest editing a collection of articles for a special theme issue of Academic Medicine on Professional Identity Formation (June, 2015). Frameworks for assessing reflection and for guiding faculty in crafting quality written feedback to students' reflective narratives which Dr. Wald helped develop are currently in use within health professions education in the US, England, Israel, Canada, Spain, Ireland, Australia, Indonesia, China, Austria, and Taiwan. Dr. Wald's creative writing, reviews, and poetry have appeared in literary and medical journals and excerpted in the NY Times. Her comments on the use of interactive reflective writing and the arts in health professions education have been cited in the Wall Street Journal, LA Times, and Chicago Tribune. Fostering resiliency and preventing burnout in health care practitioners and students with synergistic mind-body medicine and reflective writing-enhanced reflection is a current research interest and she presents plenaries and experiential workshops at faculty retreats on Faculty Resilience and Vitality.

2016 IME Conference Presenter Biographies

Acevedo, Rhina
I am an Assistant Professor and member of the Core Residency Faculty at Rutgers/Robert Wood Johnson Medical School Department of Family Medicine and Community Health. My residency related responsibilities are varied amongst clinical, administrative and educational tasks. Currently, I am responsible for guiding the resident's experience in Maternity Care. I am also the leader of our Education Management Unit at our current clinical site. I provide regular lectures/workshops and precepting to our residents as well as to other departments. I was born and raised in El Salvador, Central America. In 1996, I received my medical degree from Weill E. Cornell Medical College in NYC and completed my Family Medicine Residency at University of Medicine and Dentistry of New Jersey (Now Rutgers/Robert Wood Johnson Medical School). In 2000, I completed an additional year of training in Low Risk Obstetrics and joined the faculty at the Dept. of Family Medicine and Community Health where I continue to serve as assistant program director for our Family Medicine residency program.

Aghajan, Yasmin
Yasmin Aghajan is a second-year medical student at UC San Diego School of Medicine. She grew up in the bay area and was admitted to the Med Scholars program, a BS/MD program. She completed her B.S. degree at UC San Diego in 2014 in General Biology with a minor in Science, Technology, and Society, graduating with honors. She is a general manager at the UCSD Student Run Free Clinic, where she oversees patient care for patients without access to insurance and resources. She has been involved in scientific research projects throughout her time at UC San Diego. Her academic interests include emergency medicine, obstetrics/gynecology, diversity in medicine, as well as mentoring high school and undergraduate students achieve their goals of becoming health-care professionals.

Akers, Nicole
Nicole Akers, MD, is a first year family medicine resident at Bayfront Health St. Petersburg Family Medicine Residency. Dr. Akers graduated from the University of Nebraska Medical Center in 2011. While studying at UNMC she was dedicated to international medical mission trips, served as the class Vice- President, and began research in healthcare literacy. Prior to medical school Dr. Akers graduated from Doane College, a Liberal Arts university in Crete, Nebraska where she studied Biology and Mathematics. Dr. Akers is interested in global health, women's health, obstetric care, and palliative care.

Alrabah, Rola
Rola Alrabah, MD; A board certified emergency physician at King Abdullah Bin Abdulaziz University Hospital-Saudi Arabia . Graduated from King Saud University in Saudi Arabia- School of medicine, finished the Emergency Medicine Residency Program at King Faisal Specialist Hospital. Currently doing her fellowship in simulation medicine at the University of California-Irvine and deeply involved in integrating simulation in the academic curriculum for medical students and residents. She also conducts projects that interlink simulation medicine with medical education and quality assurance. She is currently studying for the Master of Academic Medicine program at USC. she loves to travel around the world and meet new people, learn about new cultures and try new cuisine E-mail: dr.rola.r@hotmail.com.

Anderson II, Garland
Garland Anderson, MD is an Assistant professor of Family Medicine at Louisiana State University's Rural Family Medicine Program in Bogalusa, Louisiana. He is a Board Certified in Family Medicine and has published several textbook chapters over the course of his career. He was awarded his degree in Medicine from Louisiana State University Health Sciences Center-New Orleans in 2011. Graduating with a degree in Chemistry from Southeastern Louisiana University in 2004 he worked in Post Katrina New Orleans in that field for many years before perusing a career in medicine. He grew up in Rural Louisiana

Anderson, Jordan
Jordan Anderson, MPhil is a second-year MD candidate at Harvard Medical School with interests in health policy, healthcare delivery, and medical education. Before coming to medical school Jordan studied medical anthropology at Oxford University on a Rhodes Scholarship and worked in healthcare delivery reform at an accountable care organization in Nashville, Tennessee. Jordan is originally from Roanoke, Virginia and received his bachelor's degree at Auburn University where he studied biomedical science and captained the varsity swim team. In addition to his medical studies, Jordan also serves a resident tutor to Harvard undergraduate students and is completing research in healthcare policy and reform. Email: jordan_anderson@hms.harvard.edu

Baskin, Jacquelyn
Jacquelyn L. Baskin, M.D. M.Sc is an Assistant Professor in the department of Pediatrics at the Keck School of Medicine of the University of Southern California and a pediatric hematology-oncology attending physician at the Children's Hospital Los Angeles. Her main area of research is access to care for adolescents and young adults with genetic blood disorders and has received funding to develop a transition program utilizing new models of care to improve outcomes in this patient population as they transition to the adult healthcare system. Along with her clinical and research activities, she provides medical education in the area of hematology-oncology to trainees of various levels including fellows, residents, and medical students. Dr. Baskin obtained her undergraduate degree at Massachusetts Institute of Technology, her medical degree at the Albert Einstein College of Medicine, and a master's degree in clinical investigations at the University of Southern California. Email: jbaskin@chla.usc.edu

Bell, Catherine
Catherine Bell, BA is currently working as a research assistant in the Faculty of Medicine and Dentistry at the University of Alberta. She received her Bachelor of Arts in Psychology at the University of Victoria in 2014. She spent 2014-2015 teaching English as a second language through the North American Language and Culture Assistant program. During her time in Spain, she taught at Virgen de las Cruces elementary school in El Guijo, Wink Academy of Languages in Pozoblanco, and provided private English classes for children and adults. She also has experience working as a caregiver for a child living with disabilities in Edmonton.

Bernaba, Mario
Mario Bernaba is a second year medical student at the University of California Irvine School of Medicine. He obtained a BA from Stanford University in 2013 and conducted research in pain, pain processing, and pain perception. In July 2015, he traveled to rural Ethiopia to teach Ethiopian Medical Students ultrasound skills and to do research in surgery.

Burns, Roshan
Roshan Burns is a third year medical student at University of California, Irvine, School of Medicine, highly interested in both patient and medical student education. She has been involved in this study since its inception participating in the project design and plans for implementation. She created the scripts and videos for the patient discharge instructions. She will continue to work on patient education through a collaboration with Emmi, a company that enhances patient engagement through technology-based solutions. Furthermore, based on the positive reception of this project, she's begun developing educational videos for other studies and departments. Prior to Roshan's involvement in this project, her experience includes two years as President of Interaxon, a scientific educational outreach program at UCLA, being a patient educator through UCLA Mobile Clinic's Health Education Committee, and being the director of Health Education and Outreach for UCI's Medical Initiative Against Homelessness. She's also involved in medical student education, giving annual lectures to first and second year students, and working on curriculum development and research for the Obstetrics & Gynecology department at UCIMC.

Butani, Lavjay
Lavjay Butani is Professor of Pediatrics and Chief of Pediatric Nephrology at the University of California Davis Medical Center. He wears many hats related to education at the School, including co-directing the Pediatrics Clerkship, Chairing the Committee on Student Promotions and serving on the Dean's Advisory Council on Education. At a national level, he is the Chair Elect of the Grant's Committee and an active member on the Research & Scholarship and Curriculum task forces of COMSEP, the national Pediatric Clerkship Director Organization. Within medical education, he is most passionate about reflective practice and lifelong learning.

Calahan, Christopher
Christopher Calahan is a second year M.D. candidate at Harvard Medical School. He graduated from Bates College with a B.A. in Neuroscience and Mandarin Chinese in 2012, prior to moving to Boston to work at Brigham and Women's Hospital. At Brigham and Women's, he worked as a study coordinator in the surgical intensive care unit to design and implement clinical research across the spectrum of critical care challenges. While at Harvard, he has been actively involved in curriculum development and student life. He currently leads the simulation interest group, and sits on the board of HMS Medscience, a high school program aimed at teaching science through hands on medical simulation. He also serves a pre-med tutor and undergrad advisor at Harvard College. Before pursuing an academic career in pediatrics, Christopher plans to complete a scholarly project focused in global medical education with Partner's in Health. Email: christopher_calahan@hms.harvard.edu

Cannon, Jennifer
Jennifer Cannon, MD, is an Assistant Professor of Clinical Pediatrics at the USC Keck School of Medicine and a pediatric hospitalist at CHLA. She completed medical school at the University of Arizona and pediatric residency training at Phoenix Children's Hospital. Her academic interests include medical student and resident education, curriculum development, and development of evidence-based clinical decision rules. She is an Introduction to Clinical Medicine instructor for second year medical students at USC and assists with the clerkship curriculum on the attending only service at CHLA.

Castillo, Romeo
Romeo C. Castillo, MD, Program Director, Faculty , Hanford Rural Family Medicine Program, associate professor Loma Linda University since 2005. With my childhood desire of a career in caring profession, I completed a degree of Bachelor of Science in Nursing and worked in Texas and California in various nursing fields before entering the residency training, including Oncology, ER, ICU and Post Anesthesia care. My diverse interests in the field of medicine led me to choose family medicine. After completing residency training at University of Texas in Galveston in 2003, I moved to Hanford, California to join a group practice. Two years later, I started to volunteer mentoring students. I found my-self enjoying mentoring students and felt it very rewarding. In 2005, I became a part time faculty at LLU Rural Hanford Family Medicine Program. In 2010, I was offered a full time faculty position. In 2012, I was appointed as the assistant director. In 2013, I became the interim director and eventually became the program director in 2014. As a faculty, I assume various roles including chief resident coach, Balint group leader and didactic coordinator. I have been actively involved in curriculum development and competency based evaluation for the last four years. I am also active in community and international missions. My interests include whole person care, spirituality, physician wellness, cultural awareness and alternative complementary medicine.

Chan, David
Biosketch: David DeGuire Chan, D.O. David Chan, DO was born and raised in Northern California and finished his undergraduate studies at U.C. Irvine, graduating with a B.S. in biological sciences. Dr. Chan received his doctorate of osteopathic medicine from Western University: College of Osteopathic Medicine of the Pacific. He ventured to University of Chicago: NorthShore Evanston Hospital where he completed his residency training in Internal Medicine as well as a Chief Resident year. During his Chief year, he began a leadership role on a team of physician educators composed of Palliative, Oncology, and Internal Medicine physicians as well as residency program directors that developed an Outpatient Advance Care Planning resident education curriculum. David currently resides with his wife and 18 month old son in Ukiah, California in Mendocino County with his where he works as a primary care physician. Email: daviddeguirechan@gmail.com

Chang, Jinnie
Jinnie Chang is a second year medical student at UC San Diego School of Medicine. She serves as a general manager of the UCSD Student-run Free Clinic Project and has been working to address food insecurity in the free clinic population. She is one of the founding members of Medical Students for Justice, a student organization that works to create dialogue regarding social justice issues. Jinnie received her Bachelors of Arts in Political Science and Public Policy from UC Berkeley in 2009. Email: jichang@ucsd.edu

Chen, Jefferson
Dr. Jefferson W. Chen is a neurosurgeon who is board certified in neurosurgery, neurocritical care and neuro-oncology. His clinical interests include traumatic brain injury, normal pressure hydrocephalus, stroke and brain tumor. He is a leader in techniques such as multimodal brain monitoring for traumatic brain injury and the use of BrainPath® technology to access deep-seated lesions. Chen earned his graduate and medical degree from Johns Hopkins School of Medicine. He completed a residency in general and neurological surgery at the UC San Diego, followed by a neurovascular/skull base fellowship at St. Joseph's Hospital and Medical Center in Phoenix. His research interests include studying the molecular mechanisms of brain injury and brain cell death.

Christman, Grant
Grant Christman, MD, FAAP, Attending Physician and Director of Education, Division of Hospital Medicine, Children's Hospital Los Angeles; Assistant Professor of Clinical Pediatrics at the USC Keck School of Medicine. I have been a pediatric hospitalist at CHLA for the past four years, where I supervise residents and medical students on the general pediatric inpatient service. My primary area of academic interest is the use of e-learning in medical education. As the head of e-learning programs for my division, I maintain an educational website used by faculty, fellows, residents, and medical students, with courses on such topics as palliative care, pain management, legislative advocacy, and research skills. I am also exploring the gamification of e-learning through the incorporation of patient cases, badges and awards, and interactive fiction. I am active in the local chapter of the American Academy of Pediatrics, as Member-at large and chair of the Committee on Injury and Poison Prevention. I was born and raised in Los Angeles, where I currently live with my wife (Kelly Callahan, a child abuse pediatrician at Harbor-UCLA) and three daughters Emma (6) Julia (4), and Violet (9 months).

Collins, Christopher
Dr. Collins is the Fellowship Program Director for the Division of Rheumatology at the MedStar Washington Hospital Center (MWHC) in Washington, DC, and Associate Professor of Medicine at Georgetown University Medical School. Prior to joining MWHC, Dr. Collins completed his two-year clinical Rheumatology Fellowship training at the University of Southern California (USC) in Los Angeles followed by an additional two-year research fellowship at the National Institute for Arthritis and Musculoskeletal and Skin Diseases (NIAMS) at the National Institutes of Health (NIH) in Bethesda, Maryland. He completed his postgraduate training in internal medicine also at USC and has an MD degree from the University of Arkansas for Medical Sciences and a BA from Hendrix College, Arkansas. Dr. Collins was awarded the Clinician Scholar Educator Award from the ACR in 2009 which has allowed him to expand his research interests into innovative methods in medical education. Dr. Collins serves on several ACR committees including the Committee on Education, the Subcommittee on Medical Student and Resident Education, and the Test Material Development Committee. Dr. Collins is also a member of the Medical and Scientific Advisory Panel for the Lupus Foundation of Greater Washington (LFAGW) and is the current President of the Rheumatism Society of the District of Columbia.

Cosimini, Michael
Michael Cosimini is an Assistant Professor of Clinical Pediatrics at the Keck School of Medicine of USC and an attending physician at Children's Hospital Los Angeles (CHLA). His research interest in medical education includes trainee motivation for participation in educational activities and the application of new technologies. He is an associate editor and contributor to PedsRAP (a pediatrics continuing medical education podcast). He completed medical school at the University of Pittsburgh School of Medicine and Internship and Residency at CHLA, where he also served as Chief Resident. Email: mcosimini@chla.usc.edu.

Dameff, Elizabeth
Elizabeth Dameff MD, MPH is a board certified family medicine physician. She earned her BA in French at Southern Adventist University in 1997. She then completed a Masters in Public Health in Epidemiology and a medical degree from Loma Linda University in 2002. She completed her Family Medicine Residency at Kaiser Permanente in Fontana in 2005. She worked for 8 years as a per diem physician until 2013 and during that time did a variety of international medical mission trips to countries such as Mexico, Guatemala, Brazil, Peru, Belize, India, Swaziland, South Africa, Republic of Chad, and Kenya. Her special interests include international medical work, pediatrics, and women's health. She has been a faculty member of the Family Medicine Residency at Kaiser Permanente in Fontana since 2014. Her email is Edameff02m@LLU.edu

De Zoysa, Madushka
Madushka Yohan De Zoysa is a current MSIV at Keck School of Medicine of USC and is applying to Ob/Gyn for residency. Madushka is originally from Sri Lanka but has grown up in Southern CA. His interests during medical school focused on primary care, and he was strongly involved in Keck's Student Run Clinic as well as Pediatric volunteering in the hospital and out in the community as a health education instructor. Additionally, he helped create a Lactation Education Program at LAC+USC to counsel new mothers about the benefits of breastfeeding. Beyond his research in Gestational Diabetes, Madushka was involved in research exploring tissue perfusion in patients with sickle cell disease as well as a project focusing on determining the role of tumor associated macrophages in patients with endometrial cancer.

DeTata, Cynthia
Cynthia DeTata is the director of the core obgyn clerkship at Stanford University's School of Medicine. As a past graduate of USC's medical school, she is enjoying the change to return for this program. An enthusiastic teacher, she is always looking for ways to improve her course, and appreciates sharing ideas with like-minded collagues from within her own, and from other institutions.

Diaz-Rios,Kristan
Dr. Kristan Diaz-Rios is a family medicine physician who graduated from Brown University's Warren Alpert School of Medicine in 2007 and completed her Family Medicine Residency and Obstetrics Fellowship at Christus Spohn Memorial Hospital in Corpus Christi, TX in 2011. She joined HMS in Silver City, NM as a family phyician in 2012 and became HMSFMRP Associate Program Director in 2014.

DiTullio, David
David DiTullio is a fifth-year MD/PhD student at UCLA. He is the senior tutor of the DGSOM Peer Tutoring program, with which he has worked for the past three years. The peer tutoring program works to support medical students at all levels of education, including both preclinical and clinical years, with one- on-one, small group, and large group tutoring program. In addition to his work with the PDR Step 1 study program, David has also worked on a year-long Step 1 review program, as well as several programs that support students during the preclinical curriculum at DGSOM. David is particularly interested in investigating ways to reduce medical student anxiety, particularly with regard to the USMLE Step 1 exam.

Elder, William
William Elder, PhD is a Professor and Director of Behavioral Health at the Department of Family and Community Medicine at the University of Kentucky. He has received funding from national foundations, SAMHSA, HRSA and NIH to create curricula in professionalism, interprofessionalism, rural training, care for the underserved, integrated behavioral healthcare, and integrative medicine. The current project applying the BATHE technique to cultural competency reflects his interest in enhancing behavioral science topics to specifically teach and evaluate family medicine residency milestones.

Espinoza, Juan
Juan Espinoza is an Assistant Professor of Clinical Pediatrics at Children's Hospital Los Angeles and the Keck School of Medicine of USC. His research interests include digital media and technology and their role in medicine and medical education, with a special focus on data science and patient (user) generated health information. These academic interests arise from his experiences outside of medicine; in 2010 he co- founded GC/MDDM, a small media production company that works with television, film, web, and mobile technologies. Through this endeavor, he has partnered with both the entertainment and healthcare industries. Healthcare clients include the Alfred Mann Foundation, UCLA Nathanson Family Resilience Center, Children's Hospital Los Angeles, and Medallion Therapeutics. In each of these partnerships, Dr. Espinoza's role was to create and implement technology and media solutions to healthcare and education problems. Dr. Espinoza is an accomplished sound engineer whose work has been featured in film, video, mobile games, and web series. The opportunity to develop an audio podcast-based educational curriculum is a perfect synergy of his interests in technology, media, and medical education. Email:
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Fallin-Bennett, Keisa Dr. Fallin-Bennett is an assistant professor in the Department of Family and Community Medicine at the
University of Kentucky, where she participates in clinical care, teaching, and research. She earned an MD and Masters in Public Health at the University of Kentucky, and completed post-graduate training in Lawrence Massachusetts and at Georgetown University. Dr. Fallin-Bennett's special interests are LGBTQ* health, interprofessional teamwork, evidence based medicine, and maternity care. She has researched LGBTQ* rural health and has served as co-chair of two LGBTQ* committees on the national level. She is an active member of the Health care committee of the LGBTQ* task force at UK.

Farah, Jennifer
Jennifer Farah, MD is a Resident Physician in the Department of Emergency Medicine at LAC+USC Medical Center. After graduating with her B.S. in Biology from the University of San Francisco, she attended the Keck School of Medicine of USC to obtain her Medical Doctorate. Her academic interests include adult learning theory and curriculum design. She aims to improve residency education by designing learning modules that cater to an individual resident's preferred learning style. In 2012, she presented at the Innovations in Medical Education Conference with her abstract "Learning Styles in Emergency Medicine Graduate Medical Education Programs." And this year, she has focused her efforts on Intern education, with her latest project, "The Intern Study Guide." Email:
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Faucette, Lindsey
Lindsey Faucette, DO received her medical degree from Touro University College of Osteopathic Medicine in Vallejo, California. She completed her residency in Urban Family Practice at Beth Israel Medical Center in NYC and received additional training in integrative medicine through the University of Arizona. Drawing on her osteopathic and integrative medicine training Lindsey strives to develop curriculum and educate medical students and residents in comprehensive and holistic care that is patient-centered and evidence based. She is currently the Director of Osteopathic Education and Core Faculty at Marian Family Medicine Residency in in Santa Maria, California.

Fisher, Dixie
Dixie Fisher is a faculty member in the Department of Medical Education. She received her B.A. in Microbiology and her M.S. in Veterinary Science from the University of Nebraska, and her PhD in Education from the University of Southern California. She has taught educational research courses for the fellowship programs and the Department of Medical Education since 1993. Her personal research interests are in exploring the development of clinical reasoning in medical students, standardized patient feedback, and development of innovative, interactive teaching methods. She is accredited by Multi-Health Systems, Inc., Toronto, Canada to administer the MSCEIT Emotional intelligence Ability Test, and is certified by Charles J. Wolfe Associates to deliver the Emotional Intelligence Critical Skills for Success Workshop. Prior to joining the Department of Medical Education, she directed the Veterinary Diagnostic and Disease Surveillance Laboratory at USC. She has peer-reviewed publications in the areas of animal, fish, reptile, and educational research. dfisher@usc.edu

Fitzgerald, Leah
Leah FitzGerald PhD, FNP-BC, is an Associate Professor and Fletcher Jones Endowed Chair in Community partnerships in Nursing, at Mount Saint Mary's University after recently moving across town from ten years as UCLA School of Nursing faculty teaching both graduate and prelicensure nursing students. Collaboration with interdisciplinary colleagues has been an essential part of her practice in primary care. FitzGerald is a member of the Expert Faculty for the First 5 LA-UCLA Oral Health Collaborative supporting local FQHC's in improving access to oral health for children and families of Los Angeles County and served as the sole nursing representative at the IOM oral health guidelines for underserved and vulnerable populations. Dr FitzGerald received her doctorate in Nursing from UCLA in 2003 and a post-doc in psychoneuroimmunology at the UCLA Norman Cousins Center.

Flora, Monica
Dr. Monica Kaur Flora is a native Californian, born in Los Angeles, Ca. After earning her medical degree from M.S. Ramaiah Medical College in Bangalore, India, she then joined Mercy St. Vincent's in Toledo, OH for her residency in Family Medicine. She is active in research and had been published in CHEST and EULAR. In her free time, she is an ACLS, BLS, and PALS instructor. Outside of the medical field, her interest includes traveling and spending time with her family and friends.

Fogerty, Robert
Robert Fogerty attended the University of Northwestern School of Medicine for medical school and his Masters of Public Health. He completed his residency in Internal Medicine at Yale University where he is now an Assistant Professor of Medicine (General Medicine). He is currently the Co-Chief of the Generalist Firm for Internal Medicine residents, a member of the Academic Hospitalist team, and the co-chair of the Yale-New Haven Hospital GME Quality Improvement Committee. His scholarly work has a strong emphasis in educating medical professionals in safety and quality issues, with a focus on cost-awareness.

Fong, Michael
Born in Hong Kong, China, my family immigrated to the United States when I was ten years old. I attended elementary and middle school in New York City. My family moved to Dallas, Texas, where I attended high school. I majored in Economics and Molecular Biochemistry & Biophysics at Yale University. I returned to Texas for medical school at the University of Texas Medical School at Houston. I completed my Family Medicine residency training and Sports Medicine fellowship training at Kaiser Los Angeles Medical Center, where I remain as faculty in the Division of Sports Medicine and in the Department of Family Medicine. My research interests include tendinopathy and its treatment modalities including percutaneous needle tenotomy and platelet-rich plasma injections.

Fowler, Amy
Leslie Fowler serves as the Director of Education, Development, and Research in the Department of Anesthesiology at Vanderbilt University Medical Center. In this role, she is actively involved in curriculum development, delivery and evaluation for anesthesiology residents as well as creation of assessment tools and implementation of multisource assessments. She is working to expand the educational offerings within the department, including having been the instructional designer/curriculum developer for over thirty anesthesia courses in Vanderbilt's learning management system, VSTAR. Currently, Leslie is the principal investigator on 4 innovative educational projects and Co-investigator on 7 others. Her work titled "Ongoing Professional Performance Evaluation using ACGME 6 Core Competencies" was presented at the 2015 International Anesthesiology Research Symposium in Honolulu, Hawaii. Additionally, she will present two abstracts at the American Society of Anesthesiology meeting in San Diego in October 2015. The titles of these presentations are: "Anesthesiology Residency Testing Policy Survey" and "ACGME Based Professional Development Experience and Reporting for Anesthesiology Residents". She is listed on numerous grants as an educational consultant, the most prominent of which, funded by General Electric Foundation, is over 3 million dollars. The grants focus is to improve perioperative and anesthesia care in East Africa by training Kenyan registered nurse anesthetists.

Fowler, Leslie
Leslie Coker Fowler is the Director of Education, Development, and Research in the Department of Anesthesiology at Vanderbilt University Medical Center. In this role, she is actively involved in curriculum development, delivery and evaluation for anesthesiology residents as well as creation of assessment tools and implementation of multisource assessments. She is working to expand the educational offerings within the department, including having been the instructional designer/curriculum developer of the over thirty anesthesia specific courses in VSTAR Learn; a Moodle based learning management system. Currently, Leslie is the principal investigator on four innovative educational projects and Co-investigator on seven others. Her work titled "Ongoing Professional Performance Evaluation using ACGME 6 Core Competencies" was accepted and presented at the 2015 International Anesthesiology Research Symposium in Honolulu, Hawaii. Additionally, she presented two abstracts at the American Society of Anesthesiology meeting in San Diego in October 2015. The titles of these presentations are as follows: "Anesthesiology Residency Testing Policy Survey" and "ACGME Based Professional Development Experience and Reporting for Anesthesiology Residents". She is listed on numerous grants as an educational consultant, the most prominent of which, funded by General Electric Foundation, is over three million dollars. The grants focus is to improve perioperative and anesthesia in Kenya.

Fullerton, Morgan
Morgan Fullerton is a third year resident in the Department of Obstetrics and Gynecology at LAC+USC Medical Center. She completed her undergraduate education at the University of Southern California receiving a BS in Kinesiology in 2009. She received her MD in 2013 from the Keck School of Medicine of the University of Southern California. In medical school she was involved in research in the Department of Internal Medicine with the Division of Cardiovascular Medicine and the Department of Obstetrics and Gynecology. As a resident she has been involved in multiple research projects that include colposcopy and resident education, venous thromboembolism and cervical cancer, procidentia and cervical cancer, and management of vesicovaginal fistula. Her research has been published in the International Journal of Urogynecology.

Fung, Cha-Chi
Cha-Chi Fung, Ph.D. Vice-Chair of the Department of Medical Education and Assistant Dean of Educational Affairs at Keck School of Medicine of USC. Her area of expertise lies in the teaching and assessment of clinical performance and clinical reasoning. Dr. Fung is the Chair-elect for the AAMC Western Group on Educational Affairs and a facilitator and member on the Steering Committee of the Medical Education Research Certificate program sponsored by the AAMC. She is spearheading an innovative evaluation process at the undergraduate level that will empower students to provide constructive feedback, reduce survey fatigue and most of all streamline the reporting process. In her role, Dr. Fung will also stimulate research activities amongst faculty in educational affairs that will not only promote scholarship, but also, the practice of evidence-based education.

Ganster, Anna
Anna C Ganster, M.D., is an Assistant Professor of Clinical Pediatrics, University of Southern California – Keck School of Medicine. After graduating medical school in Germany, she completed pediatric residency in New York City (2008). This was followed by a neonatal-perinatal medicine fellowship at Children's Hospital at Montefiore/Albert-Einstein College of Medicine, where she graduated in 2012. Since then she has joined the faculty of the Division of Neonatology at Children's Hospital Los Angeles. She is a member of the educational section of the division. She serves in the ethics resource committee and co-chairs the neonatal resuscitation committee at CHLA. Her interest are education in communication skills, simulation and its application to medical education, as well as challenges in clinical teaching within the new accreditation system and changes in academic healthcare. Dr. Ganster is currently a student in Master of Academic Medicine program at USC. aganster@chla.usc.edu

Ganupuru, Mayuri
Mayuri Ganupuru, MD, is a Hospital Medicine Fellow in the Division of Hospital Medicine, Children's Hospital Los Angeles. She is pursuing her master's degree in public health at the Keck School of Medicine at the University of Southern California with specialization in public policy. Her interests include social determinants of health and disparities in access to care, particularly as they apply to clinical care. She is also active in the American Academy of Pediatrics and regularly engages in advocacy. She also takes an interest in systems of care and utilization management. mganupuru@chla.usc.edu

Gilani, Christopher
I am currently a first year Medical Student at the University of California, Irvine. In 2012, I graduated from UCI with a degree in Biological Sciences. As an undergraduate I became deeply involved in research and education. In 2010 I joined the Emergency Medicine Research Associates Program. During my 4 years in the program I gained knowledge in the methodology of clinical and epidemiological research while working with emergency physicians to collect and analyze data from studies ranging from alcohol screening interventions to ultrasound guided lumbar punctures. Additionally, as an undergrad I found teaching to be vital in my efforts to empower and serve others both in the classroom and my community. As a medical student, I look forward to further pursuing my interests in research and education so that I may develop into a physician capable of making a difference in the lives of others.

Gleit, Cindy
Cindy Gleit, M.D. Research Director Associate Program Director Family Medicine Residency Assistant Professor of Medicine Mercer University School of Medicine Memorial University Medical Center cindygleit@memorialhealth.com Dr. Gleit joined MUMC's Family Practice Residency Program in 2011. She is a graduate of The Ohio State University and Vassar College. She completed her medical residency at Brown University in Providence, R.I. in 2008. Before moving to Savannah, she was a primary care practitioner at Beth Israel Deaconess Hospital in Needham, Mass. Dr. Gleit is currently the Research Director and interests include patient safety as well as medical student and residency education. She is a member of the American Academy of Family Physicians and Georgia Medical Society and she is board certified in family medicine.

Gonsalves, Wanda
Dr. Gonsalves is currently at the University of Kentucky as Vice Chair and Professor in the Department of Family and Community Medicine. As Vice Chair, she is responsible for strengthening the entire spectrum of the department's contributions to education. She has developed and implemented a mentoring and faculty development program. In 2013, Dr. Gonsalves was a participant in the White Memorial Medical center Faculty Development Program, "Developing Faculty Scholars in Cultural Competency". She is focusing on advancing curriculum design and delivery, on learner recruitment, improving the healthcare workforce and mitigate shortages of well-trained primary care physicians. At UK and previously at MUSC, Dr. Gonsalves developed and worked with health professions students and faculty from several colleges to establish successful student-run free clinics. She also served as the medical director of the Physician Assistant program for five years. At MUSC, she held the position of Associate Dean for Resident Inclusion and Diversity Education. Her scholarly interests and publications include service learning, interprofessional education, and oral health for primary care clinicians. She is a co-author for the award winning Smiles for Life:A National Oral Health Curriculum. Dr. Gonsalves served on numerous boards including the Nicholas Pisacano Foundation, the Journal of the Academy of Physician Assistants, and the Nat. Commission of Certification of Physician Assistants.

Guadiana, Laura
Dr. Laura Guadiana is currently junior faculty at Long Beach Memorial Family Medicine residency program. She completed medical school at UC Davis School of Medicine and residency at Long Beach Memorial where she stayed as faculty. She was able to continue in her mission for outreach and diversity as the faculty advisor of Long Beach's pipeline program Neighborhood Med and participates actively in the residency's outreach programs. She has a particular interest in geriatrics and heads the curriculum for the geriatric rotation in which she seeks to address and promote culturally competent care.

Hadinger, Margaret
Margaret (Maggie) Hadinger, EdD, MS is a Director of Medical Education at Lehigh Valley Health Network (LVHN), Allentown, Pennsylvania. In her current role, Maggie directs the central office functions for LVHN's Graduate Medical Education and Undergraduate Medical Education programs, working to support LVHN's partnership with the University of South Florida Morsani College of Medicine (USF)/LVHN SELECT program in the following areas: accreditation, admissions/recruitment, student affairs, curricular development, faculty appointment/promotion, and faculty development. Maggie is a Summa Cum Laude graduate of Kutztown University, earning a Bachelor Arts with a Major in Spanish. She earned her Masters in Science with a concentration in Global and International Education from Drexel University. Maggie completed her Doctorate in Education in Higher Education Management from the University of Pennsylvania's Graduate School of Education. Her dissertation research explored the experience of underrepresented minorities in medical school admissions. Email: Margaret_A.Hadinger@lvhn.org

Hagiwara, Yuya
Yuya Hagiwara, MD is an Assistant Professor at the Division of Community Geriatrics and Palliative Care, Department of Family and Community Medicine, University of Texas Health Science Center at San Antonio School of Medicine. Dr. Hagiwara's interests include Geriatric-Palliative Medicine education with focus on end- of-life communication, advanced care planning, goals of care discussion and family meeting communication skills. He is also working on collaborating with Geriatrics, Palliative Care and Family Medicine training programs in Japan. Dr. Hagiwara is currently a student in the Master of Academic Medicine program at USC.
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Harlan, Greg
Dr. Greg Harlan graduated from Princeton University and Keck School of Medicine. He completed his Pediatrics residency at UCSF, and then received his Masters in Public Health from the University of Utah, where he was Assistant Professor of Pediatrics and a pediatric hospitalist. Greg spent 5 years at IPC The Hospitalist Company as the Director of Medical Affairs. In that capacity he worked closely with IPC's 250 Practice Group Leaders and managed the IPC-UCSF Fellowship for Hospitalist Leaders. This joint effort between IPC and UCSF taught physicians deliberate understanding of their personal leadership styles and fostered specific skills on leading change by completing a quality improvement project. At Keck, Greg is the Director of the Introduction to Clinical Medicine course (ICM). He is integrating the educational framework for ICM into ongoing CME and ACGME frameworks. He is introducing new elements into first and second year medical students' ICM curricula around optimizing team performance and developing personal leadership styles. Greg's professional interests center on early formation of professional identify, fostering physician leaders, and innovative methods to teach teamwork and communication skills. Greg is Associate Professor of Clinical Pediatrics and Medical Education. He works clinically at LAC+USC Medical Center in the Pediatrics Department.

Heck, Madeline
Madeline Heck is a medical student at the University of Minnesota Medical School. She is also a Masters student at the University of Minnesota School of Public Health. Her research interests are in medical errorsand communication failures in the field of anesthesiology. She intends to apply to anesthesiology residencies upon graduating medical school. Prior to attending medical school, Madeline obtained her Bachelors of Arts with a major in Medical Anthropology at Creighton University in Omaha Nebraska.

Hege, Inga
Inga Hege, MD, M Comp Sc is an Associate Professor for Medical Education at the Institute for Medical Education at Ludwig-Maximilians-Universität in Muenchen, Germany. Since July 2015 she is at the Geisel School of Medicine at Dartmouth for a 1 1/2 year Marie-Skłodowska-Curie Global Fellowship funded by the European Union. She has been working for 15 years in medical education, focusing on e-learning and curriculum mapping. Her research focus is on virtual patients.

Heily, Meredith
Ms Meredith Heily M.Ed, RN, CCRN, BA, Grad. Dip Adult Ed & Training Meredith has extensive and current clinical and educational experience working within the acute hospital setting. Her background includes hospital-based teaching and educational research into medical and nursing staff education at post- graduate and undergraduate levels. Meredith's interest in optimising preparation of medical students for work as interns has led to the completion of a variety of research projects, including curriculum development and program implementation for teaching and assessment of procedural skills. This program is now embedded within the Melbourne Medical School clinical curriculum.

Hernandez, Adriana
Adriana Hernandez is a third-year pediatric resident at Children's Hospital Los Angeles (CHLA) Pediatric Residency Program. She completed medical school at Baylor College of Medicine and her internship at CHLA where she will also be serving as Chief Resident next year. Her research interest in medical education to date includes incorporating social media into the clinical education of medical students.

Hill-Daniel, Jamie
JAMIE HILL-DANIEL, M.D., Assistant professor in the Department of Family Medicine at Georgetown University/Providence Hospital Family Medicine Residency Program, Washington DC. Dr. Hill-Daniel received her medical degree from the David Geffen School of Medicine at UCLA and completed a family medicine residency at Georgetown University/Providence Hospital Family Medicine Residency Program, Washington DC. She is board certified in Family Medicine and practices full scope Family Medicine. As the Director of Medical Student Education she oversees the fourth year Family Medicine elective clerkships and assists with teaching Evidence Based Medicine I & II, Service Learning and Patients, Populations and Policy courses through the Family Medicine Department for the Georgetown School of Medicine. She has a clinical interest in community health and is currently pursuing a faculty development fellowship sponsored by HRSA at the Cultural Medicine Training Center at White Memorial Medical Center.

Hofstra, Thomas
Thomas Hofstra, MD, is an Assistant Professor in the Department of Pediatrics within the Keck School of Medicine of the University of Southern California. He is a pediatric hematologist at the Children's Hospital Los Angeles (CHLA) with special expertise in medical education, specifically in the education of medical students, residents and fellows, and employs various techniques such as direct interactive modeling as well as didactic sessions. He has been a coordinator of medical student and resident education at CHLA for over 15 years and has won multiple awards in medical education including the Philip E. Rothman Memorial Award for Excellence in resident education and the Meade-Johnson Faculty teaching award. Dr. Hofstra obtained his undergraduate degree at Wheaton College and medical degree at Loyola University Stritch School of Medicine. Email: thofstra@chla.usc.edu.

Hogue, Amy
Amy L Hogue, MD is an assistant professor at the University of South Dakota Sanford School of Medicine and core faculty at the Sioux Falls Family Medicine Residency Program. She received a B.S. in biological sciences and anthropology from the University of Notre Dame in 2002 and an M.D. from University of Iowa Carver College of Medicine in 2006. She completed residency in family medicine at Memorial Hospital in South Bend, Indiana. In addition to a full spectrum academic family medicine practice, she serves as local site director for the residency's community health center continuity clinic, which has large refugee and Native American populations. She also directs the pediatrics curriculum and serve as a longitudinal adviser for residents. She is currently completing a fellowship in Family Medicine Faculty Development and Cultural Competency sponsored by HRSA and White Memorial Medical Center.

Hoonpongsimanont, Wirachin
Wirachin Hoonpongsimanont has been involved in undergraduate medical education as the Emergency Medicine Clerkship Director since 2013. She also teaches Clinical Foundation for first and second year medical students. These experiences helped me realize a gap in medical education: we are teaching medical students in a technology dependent generation so we have to adjust our teaching style and incorporate technology to enhance medical student learning experience. This year we implemented many new teaching styles including flipped classroom instead of formal lectures and Google Glass recording to provide feedback and improve self-reflective skills. I hope to create an effective EM curriculum for the new generation.

House, Steven
Dr. House graduated from Mercer University School of Medicine (MUSM) and the MUSM/MCCG Family Medicine Residency Program in Macon, GA. After 4-1/2 years of private practice, he began working in Undergraduate and Graduate Medical Education in 2002 and has been doing so ever since. He relocated from GA to Glasgow, KY, in 2010 to begin working for the University of Louisville Glasgow Family Medicine Residency Program where he currently serves as the program director. His areas of professional interest are evidence-based medicine, pain, advance directives, and end-of-life care.

Hughes, Elisabeth
Elisabeth Hughes is an assistant professor of anesthesiology and associate residency program director at Vanderbilt University Medical Center in Nashville, Tennessee (VUMC). She completed her anesthesia residency training and a pediatric anesthesia fellowship at VUMC. She began pursuing her interests in resident education during her chief resident year when she authored resident simulation scenarios and was a member of the program evaluation committee. After her first faculty year at the Children's Hospital she became the pediatric anesthesia resident rotation director and undertook a major renovation of the rotation including course curriculum, goals and objectives, education conferences, instituting a "keyword of the day" program, and creation of a pediatric anesthesia simulation program for fellows and residents. She also created an airway rotation experience for over 65 non-anesthesia personnel in the children's hospital. She was most recently involved in a simulation based project designed to evaluate cognitive aid usage for management of pediatric perioperative critical events. As an active member of the pediatric pain service, she also created a pediatric pain and palliative care rotation for pediatric residents. She has been the associate residency program director for 9 months in which time she has collaborated with the education office in revising the resident evaluation system and assisted in creating a milestone and EPA based resident assessment tool.

Humphrey, Tara
Tara L. Humphrey, DO , Assistant Professor of Clinical Anesthesia at the Keck Hospital of the University of Southern California. I am a Cardiac Anesthesiologist, Director of Resident Simulation and Program Director of the Anesthesia Interns. My daily responsibilities are my clinical cases and supervising, instructing and mentoring resident and fellows. I give regular lectures for the residents and fellows. This year I am responsible for the Anesthesia intern educational curriculum which includes lecturing, mentoring and problem solving. I have been involved in Resident Simulation for 4 years and am now the Director of Resident Simulation. I am responsible for organizing the curriculum and leading nine Saturday Sim workshops for all of our residents. I have been on faculty since 2009. I have been married for 5 years. We have a 22 month old daughter who has recently started climbing up everything. My hobbies are ballroom dancing, scuba diving, piano, singing and running.

Huynh, Thanh
Dr. Thanh Huynh is a Pediatric Hospital Medicine Fellow at Children's Hospital Los Angeles. She completed her Bachelor's degree in Molecular and Cell Biology at the University of California, Berkeley and went on to receive her Master of Science degree in Physiology and Biophysics at Georgetown University. Dr. Huynh received her M.D. at the Oregon Health and Science University and completed her Pediatrics residency at Harbor-UCLA Medical Center in 2014. Her scholastic efforts are aimed at raising awareness and implementing safe integration of complementary and alternative medical therapies into conventional medicine through education and research. She also has an interest in promoting medical provider wellness and is investigating evidence based strategies for the prevention of caretaker burnout. Dr. Huynh's mission is to promote culturally competent and holistic health care, recognizing the interconnection of physical, mental, and emotional factors that contribute to wellness. Email: thuynh@chla.usc.edu

Jefferson, Chen
Dr. Jefferson W. Chen is a neurosurgeon who is board certified in neurosurgery, neurocritical care and neuro-oncology. His clinical interests include traumatic brain injury, normal pressure hydrocephalus, stroke and brain tumor. He is a leader in techniques such as multimodal brain monitoring for traumatic brain injury and the use of BrainPath® technology to access deep-seated lesions. Chen earned his graduate and medical degree from Johns Hopkins School of Medicine. He completed a residency in general and neurological surgery at the UC San Diego, followed by a neurovascular/skull base fellowship at St. Joseph's Hospital and Medical Center in Phoenix. His research interests include studying the molecular mechanisms of brain injury and brain cell death.

Johnson, Robert E.
Robert E. Johnson is the Clinical Sciences Librarian at the University of Southern California's Norris Medical Library. Prior to working at USC, he was the Research Librarian for Nursing, Allied Health, and Public Health at the University of California, Irvine, Education Services Librarian at Virginia Commonwealth University's Tompkins-McCaw Library for the Health Sciences, and a Library Assistant at the University of Minnesota's Bio-Medical Library.

Jubran, Rima
Director of Medical Education (DIO), Children's Hospital Los Angeles. Dr. Jubran received her Medical degree from Case Western Reserve University School of Medicine, Cleveland, Ohio, her Masters of Public Health at George Washington University, Washington, D.C and Masters in Academic Medicine at University of Southern California. Following her residency at Rainbow Babies and Children's Hospital in Cleveland, she completed a fellowship in pediatric hematology/oncology at Children's National Medical Center, Washington, D.C. Dr. Jubran is a member of the retinoblastoma committee of the national Children's Oncology Group. She serves on the study committees of several retinoblastoma studies. Her investigations focus on retinoblastoma and Langerhans cell histiocytosis, a cancer-like condition that may be treated with chemotherapy. A frequent lecturer and author, she is an active member of the international Histiocytosis Society. In her role at Director of Graduate Medical education she oversees and supports the learning and working environments for all ACGME-accredited training programs at CHLA.

Kaplan, Michael
Michael Kaplan is a 2nd year resident at the Yale Primary Care program. Prior residency he studied music and neuroscience at Skidmore College, and earned his medical degree at Sackler School of Medicine. With this project, Mike hopes to open a dialogue about the intersection between performance, team-based collaboration, and education. Mike aspires to pursue general academic medicine with particular interests in medical education, quality improvement and the physiology of subjective experience. Email: m.kaplan@yale.edu

Kaplan, Samuel
Samuel Kaplan is currently a second-year medical student at the University of California, Irvine School of Medicine. He grew up in southern California and earned a Bachelor of Science in Bioengineering at University of California, Berkeley in 2012 with an emphasis in biomedical devices. During his undergraduate years, he assisted faculty at UCB with research in traumatic brain injury finite-element modeling as well as microfluidics, and consulted on cognitive modeling projects at HRL Laboratories in Malibu, CA. After graduating, he worked for two years as a medical scribe and EMR trainer in the emergency department at Los Robles Hospital in Thousand Oaks, CA until he began medical school at UC Irvine in 2014. During his time as a medical student, he has enjoyed volunteering at various medical clinics locally as well as in Tijuana, Mexico, and became a board member of the UCI Simulation Interest Group. He has also developed an interest in public health and clinical ultrasound, a highly emphasized combination at UCISOM. In June 2015, he traveled with nine other students to develop and teach an ultrasound course at a clinical officer school in Mwanza, Tanzania and conduct ultrasound-based clinical research projects on prenatal ultrasound and detection of schistosomiasis. He particularly appreciates the power of effective education and mentorship, and looks forward to exchanging ideas on how to improve international medical education.

Kareff, Samuel
Samuel A. Kareff is a MD/MPH candidate at the University Of Miami Miller School of Medicine. He holds a BSFS in Science, Technology, and International Affairs with a concentration in Biotechnology and Global Health and a Certificate in Latin American Studies from the Edmund A. Walsh School of Foreign Service of Georgetown University. Sam currently serves as the Student Co-Director of the Human Rights Clinic of Miami, Policy Associate for the American Public Health Association Student Assembly, Vice-President of the Hispanic-American Medical Student Association and MD/MPH Ethics Representative. His interests include health practice, policy and education, along with global health, social justice and
advocacy. He enjoys cooking, exercising and travelling in his spare time.

Kigorwe, Kenneth
Kenneth M. Kigorwe, MD., Faculty Physician, Union Hospital Family Medicine Residency Program, Terre Haute, IN. Dr. Kigorwe graduated from Moi University School of Medicine in Kenya, East Africa in 1999. In 2006 he moved to Indiana to complete his family medicine residency. From 2009-2014 Dr. Kigorwe was in private practice within a group in Logansport, Indiana. In August 2014 he returned to Terre Haute as a faculty physician in the residency program. Within the program he co-ordinates the Obstetrics teaching activities and serves as liaison to the OB department at the residency sponsoring hospital. He is currently completing a Family Medicine Faculty Development fellowship that has a dual focus on teaching the ACGME competencies (and Family Medicine Milestones) and on promoting culturally responsive health care. Email: kkigorwe@uhhg.org.

Kinsella, Christopher
Christopher Kinsella is a PGY4 General Surgery resident at Saint Louis University Hospital. Prior to his residency, Dr. Kinsella completed a two-year Craniofacial Research fellowship at the University of Pittsburgh Medical Center where he was responsible for study design, grant funding, study execution, data analysis, and manuscript preparation. His work in translational and clinical research has been presented at multiple national and international meetings and published in several prestigious medical journals (Spine, Annals of Thoracic Surgery, Annals of Plastic Surgery, Plastic and Reconstructive Surgery, and Hernia). His extracurricular interests include medical device design, hobby circuitry, and cooking with his daughters.

Komishke, Bailey
Bailey Komishke, MD Candidate 2018 at University of Alberta, obtained her Bachelor of Sciences in Integrated Sciences (Physiology, Neurosciences) from the University of British Columbia in 2014. She is a recipient of an NSERC Undergraduate Research Award and completed a summer studentship with the Hotchkiss Brain Institute (HBI) at the University of Calgary studying the microscopic integrity of the corpus callosum in patients with Multiple Sclerosis through MRI analysis. She presented at the HBI Summer Student Symposium in 2014. She is co-leading the University of Alberta Disability Dialogue sessions for the 2015-2016 school year.

Konia, Mojca
Mojca Remskar Konia, MD, PhD, MACM is currently an Associate Professor in the Department of Anesthesiology at the University of Minnesota. She is a fellowship trained cardiac anesthesiologist and pediatric anesthesiology certified anesthesiologist with special interest in adult and pediatric cardiac anesthesia. In 2010 she became the Residency Program Director and in 2014 Vice Chair of Education of the Department of Anesthesiology. She teaches second, third and fourth year medical students, and anesthesiology residents PGY-1 through PGY-4 and has received several Teacher of the Year awards. She began working with simulation in 2009 and is now a Clinical Director of the Anesthesiology/Critical Care Skills Simulation Laboratory in the SimPORTAL at the University of Minnesota. Dr. Konia is an active member of The Board of Directors and Champions Executive Committee of SimPORTAL at the University of Minnesota. She is involved with curriculum development of the anesthesiology and surgery residency simulation program and is developing multidisciplinary educational curricula, which utilize high- and low- fidelity simulation. Her special area of interest is translation of clinical skills, medical knowledge and attitudes obtained in the simulation laboratory into the clinical world. She has written journal articles and a book chapter in medical and simulation literature. In her free time she enjoys mission trips to underdeveloped areas to provide medical care to children in need.

Konor, Lindsey
Lindsey S. Konor, M.D. Director, Family Medicine Accelerated Curriculum Track (FM-ACT) Associate Program Director Family Medicine Residency Assistant Professor of Medicine Mercer University School of Medicine Memorial University Medical Center lindseykonor@memorialhealth.com Dr. Konor received her combined B.S./M.D. degree at Northeast Ohio Medical University in 2009. She served as chief resident during her training at The Ohio State University Medical Center in Columbus, OH. Her interests include continuing resident and medical student education, EMR implementation, and women's health. Dr. Konor is a family medicine instructor at Mercer University School of Medicine's Savannah campus and director of the Family Medicine Accelerated Curriculum Track (FM-ACT). She also enjoys global health and has provided care to medically underserved communities in Peru and Zimbabwe. She is a member of the American Academy of Family Physicians and Georgia Medical Society and she is board certified in family medicine.

Kuwajerwala, Nafisa
Staff Breast Surgeon at Providence Hospitals in Michigan, Medical Director of surgical services at Southfield and Novi locations, Assistant professor at Oakland University and William Beaumont hospitals, Fellowship in Breast surgery at William Beaumont Hospitals, and Residency in General Surgery from North Oakland Hospitals affiliated with Wayne State University, research fellowship in Henry Ford Hospitals, Oncology fellowship in Tata memorial hospitals in India, General Surgery training in KEM hospitals and Graduate from Grant Medical college, India.

Kysh, Lynn
Lynn Kysh graduated for the University of California at Los Angeles (UCLA) in 2012. Afterwards she promptly started working as an Information Services Librarian at the University of Southern California (USC) Norris Medical Library as the liaison to Keck School of Medicine. Starting in early 2015, she is now the Clinical & Research Librarian and splits her time supporting the students, staff, and faculty on the USC Health Sciences Campus and at Children's Hospital, Los Angeles (CHLA).

Labbad, Jakleen
Dr. Jakleen Labbad received her BA in Economics/Politics/Women's Studies from Oberlin College and her M.D. from the University of Toledo, College of Medicine. She completed an internship in Obstetrics and Gynecology before realizing that her true calling is to be a full spectrum family physician. She then completed her Family Medicine residency at Case Western Reserve University. After graduation Dr. Labbad practiced in a variety of settings (going from the Bay Area, to Stockton, CA and then Compton CA). In 2013, Dr. Labbad joined the faculty at Ventura County Medical Center Family Medicine Residency. Dr. Labbad enjoys doing and teaching everything in the spectrum of family medicine, she has a special interest in pediatrics and women's health. She has a passion for working with the underserved and immigrant communities.

Lahham, Sari
MD/MBA Candidate at UC Irvine SOM.

Lepinski, Sandra
Sandra Lepinski, MD is a Family Medicine faculty at the Research Family Medicine Residency in Kansas City, Missouri since 1993, and a clinical associate professor for the University of Missouri Kansas City School of Medicine. She graduated in 1986 from residency in the Medical College of Wisconsin. She teaches the spectrum of Family Medicine, supervising patient care in the clinical and hospital setting, obstetrics unit and newborn nursery, and provides direct patient care in the Goppert-Trinity Family Care Clinic. She serves as trainer and director of the Research Residency Reach Out and Read program, a national literacy program, and is an instructor and advisory faculty for Advanced Life Support in Obstetrics. She is a Fellow in the HRSA-sponsored Family Medicine Faculty Development Fellowship. She has special interests in preventive health and nutrition and is interested in creating an interdisciplinary approach to problem solving in the clinical setting. Email: sandra.lepinski@hcahealthcare.com

Liu, Deborah
Deborah Liu, MD has been the Fellowship Director for the Children's Hospital Los Angeles Pediatric Emergency Medicine Fellowship Program since 2006. She joined CHLA in 2003 after completing her pediatrics residency and pediatric emergency medicine fellowship at Rainbow Babies and Children's Hospital in Cleveland. Her research interests include analgesia, gastroenteritis, and ED utilization. D r. Liu has been an active member of AAP Section of Emergency Medicine Fellowship Director subgroup, as well as numerous CHLA committees. Email: DeLiu@chla.usc.edu

Lopez, Maria Cynthia
Maria Cynthia S. Lopez, MD, FAAFP, is currently a Family Physician and an Assistant Director at the Bayfront Health St. Petersburg Family Medicine Residency. She is also an Assistant Clinical Professor at the University of Southern Florida, Department of Family Medicine. Dr. Lopez has been board certified by the American Board of Family Medicine since 1995. She received her medical education from Rosalind Franklin University of Medicine and Science and completed her residency training in family medicine at White Memorial Medical Center. She is particularly interested in women's health, maternal/infant care, including obstetric deliveries and colposcopy, and patient health education. Dr. Lopez believes that building relationships with her patients and making them partners in their own health care is the best way to keep them well.

Louthan, Michael
I am currently a medical student at University of California, Irvine School of Medicine and have a large interest in undergraduate medical education. I was heavily involved with research during my undergraduate career through the Emergency Medicine Research Associates Program, and worked closely with many emergency department facility on several projects. Through this program, I gained valuable experience working with the IRB and understanding research methodologies, and hope to continue with this learning experience. I am continuing this interest by working with my faculty mentor, Dr. Hoonpongsimanont, to improve undergraduate medical education in order to produce more capable residents. As a medical student, I've become more involved with analyzing and understanding medical education, and hope to apply my research capabilities to further progress medical education.

Luu, Cindy
Cindy Luu, MD is a third year general pediatric resident at Children's Hospital Los Angeles. Born and raised in San Francisco, California, she moved to the Los Angeles area in 2004 to attend the University of California, Los Angeles, where she obtained a bachelor's degree in Physiological Sciences. She completed a year of basic science research at UCLA in the department of neurobiology. Dr. Luu obtained her medical degree at the University of Southern California's Keck School of Medicine and began her pediatric residency training at CHLA in 2013. She has served on the Accreditation Council for Graduate Medical Education as well as the Program Evaluation Committee at CHLA for the past 3 years. Dr. Luu has been intimately involved with CHLA's education track, where she has led several educational lectures during her residency. She has been accepted to the Children's Hospital Los Angeles Pediatric Emergency Medicine program, where she will start her fellowship in July 2016. Email: ciluu@chla.usc.edu

Lyons, Lance
Lance Lyons is a fourth year medical student at SUNY Downstate Medical Center in Brooklyn, New York. He has been involved in teaching for over six years, most recently with the Health Science Academy at the Arthur Ashe Institute for Urban Health and in his role designing the "Transition to Clerkship" student panels for SUNY Downstate College of Medicine. He plans on pursuing a career in ophthalmology while continuing his engagement in education.

Mantri, Sneha
I have a longstanding interest in effective teaching methods, particularly in relation to medical education. Between 2007 and 2012, I taught in a weekly science enrichment program for low-income teenagers. Using web-based and traditional resources, I independently developed lesson plans that turned abstract concepts such as disease transmission into hands-on learning for my students. In my final year of medical school, I was an instructor for the Clinical Correlates course, demonstrating physical exam techniques at the bedside to first-year students. My thesis project for the Master of Science in Narrative Medicine evaluated a component of Columbia's medical humanities curriculum by surveying medical students for feedback; from those results I generated a new model curriculum incorporating goals of both instructors and students, which was presented at the inaugural conference of the International Network of Narrative Medicine, in June 2013. Under the mentorship of Dr. Harrison and Dr. Charon, I have developed and implemented the narrative medicine curriculum for the neurology clerkship at the University of Virginia. I am also interested in the use of novel technologies in medical education and am developing a neurology question-bank app to allow residents to self-evaluate and guide independent learning. I intend to pursue a career in academic neurology, exploring the imaginative education of medical students as they transition into independent physicians.

May, Win
Dr. May is a Professor in the Division of Medical Education, and the Director of the Clinical Skills Education and Evaluation Center at the Keck School of Medicine. She is a Distinguished Faculty Fellow of the USC Center for Excellence in Teaching, and a member of the California Consortium for the Assessment of Clinical Competence. She is a member of the Association of American Medical Colleges (AAMC) Research in Medical Education (RIME) Planning Committee. She served as a member of the United States Medical Licensure Examination (USMLE) Step 2 Clinical Skills Test Material Development Committee for the National Board of Medical Examiners. She served as a member of the Advisory Committee of the AMA Learning Environment Study. She is a Co-Director of the Intersessions Course, teaches in the Introduction to Clinical Medicine (ICM) Program and has been a faculty mentor in the Professionalism and the Practice of Medicine (PPM) course since its inception. She is an instructor in the Masters of Academic Medicine and Faculty Development programs. She has worked collaboratively with the Institute of Creative Technologies to develop a virtual standardized patient. Prior to joining USC in May 2000, Dr. May worked for the World Health Organization (WHO) in Geneva, and in New Delhi. She was the founding Dean of the Institute of Nursing in Myanmar. Dr. May is a reviewer for medical education journals, and has written journal articles and book chapters in medical and nursing education.

McCarthy, John
John G. McCarthy, MD received his BS from Cornell University and his MD from Georgetown University School of Medicine. After completing his Internal Medicine Residency at Tripler AMC in Honolulu, he is serving as Chief of Medical Residents. Dr. McCarthy is Board Certified in Internal Medicine.

McDermott, Allyson
Allyson McDermott, MD, is a Third Year Categorical Pediatric Resident at Children's Hospital Los Angeles (2013 – present). She has been accepted to Fellowship in Pediatric Hospital Medicine at Children's Hospital Los Angeles beginning July 2016. She plans to pursue a Master of Academic Medicine degree through the University of Southern California. Her interest include medical eduation, family- centered care, and care of the acutely hospitalized child. She has authored several chapters of the USMLE Secrets series of review books. Dr. McDermott began her medical training at the University of Connecticut School of Medicine, graduating in 2013.
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Medina-Gonzalez, Yailis
Yailis M. Medina Gonzalez, MD, FACOG, assistant professor, Department of Obstetrics & Gynecology,
School of Medicine, University of Puerto Rico. She has Bachelors in Biology, followed by Medical Degree with specialty in Obstetrics and Gynecology of the School of Medicine, University of Puerto Rico. Graduated three years go from residency and now works for the program as a primary Ob/Gyn in a University-based hospital. Currently, her main areas of work are clinical, working in underserved areas and Level III hospital, and educational, supervising residents and medical students in the clinical setting. Developing multiple areas of interest, she assists the Ob/Gyn clerkship coordinator, participates in competencies committee for the residency program and is actively engaged in various research projects and mentoring programs to develop young faculty' abilities in research. The main focus of this project is to enhance the knowledge, skills and attitudes of the residents towards ob/gyn related topics.

Mhaskar, Rahul
Dr. Rahul Mhaskar trained as a physician in Pune, India. He earned his MPH in 2005 and Ph.D. degree in Public Health in 2010 in USA. Currently, Dr. Mhaskar serves as an assistant professor in comparative effectiveness research program; department of internal medicine, University of South Florida Morsani College of Medicine (MCOM). Dr. Mhaskar is actively engaged in undergraduate and post-graduate medical education at the MCOM. Dr. Mhaskar's main areas of research are comparative effectiveness, research ethics, decision analysis and medical education. Dr. Mhaskar has successfully collaborated with researchers across the globe, and produced several peer-reviewed publications, meeting presentations and book chapters. His work has been recognized by others in the field especially by the Cochrane collaboration. Dr. Mhaskar has received the most prestigious recognition in the field of evidence based medicine in the form of "The Thomas C Chalmers Award" from The Cochrane Collaboration in 2011.
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Michaud, Nicole
Nicole M. Michaud, MS, CCP, LCP, CPBMT is the Director of Cardiovascular Perfusion Technology at Vanderbilt University Medical Center. She is the developer and facilitator of the Perfusion Simulation Lab, Clinical Instructor, and Sole Didactic Instructor of the Cardiovascular Perfusion Technology Program which received a 10 year accreditation from CAAHEP in July of 2014. She played the lead role in the development of perfusion simulation lab and curriculum in the perfusion education program at the Medical University of South Carolina prior to joining Vanderbilt Medical Center. While at MUSC, she was honored to received "Teacher of the Year" and "Clinical Instructor of the Year" awards. Mrs. Michaud joined the Vanderbilt University Medical Center staff in October of 2012. Mrs. Michaud is a graduate of the Milwaukee School of the Engineering with a BS in Biomedical Engineering '94 and MS in Perfusion Science '96. Simulation and the immersion into a perfusion education curriculum has been an interest of Mrs. Michaud's since 1994.

Miller, Jamie
Jamie Miller is a second-year medical student at the University of California, Irvine School of Medicine. She grew up in Lake Forest, CA and attended University of California, Santa Barbara for her undergraduate studies. As an undergraduate, she explored her passion for global health by leading various health expeditions within Central America and East Africa. She spent a semester abroad in Monteverde, Costa Rica, where she studied tropical biology and conservation and conducted independent research on the foraging behavior of Nasua narica (white-nosed coatis). After earning her Bachelors of Science in Biological Sciences in 2012, she spent two years with the Trauma and Surgical Research department at Santa Barbara Cottage Hospital and assisted undergraduate student in their education as a group tutor in genetics and introductory biology. As a medical student, Jamie is heavily involved with administration and admissions. She serves on the executive board of Student Government as a class President, and is involved with the recruitment process for incoming medical students. She is a board member of the Flying Samaritans organization that serves the medical needs of Valley Redondo, Mexico, and she serves as the Vice President of Education for the Ultrasound interest group. In June 2015, she conducted ultrasound- based infectious disease and women's health research, and executed an ultrasound course for healthcare professions in Mwanza, Tanzania with other medical students.

Milton Pong, PhD
Milton Pong, PhD is an associate professor at A.T. Still University School of Osteopathic Medicine in Arizona. Dr. Pong received his Ph.D. in Physiology and Biophysics from the University of Washington in Seattle. His laboratory research has focused on the neural control of movement. After being a researcher at the Barrow Neurological Institute in Phoenix, he joined the faculty of ATSU-SOMA. His area of interest is physiology and the effective teaching of that material to osteopathic medical students in both in-person and distant modalities. He serves as the Vice Chair of the ATSU SOMA Admissions Committee.

Min, Jeff
Jeff Min is a graduate of Baylor College of Medicine and is currently a categorical internal medicine intern at Massachusetts General Hospital.

Molas-Torreblanca, Kira
Kira Molas-Torreblanca, DO, FAAP, is an Assistant Professor of Clinical Pediatrics at USC and a pediatric hospitalist at Children's Hospital Los Angeles. She graduated medical school from Western University and completed her post-graduate training and chief residency in pediatrics at the University of Nevada. She held a faculty position where she worked as a pediatric hospitalist at University Medical Center in Las Vegas, Nevada. She served as the associate pediatric residency program director there before relocating to California with her family. Currently she is involved in preclinical medical student education as a Professionalism and Practice of Medicine Course mentor and an Introduction to Clinical Medicine instructor at the Keck School of Medicine. She is also involved in 3rd year medical student education at CHLA while serving on the attending-only service. She currently serves as the Associate Program Director for the Pediatric Hospital Medicine Fellowship at CHLA. Her interests include curriculum development and quality improvement with regard to transitions of care. kmtorreblanca@chla.usc.edu.

Munir, Naeemah
Naeemah Munir is a second year medical student at UC San Diego and a cohort member of Programs in Medical Education- Health Equity. She is currently the director of community outreach and diversity for the student council class of 2018, co-president of the UCSD chapter of Student National Medical Association (SNMA) and founding member of Medical Students for Justice, student organization that works to create dialogue regarding social justice issues. Ms Munir received a BS and MPH in environmental studies and environmental health during a 5 year dual degree program at Emory University in 2012. Email: nmunir@ucsd.edu

Murray, Patrick
Patrick Murray, MD, is a first year family medicine resident at Bayfront Health St. Petersburg Family Medicine Residency. Dr. Murray graduated from Florida State University College of Medicine. He is an Arnold P. Gold Foundation Gold Humanism Member, awarded in 2014. He has interests in global health, academic medicine, and sports medicine. Patrick.murray@bayfronthealth.com

Nguyen, B. Sean
B. Sean Nguyen is a second-year medical student at the Keck School of Medicine of the University of Southern California. He co-founded and is the Director of the Keck Online Learning Initiative (KOLI), a department within the Office of Academic Support Services at the Keck School of Medicine that is creating content-focused, collaborative, online learning tools for current and future Keck medical students. Besides education, his other interests include medical technology and coffee. In 2013, Sean graduated from the University of California, Los Angeles with a major in Integrative Biology and Physiological Science and a minor in Global Studies. Email: baoseann@usc.edu

Noelker, Joan
Joan Noelker is a Clinical Instructor and Education Fellow int he Division of Emergency Medicine (EM) at Washington University in St. Louis. She was chief resident at the same institution, and is now a faculty member responsible for the EM resident simulation curriculum. Dr. Noelker also teaches several sections of the Practice of Medicine course for pre-clinical medical students, and is the faculty liaison the the EM Interest group. Her interests in education include simulation, transitions and remediation. Dr. Noelker received her medical degree from the Royal College of Surgeons in Ireland in 2010. Email: noelkerj@wusm.wustl.edu.

Nyquist, Julie
Julie G. Nyquist, PhD is a Professor in the Department of Medical Education within the Keck School of Medicine of the University of Southern California. She directs the Master of Academic Medicine program and Is Chair of the Innovations in Medical Education Conference for 2016. Dr. Nyquist joined the faculty in 1981 is co-chair of the school's Competency-Based Medical Education Committee and served as program evaluator for the medical student curriculum for 34 years. In the Master of Academic Medicine program she is the lead instructor for multiple courses. Dr Nyquist has given over 650 workshops and presentations on topics related to teaching, evaluation, career development, scholarship, and leadership to a variety of health care professions' faculty members. Dr. Nyquist has been the author or co-author on 14 federally funded education-related grants. Dr. Nyquist received her doctorate in Educational Psychology from Michigan State University in 1981. Email: nyquist@usc.edu

O'Neil, Amy
Amy O'Neil, M.D., M.P.H, is currently completing a fellowship in Simulation and Education at Hennepin County Medical Center in Minneapolis, MN and a student in the Master of Academic Medicine program at USC. The focus of her fellowship is on the development of simulation curriculum and design as well as resident education. She recently completed her residency in Emergency Medicine at Mayo Clinic in Rochester, MN. She completed medical school at the University of Wisconsin School of Medicine and Public Health in Madison, WI and graduated in 2012. Between her 3rd and 4th years of medical school, she received her master's degree in Public Health from the University of Minnesota- Twin Cities with a focus in emergency preparedness and disaster planning. She completed her undergraduate degree at the University of Wisconsin- Madison with a major in genetics in 2005. Email: oneil.amy.m@gmail.com.

Obadia, Sharon
Sharon Obadia, DO, associate professor of internal medicine, serves as director of faculty development, chair of clinical science education, and director for the Medical Skills course and at A.T. Still University School of Osteopathic Medicine in Arizona. Dr. Obadia is a member of the American Osteopathic Association, Arizona Osteopathic Medical Association, and Society of Osteopathic Medical Educators. She has completed the Fellowship in Teaching and Learning and Fellowship in Educational Leadership at the University of Southern California, Keck School of Medicine. Dr. Obadia currently serves as faculty adviser to multiple students groups, including the SOMA Health Disparities Interest Group. She also serves as an active mentor and role model through her volunteer activities, which include providing medical care to patients at Circle the City, Phoenix's post-hospital homeless respite center. A 1997 graduate of Kirksville College of Osteopathic Medicine, Dr. Obadia completed an internal medicine residency program at Banner Good Samaritan/Phoenix VA Medical Center, Phoenix, Arizona.

Oh, Jane
Assistant Pediatric Residency Program Director, Children's Hospital of Los Angeles. Dr. Oh received her medical degree from the University of Maryland Medical School, in Baltimore, Maryland. She completed her pediatric residency and chief resident year at Children's Hospital of Los Angeles. Dr. Oh is a faculty member of the Division of General Pediatrics and her areas of interest include resident education and development, resident handoffs, and pharmacy education.

Olson, Holly
Holly Olson, MD is a graduate of West Point and Vanderbilt University School of Medicine. She is Board Certified in Obstetrics-Gynecology and has served as Ob-Gyn Program Director and Director of Medical Education and Designated Institutional Official at Tripler Army Medical Center, Honolulu, Hawaii.

Park, Paula
EDUCATION Doctor of Pharmacy (Pharm.D.) Skaggs School of Pharmacy and Pharmaceutical Sciences, UC San Diego, La Jolla, CA Doctor of Philosophy (Ph.D.) in Biomedical Sciences, University of California at San Diego, La Jolla, CA Thesis: The role of pain and anxiety in the transition to opioid addiction Bachelor of Sciences (B.S.) in General Biology, University of California at San Diego, La Jolla, CA HONORS AND AWARDS 06/2010-06/2013 NIH T32 Traineeship 12/2009 Special Congressional Recognition for volunteer services on the USNS Comfort 06/2008, 06/2009 Skaggs Summer Research Scholarship SELECTED PUBLICATIONS 1. Park PE, Schlosburg JE, Vendruscolo LF, Schulteis G, Edwards S, Koob GF. Chronic CRF(1) receptor blockade reduces heroin intake escalation and dependence- induced hyperalgesia. Addict Biol. 2013 Dec 13. doi:10.1111/adb.12120. PMID: 24330252. 2. Park PE, Vendruscolo LF, Schlosburg JE, Edwards S, Schulteis G, Koob GF. Corticotropin-releasing factor (CRF) and α-2 adrenergic receptors mediate heroin withdrawal-potentiated startle in rats. Int J Neuropsychopharmacol. 2013 Sep;16(8):1867-75. doi: 10.1017/S1461145713000308. Epub 2013 Apr 16. PMID:23590881 3. Park P, Schachter S, Yaksh T. Intrathecal huperzine A increases thermal escape latency and decreases flinching behavior in the formalin test in rats. Neurosci Lett. 2010 Feb 5;470(1):6-9. doi: 10.1016/j.neulet.2009.12.033. Epub 2009 Dec 22. PMID: 20026382

Patel, Pruthul
Pruthul Patel, M.D. Resident physician, Internal Medicine and Pediatrics Keck School of Medicine of USC pruthulp@usc.edu Pruthul Patel graduated with a degree in Molecular Biology from the University of California at San Diego. He then attended the Keck School of Medicine of USC where he graduated with his Medical doctorate. Pruthul has been previously recognized for his outstanding leadership via the Oceanid's Service and Leadership Award and the Order of Areté. He was also recognized for his research in apheresis medicine by the World Apheresis Association with the Abel-Rowntree-Turner Young Investigator's Award. He is currently a first year post-graduate resident in combined Internal Medicine and Pediatrics and LAC+USC Medical Center. Upon completion of his residency training, Pruthul hopes to pursue academic medicine as a resident and medical student educator and Med-Peds hospitalist.

Pendergraph, Bernadette
Bernadette Pendergraph, MD is an Associate Professor at the David Geffen School of Medicine in the Department of Family Medicine and is also the program director for the Harbor-UCLA/Team to Win Sports Medicine Fellowship. Besides being the team physician for Gardena High School, Los Angeles Harbor College, and Southwest College, she also has expanded the curriculum in addiction medicine and pain management with Dr. Gloria Sanchez at Harbor-UCLA's Department of Family Medicine.
bpendergraph@labiomed.org

Petersen, Rebecca
Rebecca Y. Petersen, MD, Neonatal-Perinatal Medicine Fellow, Saint Louis University School of Medicine. Rebecca is a second year Neonatology fellow at Cardinal Glennon Children's Hospital. She splits her clinical time between the Level 4 NICU and the Level 3 NICU which is connected to the high risk birthing hospital. She has spent time doing basic science research using lamb models for premature ventilation injury. She has been either a student or resident at Saint Louis University since 2007. She has interests in educational research and curriculum development and would like to be involved in either medical student or resident education in the future. Email: ryoung@slu.edu or rypeters@usc.edu.

Pham, Tiffany
Tiffany Pham is a second year medical student at the University of California, Irvine. She attained her BS in Psychobiology at UCLA and studied neuroradiology and neural modifications in obstructive sleep apnea patients. She also attained her MS in Human Nutrition from Columbia University and studied metabolic consequences of obstructive sleep apnea. In July 2015, she traveled to Ethiopia to teach basic ultrasound to medical students at Ottona Medical School and conduct research on ultrasound education and surgery.

Pierre, Kimberly
The presenter is Kimberly Pierre, D.M., Faculty, College of Business, Houston Baptist University and Grand Canyon University. Previously, worked as an administrator at a college managing academics for campus locations. In this role, maintained academic oversight for all things related to campus academics to include faculty and dean hiring/development, enrollment and persistence, academic advising, escalated student issues (disciplinary, academic integrity, etc.), and student success initiatives. Worked in higher education for the past 10 years, both as faculty and administrator; however, previous experiences in industry as a government contractor and in credit and banking. Currently serves as an evaluator for an accrediting agency, as a grant reviewer for the Dept. of Education and Department of Labor and as a peer reviewer for a peer-reviewed journal. Professional goal is to work within a hospital or healthcare setting in medical education in addition to pursuing more scholarly and research opportunities in the field.

Plant, Jennifer
Jennifer Plant is an Assistant Professor of Pediatrics in the division of Pediatric Critical Care at University of California Davis Medical Center. She is the co-director of the third year Pediatrics Clerkship and the director of the fourth year Pediatric Curriculum. She is also an active member of COMSEP, the national Pediatric Clerkship Director Organization. Her interests include simulation based training and humanism, and she is actively involved in research on reflective practice.

Pong, Milton
Milton Pong, PhD is an associate professor at A.T. Still University School of Osteopathic Medicine in Arizona. Dr. Pong received his Ph.D. in Physiology and Biophysics from the University of Washington in Seattle. His laboratory research has focused on the neural control of movement. After being a researcher at the Barrow Neurological Institute in Phoenix, he joined the faculty of ATSU-SOMA. His area of interest is physiology and the effective teaching of that material to osteopathic medical students in both in-person and distant modalities. He serves as the Vice Chair of the ATSU SOMA Admissions Committee.

Posadas, Emerson
MD/MBA candidate at UC Irvine SOM

Prestwich, Brian
Brian Prestwich, MD, is an Assistant Professor of Clinical Family Medicine at the Keck School of Medicine of the USC. As Director of Primary Care, Family Planning Associates Medical Group, Prestwich is a clinician, administrator, and teacher with 25 years of experience caring for vulnerable populations. His work has focused on healthcare delivery and public policy with a focus on medical education reform to better prepare an interprofessional workforce to deliver the Triple Aim in medical homes caring for defined populations as part of an integrated Health Home. Dr. Prestwich currently chairs a Moving Healthcare Upstream work group of national experts in screening, risk stratification, and care bundle development to address social determinants of health in the primary care and Health Home setting. Expert Faculty for the First 5 LA-UCLA Oral Health Collaborative. A 1987 graduate of UCLA SOM and Family medicine residency in Ventura Country Medical Center 1987-1990.

Rice, Gail
Dr. Gail Rice is Director of Faculty Development at Loma Linda University and Professor in the School of Allied Health Professions. She has held professorial positions at four universities in seven schools and has graduate degrees in nursing, public health education, educational psychology and higher education administration and leadership. She serves on several editorial boards for professional journals and boards for professional societies. Dr. Rice developed expertise in testing through her service on the governing board of the National Commission for Health Education Credentialing, Inc., where her committee developed and oversaw the administration of the Certified Health Education Specialist exams over a five- year period. Gail is a member of the faculty for the Harvard Macy Institute Program for Education in the Health Professions and is presently consulting as adjunct faculty for faculty development for the Adventist University of Health Sciences in Orlando, Florida. Her present book project is on the topic of Lecture Pauses.

Rich, Alina
Alina is the Manager for Medical Education at the University of Colorado. Previously, she was the Residency Coordinator for Child Neurology. Alina received her Master's in Public Health from Mercer University and has been involved in Medical Education for over 9 years. She has assisted the Department of Neurology with creating a system of compensation for faculty involved in education as well as developed their alumni newsletter and various CME events.

Rich, Megan
Megan Rich, MD is an Assistant Professor in the Department of Family and Community Medicine at University of Cincinnati. She is the Associate Program Director for the Christ/UC FM residency program. Her roles include implementing and managing a variety of rotations as well as longitudinal curricula such as patient safety, determinants of health, core conference series, and physician wellness. Within UC's College of Medicine, she is the Course Director for the Longitudinal Primary Care Clerkship in which all 1st and 2nd year medical students participate. Her clinical responsibilities are limited to working in the hospital, supervising residents on their in-patient medicine rotation. Her professional interests are wide and varied, but include curriculum design, teaching to different learning styles, and programmatic evaluation. Dr Rich is currently enrolled in a faculty development fellowship to help her further develop her knowledge and skills in these areas.

Richter, David
After immigrating into the US from the Czech Republic I pursued education at the UC Davis where I graduated with a Bachelors in Microbiology. I have published two research papers with the Microbiology Dept at UC Davis during my undergraduate work and later while working full time as a research associate there. I continue to pursue higher education after enrolling at UC Irvine MD program. During my medical school I have also completed a Masters focused on Translational and Biomedical research there with Dr. Hoonpongsimanont as my mentor. Currently I am trying to match into Emergency Medicine and continue clinical research.

Robertson, Amy
Amy Roberson, MD is a graduate of the University of Wisconsin School of Medicine and Public Health. She completed her anesthesiology residency at Vanderbilt University. Dr. Robertson is actively involved in education and curriculum development for both medical students and anesthesiology residents. She is the Director of Medical Student Education for the Department of Anesthesiology, serves as course director of four clinical anesthesiology courses, and has been appointed as a Portfolio Coach for Vanderbilt's School of Medicine. Her activities within the anesthesiology residency program include functioning as a resident mentor and rotation director for the vascular-hepatobiliary anesthesia rotation. On a national level, Dr. Robertson is a member of the Medical Student Curriculum Committee for the Society of Education in Anesthesia and is an appointed member of the American Society of Anesthesiologists Abstract Review Subcommittee on History and Education. She is also a member of the Vanderbilt School of Medicine Academy for Excellence in Teaching and was recently presented with the Department of Anesthesiology's Golden Apple Award for Excellence in Teaching. Dr. Robertson and Leslie Fowler, MEd. received a Faculty Innovation Award from the Vanderbilt Institute for Digital Learning to develop interactive videos as an instructional technique for anesthesiology medical student courses.

Roepke, Clare
Clare Roepke is an Emergency Medicine Education Fellow at the Keck School of Medicine at LAC+USC Medical Center, working as a Clinical Instructor of Emergency Medicine. She is co director of the third year medical student Exploratory Elective at Keck School of Medicine of USC as well as co director of the fresh tissue dissection lab at LAC+USC for the Emergency Medicine residency. She has also been the Associate Medical Director for the Los Angele Marathon from 2011 to present. Her interests include medical student education, event medicine, and leadership in the care of trauma patients in the emergency department. She attended Temple University School of Medicine for medical school and graduated in 2011. She graduated from the Los Angeles County USC Medical Center Emergency Medicine residency in 2015 and was an education chief June 2012-2015. Email: clare.roepke@gmail.com.

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Sahyouni, Ronald
Ron is a medical student at the UC Irvine School of Medicine. He is interested in regenerative medicine, and in particular, the treatment of neurodegenerative diseases with stem cells. He graduated from UC Berkeley with a double major in neurobiology and psychology, and has been interested in exploring how the brain can regenerate itself, and how new therapeutic techniques, such as stem cell transplantations can enhance the brain's ability to heal itself.

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Arunava Sarma is a second-year medical student at the Keck School of Medicine of the University of Southern California. Her interest in medical education was piqued by past teaching experiences. As an undergraduate, she co-instructed a student run class on human centered design and innovation. During her year off she tutored high school students in math and science and taught supplementary biology classes. Currently, Arunava is a Coordinator at the USC Keck Online Learning Initiative (KOLI). Her other interest include infectious disease and innovation in design. Arunava received her Bachelor's degrees in Molecular and Cellular Biology and Public Health from University of California, Berkeley in 2013. Email: asarma@usc.edu

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Sharon Obadia, DO, associate professor of internal medicine, serves as director of faculty development, chair of clinical science education, and director for the Medical Skills course and at A.T. Still University School of Osteopathic Medicine in Arizona. Dr. Obadia is a member of the American Osteopathic Association, Arizona Osteopathic Medical Association, and Society of Osteopathic Medical Educators. She has completed the Fellowship in Teaching and Learning and Fellowship in Educational Leadership at the University of Southern California, Keck School of Medicine. Dr. Obadia currently serves as faculty adviser to multiple students groups, including the SOMA Health Disparities Interest Group. She also serves as an active mentor and role model through her volunteer activities, which include providing medical care to patients at Circle the City, Phoenix's post-hospital homeless respite center. A 1997 graduate of Kirksville College of Osteopathic Medicine, Dr. Obadia completed an internal medicine residency program at Banner Good Samaritan/Phoenix VA Medical Center, Phoenix, Arizona and has been board certified in internal medicine by the American Board of Internal Medicine since 2001.

Smeds, Matthew
Dr. Smeds is a board-certified vascular surgeon and the associate program director of the vascular surgery residency and fellowship training programs at the University of Arkansas for Medical Sciences in Little Rock, Arkansas. He is a fellow of the American College of Surgeons as well as a fellow of the UAMS Educator's Academy and sits on the Education Council of the Society for Vascular Surgery (SVS). He is involved in clinic outcomes and educational research, as well as being the site principal investigator for several national clinical trials in vascular surgery. He completed a bachelor's degree in biology with high distinction at the University of Nebraska and a medical degree at the University of Rochester. He obtained residency training in general surgery at the State University of New York in Syracuse and vascular surgery
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Khamphoucanh Southisombath, MD is currently a 3rd year Family Medicine Resident at White Memorial Medical Center. She is passionate about improving health care in underserved populations with a focus on empowering the youth of this community. She has participated and held leadership roles in numerous medical student and community organizations dedicated to teaching and mentoring such as Doctors Ought to Care, Band-Aid Brigade, Lao Parent-Student-Teacher's Association, PUSH, and UCSD Pediatric Asthma Clinic. As a resident physician, she is working on developing and implementing a high school based health literacy curriculum. Dr. Southisombath received her Doctor of Medicine Degree from the University of California, San Diego School of Medicine in 2013. Email: southik1@ah.org

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Shara D. Steiner, DO, MACM is a physician medical educator on faculty at University of Miami Miller School of Medicine and Florida International University College of Medicine. Dr. Steiner is an instructor in the Master of Academic Medicine program at USC Keck School of Medicine. She graduated from Nova Southeastern University College of Osteopathic Medicine in Ft. Lauderdale, Florida. She has presented her research in medical education nationally and internationally. Her areas of interest include: curricular design, implementation, and evaluation; faculty development; exploring the impact of professional relationships on teaching and learning; and small-group teaching. In her free time, she enjoys swimming/cycling/running, yoga, and spending time at the beach.

Stone, Jordan
Jordan Stone is a second year medical student at the UC San Diego School of Medicine. He graduated with a B.A. in Public Policy Studies from Duke University, where he also conducted clinical research and led organizational efforts to better understand and upend disparities in care delivery. After college, Jordan spent two years as a Senior Analyst in the Research and Insights division at the Advisory Board Company, a health care technology and consulting firm in Washington, D.C. His work there spanned all parts of the health system, with a focus on health system growth strategy. While there, he also led a pro bono engagement to develop a business plan for free clinics adapting to the post-Affordable Care Act environment, and spent significant time volunteering with Community of Hope, a non-profit supporting chronically homeless families in the region. Outside of school, Jordan works as a general and ophthalmology manager at the UC San Diego student-run free clinic, conducts ophthalmology research at Shiley Eye Center, and in his spare time, loves to practice yoga, play frisbee, and experiment in the kitchen.

Strohm, Maureen
Maureen Strohm, MD is the Vice President of Graduate Medical Education for the Far West Division of HCA (Hospital Corporation of America) with oversight of the development of multiple new residencies in various specialties, in several hospitals in Nevada and California. She is Clinical Professor of Family Medicine of Keck USC School of Medicine, where she had been on faculty over the past 3 decades. Her passion in teaching and patient care is interpersonal and communication skill development, serving as Director of Year 1 Introduction to Clinical Medicine from 1990-1995 before transitioning to Family Medicine Program Director at USC/California Hospital from 1995-2009. In the 5 ½ years prior to joining HCA, she was Founding Program Director for the Eisenhower Family Medicine Residency program in Rancho Mirage, CA. Over the years, she has been active in substance use education, developing and promoting patient-centered curricula for medical students, residents and practicing physicians to address early identification and treatment of patients with addictive disorders through the California Society of Addiction Medicine. In addition to board certification in Family Medicine, she is also board certified in Addiction Medicine. She is currently a student in the Master of Academic Medicine at USC. Email: mstrohm@usc.edu

Succi, Marc D.
A graduate of Harvard Medical School, Dr. Succi is currently a resident physician in radiology at MGH. He created 2 Minute Medicine as a way to keep current with high-impact medical literature while researching in a lab away from the hospital. Originally consisting of short self-composed study summaries, he built and scaled the organization to the present form after realizing that the need for objective, quality-rated and concise medical reporting spanned far beyond the quad. He directs the organization, codes, manages licensing/publishing operations and edits articles. Interests include medical education, publishing, device development, and healthcare operations. A Toronto native and graduate of Harvard Medical School, Dr. Succi also conducted research at MIT and has invented various medical devices from stem-cell transplantation hardware to interventional radiological tools. He has been honored on the Forbes Magazine Top 30 Under 30 in Science and Healthcare List, named one of the top Outstanding Young Entrepreneurs and Innovators by CEO World, won the MIT Thomson Reuters Data Prize, won the Massachusetts Medical Society Information Technology Award and awarded the Governor General's Medal.

Tabatabai, Ramin
Ramin Tabatabai MD, FACEP, is an Assistant Program Director in Emergency Medicine at the LAC+USC Medical Center and an Assistant Professor at the University of Southern California Keck School of Medicine. After completing his medical school training at the Medical College of Wisconsin, he moved to Los Angeles for residency at the LAC+USC Emergency Medicine program where he served as a chief resident before graduating in 2010. He returned to join the LAC+USC Emergency Medicine residency team in 2013 as an Assistant Program Director where he dedicates the majority of his time toward residency education, residency wellness, and resident procedural competency through his work in the cadaver lab. Dr. Tabatabai is currently a student in the Master of Academic Medicine program at USC. Email:
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Talbot, Thomas
Talbot is the ICT medical doctor. As a pediatrician, scientist and futurist, Talbot endeavors to create meaningful improvements that will advance the state of the art in medical education and patient care. Areas of interest include natural user interfaces, VR and augmented reality, virtual interactive humans and microcontrollers. He envisions a future where clinician education is a daily experience and where technology is employed to better engage patients. Through ICT, he is loaned to the U.S. Army to serve as chief scientist of the Armed Forces Simulation Institute for Medicine, a laboratory of the Telemedicine and Advanced Technology Research Center. Through these efforts, Talbot has created the nation's largest medical education focused research and development program. Impact areas include live tissue/simulator comparative science, assessment and maintenance of medical competency, game-based approaches to learning, virtual reality rehabilitation, and virtual standardized patients for learning. He is a veteran of the U.S. Army with wartime experience and was chief of academic computing for the U.S. Army Medical Research Institute of Chemical Defense. Talbot has more than 15 years of experience as a medical simulation developer. He authored the popular SIMapse Nerve Agent Laboratory and Nerve Academy applications. Current work is focused on creating a new generation of virtual patients, that are useful educational tools that real people can use and author.

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PATRICK Y. TAN, MD is an assistant professor in the Department of Undergraduate Medical Education and Center for Faculty Development at Shantou University Medical College, Shantou City, China. He teaches biomedical, clinical, and general education courses in the medical and nursing programs, and mentors Chinese faculty members assigned to teach medical courses in English. He received his medical degree from Remedios Trinidad Romualdez Medical Foundation, Tacloban City, Philippines, and is currently pursuing a master's degree in teaching at De La Salle University, Manila, Philippines. He does general practice whenever he is in his home country.

Thompson, Michelle
Associate Director, Pediatric Residency Program, Children's Hospital Los Angeles (CHLA), Dr. Thompson is a graduate of the University of Virginia School of Medicine in Charlottesville, VA. She completed her pediatric internship and residency training at CHLA where she is now active in the residency program leadership. She also manages a busy clinical practice as a member of the Division of General Pediatrics at CHLA. She is in her final year of the Master of Academic Medicine program at the Keck School of Medicine. Her academic interests include developing residents as teachers, and understanding how coaching can be used to develop self-directed learning skills.

Thwin, Eugenie
Dr Eugenie Phyu Aye Thwin is a lecturer from School of Health Sciences, Nanyang Polytechnic, Singapore. She graduated from Institute of Medicine (1), Yangon, Myanmar (Burma) in 1990 and she was recently conferred on Master of Medical Education from University of Dundee, United Kingdom. She has joined the School of Health Sciences since 2012 and teaches basic sciences subjects in nursing and allied health diploma and advanced diploma courses. She has vast experience of teaching the undergraduate and postgraduate medical students in Myanmar and Malaysia. Her interests in medical education include instructional strategies, assessment and interprofessional education. Email: eugenie_phyu_aye_thwin@nyp.edu.sg

Tieman, Jennifer
Associate Program Director, Research Family Medicine Residency, Clinic Director, Goppert Trinity Family Care (Family Medicine Residency based Family Practice Center) I primarily teach and supervise family medicine residents in multiple settings, outpatient, inpatient, obstetrics, home visits, procedures, as well as practice the full scope of family medicine part time in our family practice center. I particularly enjoy maternal-child healthcare, and the large component of anticipatory guidance and education that is involved in obstetric and pediatric care. I teach first and second year medical students at UMKC in the Fundamentals of Medicine course as a Docent group leader teaching patient centered medical interviewing, and teach 3rd and 4th year medical students from KCUMB and SABA on their core clerkships in obstetrics and family medicine. I also have an interest in medical ethics (I completed a fellowship in clinical medical ethics at the Maclean Center for Clinical Medical at the University of Chicago) and sit on the ethics committee at Research Medical Center. In particular, I'm interested in the doctor-patient relationship and ethics consultation. I'm currently the department chair for Family Medicine at Research Medical Center as well, which is the sponsoring hospital for our family medicine residency.

Toohey, Shannon
Shannon Toohey is a Multimedia Design and Educational Technology (MDEdTech) Fellow, working as a clinical instructor in the emergency department at UC Irvine. She completed medical school at UC Irvine School of Medicine, after which she completed her residency at the UC Irvine Medical Center. Her interests include asynchronous learning, flipped curricula, resident and patient education.

Trop, Justin
Justin is a second-year medical student at the Keck School of Medicine of the University of Southern California. He is originally from Pittsburgh, Pennsylvania and received his undergraduate degree in Biological Sciences and Global Health from Northwestern University in Evanston, Illinois. His professional interests include global health, preventive medicine, homeless health care, LGBTQ health disparities, mental health, and primary care. His most recent research is on the sociocultural dimensions of postpartum depression in Mongolia. He is currently part of the Longitudinal Clinical Community Medicine Experience Program at Keck, through which he rotates at the JWCH Center for Community Health in Downtown Los Angeles with Dr. Paul Gregerson. For the past two years, he has served as the Professionalism and Practice of Medicine Representative for his class, working closely with course directors and student groups to plan the first Homeless Awareness Week at Keck in April 2015.

Trost, Margaret
Margaret Trost, MD, is an Assistant Professor in the Division of Hospital Medicine at the University of Southern California, Keck School of Medicine. Since 2011 she has instructed Introduction to Clinical Medicine, teaching the art of the physical exam and history taking to junior medical students. She also supervises senior medical students, residents, and fellows as they care for pediatric inpatients at Children's Hospital Los Angeles. Her research interest is the reduction of pediatric pain and distress during the experience of hospitalization using novel advanced technologies, including socially assistive robotics. She was awarded an Institutional Career Development Award (Formerly KL2) to support this work in 2015. She is an active research mentor through the USC Salerni and Required Scholarly Projects (RSP) programs, and was awarded the Outstanding RSP Mentor of the Year award in 2015.
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Seth Trueger, MD, MPH, is a member of the faculty at the University of Chicago. He completed his residency in emergency medicine at the Mount Sinai School of Medicine in New York, and he completed a Health Policy Fellowship in the Department of Emergency Medicine at George Washington University. His areas of interest include emergency department crowding and payment reform, airway management, and social media for health professions, including quality assessment of social media educational resources, and he is the Assistant Social Media Editor for Annals of Emergency Medicine and Social Media Editor at Emergency Physicians Monthly.

Vincent, Dale
Dale S. Vincent, MD, MPH, MACM is Program Director in Internal Medicine at Tripler Army Medical Center in Honolulu, HI. After graduating from West Point, he received his MD degree from the University of Texas Southwestern Medical School at Dallas, MPH from the Uniformed Services University in Bethesda, Maryland, and MACM from the University of Southern California. He is Board Certified in Internal Medicine and Geriatrics, and has completed a Fellowship in Academic General Internal Medicine.

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Anne T. Vo, Ph.D., is Assistant Professor of Clinical Medical Education and Associate Director of Evaluation at the Keck School of Medicine of University of Southern California. As an evaluation researcher, Dr. Vo's substantive interests lie at the intersection of comparative evaluation theory, evaluation capacity building, and organizational development. Her work contributes to the field's understanding of how evaluation can be practiced better, where and how social science theory and evaluation science dovetail into each other, and how this knowledge can be leveraged to drive change. She has taught graduate-level courses on research methodology and design as well as special topics seminars in evaluation. Dr. Vo has published in journals such as the American Journal of Evaluation, Evaluation and Program Planning, and New Directions for Evaluation. She also serves as Editor of the American Journal of Evaluation's section on Teaching and Learning of Evaluation, Co-Chair of the American Evaluation Association's Research on Evaluation Topical Interest Group, and is Co-Director of the Southern California Evaluation Association.

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Welniak, Tedd
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Wiechmann, Warren
Dr. Warren Wiechmann currently serves as the Associate Dean of Clinical Science Education and Educational Technology at the University of California, Irvine, School of Medicine. He is responsible for directing the school's iMedEd Initiative - a comprehensive digital overhaul of the medical school curriculum that uses technologies such as the iPad and Google Glass as the catalysts for curricular innovation and reform. And since the launch of the iMedEd Initiative in 2010, Dr. Wiechmann has focused his academic interests on technology integration into education and clinical care, leveraging technology for patient education, personalized proactive health, the role of social media in medicine, and digital literacy for students and physicians. Dr. Wiechmann is the course director for the school's Health 2.0 and Digital Literacy Elective, Health Education and Innovative Technologies (HealthEdIT) Elective, and the Director of a new Multimedia Design and Education Technologies (MDEdTech) Fellowship through the Department of Emergency Medicine. He has been an invited speaker at AMSA, SXSWedu, TEDx, MedicineX, and the AAMC, and is an Apple Distinguished Educator. You can follow Dr. Wiechmann on Twitter: @warrenwiechmann

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Thilan Wijesekera attended the University of Rochester School of Medicine and Dentistry and is currently a PGY-3 at the Yale University Primary Care Internal Medicine Residency Program. He will be starting a fellowship in medical education at Yale University beginning in June 2016. He works closely with the Yale School of Medicine and its Teaching and Learning Center, leading interview skills and physical exam workshops for medical students while having won the “Power Day” award for the resident who best models the responsible, positive, and beneficial use of power in healthcare. His work in the Yale Internal Medicine Residency Program includes developing multiple curricula, giving noon conferences, and writing a chapter in the renowned Yale Office Based Curriculum. His primary interests include quality improvement and medical education with an attention to diagnostic error, physical exam, and feedback.

Wiley, Christi
Christi Wiley, MD, is a board certified Family Medicine physician. She earned her BA in Sociology at UCLA, and her medical degree from the Keck School of Medicine of USC. After graduating from residency, she worked in private practice before joining Kaiser Permanente in 2011. Her special interests include community medicine and medical education. Dr. Wiley is currently faculty in the Family Medicine residency program at Kaiser Permanente Fontana.

Wray, Alisa
Dr. Alisa Wray joined the University of California Faculty as the second Multimedia and Instructional Design fellow under Dr. Warren Wiechmann, during her fellowship she will pursue a Masters in Education, Multimedia and Instruction Design though Cal Poly Pamona. Dr. Wray grew up in rural San Diego county, she attended the University of California Irvine for her Bachelors of Science; she then attended Tulane University for her MD, and finally returned to UC Irvine to complete her Emergency Medicine Residency training where she was the Academic Chief of Educational Technologies and Simulation during which time she helped to develop and expand an online curriculum. Dr. Wray’s interests include resident and patient education, incorporation of technology into education, as well as graphic design and flipped curriculum development. Outside of medicine she enjoys spending time with her husband, baking cakes, playing with her two puppies and aerial acrobatics.

Yen, Christina
Christina is a two-time alumnus of USC, having first graduated from with her B.A. in Health and Humanities in 2010 and then her MD in 2015. She is now a first year resident in internal medicine at USC. With her interest in research, she has pursued a variety of projects including phase 1 clinical drug trials and two-month CDC epidemiology rotation in 2011 researching salmonella typhi’s global burden of disease. When she is not writing, Christina enjoys illustration and has had her work featured on papers and recently the Thieme Neurosurgical textbook. She currently hopes to pursue a fellowship in infectious disease and make medical education, especially teaching residents and medical students, a key part of her future career.

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Kenneth Young, MD, is a second year resident at the University of Chicago. He completed medical school at Loyola Stritch School of Medicine. His areas of interest include simulation, improving sepsis outcomes, and global heath, especially relating to water and sanitation. Kenyoung86@gmail.com

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Zarrabi, Yassi
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Zia, Stephanie K.
A three-time alumnus of USC, Dr. Zia received her B.A. in education in 1999, M.D. in 2003, and completed residency in Combined Internal Medicine and Pediatrics (Med/Peds) in 2007. She completed a Pediatrics Chief Resident year before joining the faculty in 2008. In addition to her duties as a Med/Peds hospitalist, Dr. Zia has a passion for mentorship and teaching. She is the Co-Course Director for Keck's Professionalism and the Practice of Medicine course, the Med/Peds Faculty Advisor, and Assistant Program Director for the Med/Peds residency program. She is an AOA member and received the Leonard Tow Humanism in Medicine award. She was selected the Class of 2007's Resident Teacher of the Year and achieved Master Teacher distinction in 2013. Currently, she is pursuing her Masters in Academic Medicine at Keck. Dr. Zia is deeply devoted to USC and its students, and loves inspiring her students to be lifelong learners. Email: zia@usc.edu