

**2014 Medical Education Day at Yale
ABSTRACTS**

Abstracts will not be included in the Medical Education Day at Yale 2014 printed program.

POSTERS

YNHH Rapid Response Team (RRT): Trainee Involvement

Sarah Apgar, MD, Gary Bouley, RN, Judy Petersen, MD, Michael Yoo, MD, Christopher Sankey, MD

Objective: To ascertain barriers and improve the involvement and education of medical and surgical trainees in RRT care at YNHH York Street campus during the 2013-2014 academic year.

Methods: Involvement of medical and surgical trainees in RRT care at YNHH has been identified as an area in need of improvement and the RRT Education & Huddles subcommittee was tasked with its further assessment. A survey was given to medical housestaff in the traditional internal medicine residency program at YNHH York Street campus. Responses were based on a 1-5 Likert scale. In addition, a roundtable discussion was held with surgical trainees to further identify barriers and issues.

Discussion: Trainees have expressed a clear and consistent desire to become more involved in the RRT process of care at YNHH. Housestaff identify that their role in RRT situations is unclear, with many narrative comments illustrating that residents feel left out or pushed aside during a RRT. Residents also believe, as we do, that RRTs provide an excellent opportunity for education and they would benefit from clarification and education in this setting.

Conclusion: Clarification of trainee roles and prompt notification of the need for the RRT is critical to appropriate function of the RRT. Educational sessions during orientation for new medical and surgical trainees are being planned, as are case-based discussions of RRT cases in housestaff learning venues on regularly scheduled basis.

A Novel Nighttime Curriculum For Yale Medical Residents

Andrew Berical, MD, Kristen Marrone, MD, Gregory Ouellet, MD, Jennifer Ouellet, MD, Dana Dunne, MD

Over the last several years there has been a gradual transition in medical training to include night float rotations in an effort to provide patient care while complying with ACGME duty hour restrictions. While this schedule allows for decreased work hours, studies have demonstrated that residents perceive less emphasis on education. In fact, one study demonstrated that residents had more positive perceptions of teaching while on day rotations. With the increased flexibility of the

night schedule, there is currently a unique opportunity to develop and implement a novel educational curriculum.

Given that a significant percentage of housestaff training will likely occur at night, we are developing a novel nighttime curriculum to improve the balance between service and education on night float rotations. We propose a live evening report at a predetermined time each night will allow night residents to gather and review cases from the wards. While rotating at night, residents have ample time for independent learning, and this educational plan will help to guide residents to pertinent topics. We also propose the development of 10 interactive cases geared toward interns during the first 6 months of their training. These cases would pertain to common clinical scenarios arising at night and would help interns develop a logical and evidence-based approach to these issues. The cases will be stored on the Yale Internal Medicine Residency curriculum website, which currently hosts other supplemental educational materials.

This pilot study will take place during the first six months of the 2014-2015 academic year. Prior to and after the initiation of this educational intervention, interns will be surveyed to assess the perception of educational value of night float without a formalized curriculum and confidence in responding to a series of standardized cross coverage issues. At the conclusion of these six months, data gathered from these surveys will be used to assess intern competence, success of the live evening report and case structure, as well as help identify areas of future direction.

Assessing and Improving Palliative Care Competencies in the Yale Internal Medicine Outpatient Curriculum

Nicole Bournival, MD, Catherine Adams, MD, PhD, Laura Morrison, MD

The important role of palliative care in the care for patients with serious or life-threatening illness is gaining more recognition. However, many internal medicine residency programs provide only limited exposure to defined palliative care curricular domains for trainees. We intend to evaluate the current Yale internal medicine residency outpatient curriculum of teaching cases for exposure to the basic palliative care content domains. The curriculum will also be evaluated against a newly released set of proposed national internal medicine residency palliative care competencies. We will identify gaps in specific content areas with the goal of creating new palliative care focused cases to address deficiencies in the current outpatient curriculum.

Boot Camp Pilot for Internal Medicine Clerkship

Dana Dunne, MD, Barry Wu, MD, Naseema Merchant, MD, Robert Fogerty, MD, Leora Horwitz, MD, Donna Windish, MD

Background: Yale School of Medicine is currently undergoing major curriculum reform. The clinical clerkship year is being redesigned to include 4 12-week clerkships and these concomitant, uniform start and stop dates will allow for “precedes” wherein didactic material or skills can be delivered to the group prior to embedding in their clinical rotations. The Internal Medicine Clerkship leadership designed day long “Boot Camp” to deliver important foundational material that was not being delivered elsewhere in the clerkship.

Methods: Clerkship leadership reviewed YSM Curriculum Redesign overarching Goals reports and current curricula as well as literature on highly functional organizations. Topics were identified that were uniquely suited to address areas not currently covered or covered inadequately in the clinical clerkship year. Faculty was recruited and content was delivered on day 1 of the clerkship. Students on three consecutive Medicine rotations (n=60) were given a survey at the end of Boot Camp answering questions about pre and post-session knowledge and/or level of comfort for each topic delivered. Surveys were reviewed and answers averaged and pre and post session self-assessment was compared for each session and boot camp. Additionally, comments were solicited regarding students’ perceptions of session utility.

Results: Six topics were identified for inclusion in the Boot Camp that reflected curriculum redesign Goals and addressed attributes of highly functional organizations: 1) Clinical Skills: History Taking; 2) Evidence-based medicine; 3) Handoffs and Sign outs; 4) Patient Safety and Quality; 5) Day-in-the-Life (practical tips and systems flow); 6) Patient Experience. For the first three blocks of clerkship the Boot camp was done on the first day of the second 4-week inpatient block.

Approximately 100 third year medical students and 30 second year PA students have participated in the Boot Camp pilot this year. The survey was administered during the first 3 blocks. 60 mixed medical students and PA students were surveyed. Overall the sessions were very well perceived. The topics that students felt most perceived growth included 1) Patient Safety and Quality (scores pre: 2.4, post 3.95; difference= 1.55) and 2) Handoffs and Sign Outs (scores pre: 2.04, post: 3.66; difference = 1.62). Typical comments included “I liked having the Boot Camp session mid-clerkship because I understand more what was going on and had fundamentals down”; “Before we had this session I thought it was odd that we weren’t going to be taught whatever these sessions contained until we’d blindly stumbled through 4 weeks of internal medicine. After today, I really think the presentations were much more meaningful against the backdrop of my experiences on Med 1. It’s an important series of lectures and discussions either way, and there is something gained from doing it immediately but perhaps a more meaningful impact if held until we’ve had some experiences on the floors. I liked it this way but just be sure to hold it in some form.”

Conclusion: The Boot Camp was an acceptable and effective venue to deliver high-quality generalizable information not obtained in other times during medical training. Further work should be done to refine topics and delivery techniques.

Pain and Addiction Education: A Comparative Survey of Fellowship Directors in Pain Medicine and Addiction Psychiatry

Ellen Edens, MD, MPE, Beth Grunschel, MD, ScM, Inbal Gafni, MD, Brian Fuehrlein, MD, PhD, John Encandela, PhD

Introduction: Despite growing evidence of clinical overlap between chronic pain, mental illness, and opioid misuse and addiction, there is limited consensus among fellowship training programs in Pain Medicine (PM) and Addiction Psychiatry (AP) about what competencies must be developed. We conducted a study of U.S. training directors in PM and AP to identify themes and build consensus that may confirm need for and inform a new curriculum.

Methods: We designed and distributed a survey (after acquiring IRB exempt status) through Survey Monkey to all 140 fellowship directors of identified ACGME-accredited PM (N=95) and AP (N=45) training programs. The survey included quantitative and qualitative questions focused on curricular content such as clinical, didactic, and research opportunities, as well as institutional resources and barriers. Using descriptive statistics, we compared the two specialty responses and performed content analysis on qualitative answers to reach consensus about categories and themes. Additionally, we conducted a focus group of 5 intentionally selected AP fellowship directors. We compared focus group themes and findings with those from the surveys.

Results: Thirty PM (32%) and 28 AP (62%) program directors responded to the survey. Despite roughly equivalent past training in the co-occurring condition, AP programs were more likely than PM to require any clinical rotation in the management of chronic pain and addiction (64% v. 13%) and to deem it “very” or “extremely valuable” (82% v. 57%). Several themes emerged from the narrative portion and the AP focus group. First, PM and AP fellowship directors have somewhat different perceptions about importance in cross-training. Second, barriers to implementation of cross-training are different between PM and AP. Focus group findings suggested that APs may resist promoting a formal curriculum given that psychiatrists are generally wary of “owning” the pain diagnosis. Finally, the focus group showed a lack of awareness of what other programs are doing around training fellows in issues of pain.

Conclusions: PM physicians largely practice in a specialty referral setting and are primarily interested in minimizing risk, identifying addiction, and making appropriate referrals. Curricula that emphasize a collaborative model between AP and PM may be particularly valuable. APs often play a more generalist role than PM where referring patients is often not an available option. APs are being called on to help manage patients with co-occurring conditions. Agreement on the most important curricular elements to present to fellows would be beneficial. Given the wide variation in resources throughout training programs, there may be a strong reason to develop a centralized, “at-minimum” didactic curriculum.

Test Anxiety and Anxiety Reduction among Step 1 Test-Takers

John Encandela, PhD, Crystal Gibson, MPH, Michael Green, MD, Gary Leydon, MA, Nancy Angoff, MD

Many medical students experience test anxiety, which may impair their performance on examinations. We studied the relationship between test anxiety and USMLE Step I scores and determined the effect of a test-taking course on anxiety and USMLE scores among 2nd-year medical students at Yale. We have presented the quantitative results of this study in other venues (NEGEA, Ottawa Conference), and we will briefly summarize these results for this poster as background information. We have not, however, presented findings from the rich qualitative information we gathered from 93 second-year students in 2013. This poster will concentrate on a summary of these narrative results.

Qualitative data were gathered at 3 stages (pre-intervention; post-test-taking course intervention; and post-Step 1 exam). Questions that prompted narrative answers involved experiences that students have had with test anxiety in the past as well as in preparation for Step 1; strategies that they may have used successfully to address this anxiety; perceptions of the test-taking course among course participants; and other comments that students might want to make about test anxiety and “high-stakes” test taking. Narrative answers entered by students into a software program (Qualtrics), then, were organized in Word-document transcripts. Two investigators independently coded the transcripts; organized their coding by general concepts or categories; discussed codes and agreed on a provisional coding frame; independently re-coded transcripts and met again to compare codes. They identified the like and different coding results and determined the inter-rater reliability to be .68 (kappa), which is an adequate level of reliability. They also reconciled differences in coding and reached consensus on a final coding scheme, which permitted them to derive major themes and findings from the narrative comments.

Major themes and findings of the narrative data concerning test anxiety were organized by three large categories: Causes of anxiety, effects of anxiety, and strategies for managing anxiety (including recommended strategies for future test takers). Causes all related to cognitive activities (or “self talk”) that students performed while studying for and taking the Step 1. Self talk focused on the high stakes of the Step 1 exam; prior academic performance; time constraints for study; or academic comparison with peers. Effects of anxiety had to do with stressors on emotional well being; cognitive functions; or physical well-being. Strategies to manage anxiety involved socializing with others; cognitive exercises; or physical self-care. Findings regarding the test-taking course included satisfaction levels and perceived usefulness of the course and recommendations for future courses on test-taking and anxiety reduction. These results will be summarized and representative quotes will be provided to support the findings.

Improving Teaching of Critical Thinking in Ophthalmology Module

Susan Hall Forster, MD and Janet Hafler, EdD

The project focuses on techniques to improve the small group sessions in the 2nd year Ophthalmology Module. We video taped three faculty members while conducting small group sessions in this year's module and had those faculty view their own videos then reflect on the curriculum and on their own teaching. Major challenges discovered included lack of prep time, student engagement, and quantity of material to be covered. In conclusion, we plan to introduce tools to help seminar leaders including names tags, a student engagement tips document, Quizzler as the unique format for presentation in class, as well as some changes to curriculum and faculty training and composition.

Extreme Makeover: Classroom Edition!

Alexandria Garino, PA-C, MS, Christie-Bell Garcia, MS, Sarah Hamilton, MA

Description: As part of an Introduction to Research course for Fordham University's Contemporary Learning and Interdisciplinary Research program, 3 doctoral students facilitated a workshop and collected data at the EduCon 2.5 conference in January 2013. Workshop participants (n=20) were diverse educators from across the U.S. Participants were asked to share their ideas about the use of space and to help design a classroom to support 21st century learning.

Participants were first asked to consider 1 traditional computer classroom and 1 newly designed high technology classroom. After discussion, the educators were asked to form small groups and to collaboratively imagine and draw an ideal learning space. Each drawing was considered and discussed by the larger group. Group comments were recorded and analyzed, and common features of the drawings were likewise analyzed. Fordham University's IRB approved the project. Findings are presented in this poster. Participants unanimously agreed that collaboration is an integral part of 21st century learning and is important for mastery of content at all education levels. Collaboration must be supported by technology. Classroom and virtual space must be easily converted for different uses, users, and teachers. The ideal learning space is a modular, flexible space that must accommodate individual and group work within the same space. Teacher and learner mobility is important. Common features of the drawings included workstations that can be arranged as pods and easily separated to accommodate individual work and lectures. Workspaces should accommodate both computer and "old-fashioned" paper work. Natural light and setting were thought to be important as well.

Geriatric Evaluation Instrument

Chandrika Kumar, MD

Internal medicine residency programs must teach and evaluate geriatric medicine skills, given the significant proportion of older adults cared for by internists. The general evaluation form for our Acute Care for the Elderly unit proved inadequate, both because it failed to capture specific geriatrics skills and the numerical rating scale had poor construct alignment. In keeping with competency-based medical education, we developed an instrument that consists of a series of developmental milestones in four geriatrics competencies. Each milestone is represented with a detailed iconic narrative description of resident performance. The terminal milestone reflects our expectations for a graduating resident. The competencies, which reflect the learning objectives of the rotation, include:

- 1) Perform geriatric assessment, including assessment of function, mobility, cognition, fall risk, nutrition, and polypharmacy,
- 2) Negotiate and implement goals of care with older adults and their families,
- 3) Work effectively with interdisciplinary teams, including physician assistants, therapists, pharmacists, and nurses and
- 4) Safely oversee transitions of care for hospital to non-hospital settings.

Faculty supervisors are instructed to synthesize all their evaluation observations over the course of the month in determining the residents' progression along the series of developmental milestones. They also write specific examples of performance to "justify" their rating. We have successfully implemented the instrument on the acute care for the elderly unit and this is now available on PogoE (Portal of Online Geriatric Education) for other institutions to use.

The Addiction Leadership Workshop: Transitioning Residents from "Accidental" Leaders to "Intentional" Leaders

Donna LaPaglia, PsyD

Currently there is a call to integrate the *science of addiction medicine* with the *principles of effective management*, so that healthcare leaders in the field of addiction can more effectively serve their patients and teams. However, formalized leadership coursework is absent from most graduate medical education, and yet all residents are expected to take on leadership responsibilities (e.g., when delivering patient care, when managing teams, and when teaching and mentoring other residents). In addition, evidence suggests formal leadership coursework *increases physician confidence, job satisfaction, improves leadership and team functioning, and leads to better patient outcomes*.

This course is intended to address the need for formal leadership training by offering addiction fellows the opportunity to advance leadership ability through engaging in self-reflection and by cultivating self-awareness. Through this process, medical residents shift from being "*accidental*"

leaders (in which they are given leadership responsibilities without leadership training) to “*intentional*” leaders by developing and implementing their leadership identities.

Evaluation of a Flipped Curriculum Approach to Designing a Clinician-Performed Ultrasound Pilot for Medical Students

Rachel Liu, MD

Clinician-performed ultrasound (also known as bedside ultrasound or point-of-care ultrasound) has been shown to improve standard of care for procedural guidance, hasten diagnosis and dramatically alter treatment decisions, reduce hospital cost and patient lengths of stay, and has become a core application for multiple specialties. Many point-of-care ultrasound leaders believe that teaching this skill that allows students to see anatomic, physiologic and pathologic concepts in live motion will help them integrate basic science knowledge in a very interactive innovative way. It enables them to incorporate critical decision-making skills earlier in their formative years, improves their physical diagnosis and, overall, produces physicians able to better utilize resources and provide the best patient care.

At the Yale School of Medicine (YSM), the Emergency Ultrasound Section performed a pilot study teaching ultrasound to 16 of the current MS-1 class. These 16 formed 4 PCC (patient clinical competency) groups that provided a format for teaching hands-on skills to the students. As the YSM curriculum is already tight, students received didactic “lectures” by using a flipped curriculum asynchronous learning approach coordinated with their anatomy lab topics. Each week, they watched open-source modules that have been developed by national organizations (the American College of Emergency Physicians, the Society of Academic Emergency Medicine, the Society of Ultrasound in Medical Education) who support the #foamed movement. To ensure compliance with watching modules, they also completed weekly quizzes. Bi-weekly, emergency ultrasound faculty taught them hands-on skills corresponding to their anatomy labs, the modules and their physical exam topics.

For this proposal, we would like to demonstrate our findings, the most important of which are: the students thought that ultrasound teaching gave them a better understanding of basic sciences and physical exam over their peers and should be continued throughout the whole longitudinal curriculum. It also showed that the flipped curriculum approach worked, but some students would prefer a route to be able to ask questions in real-time. This suggests that there is a role for specific YSM-developed video modules and quiz questions, which fits with the current Educaster and The Learning Center Qualtrics projects.

Medical Students as Primary Care Providers: An Integrated Medical Student Clinic that Offers a True Longitudinal Primary Care Experience

Rebecca Liu BS, Serene I. Chen AB, Pinar Oray-Schrom MD

Introduction: Longitudinal clinical care experience is a rarely-met need in medical school education. The Wednesday Evening Clinic (WEC) at the Yale New Haven Hospital adult Primary Care Center (PCC) is a student clinic that addresses this need. It aims to: 1) Provide Yale medical students opportunity for a longitudinal clinical outpatient experience; 2) Offer students the opportunity to care for their own patient cohort and function as primary care providers (PCPs); 3) Provide outstanding medical care for an underserved patient population. The WEC is a student-staffed, fully integrated clinic in the adult PCC of Yale-New Haven Hospital. It was founded in response to medical students' desire for a longitudinal clinical experience. This experience provides insights into disease courses and opportunities for building patient-provider relationships, which are of increasing importance given the rise of chronic diseases and demand for primary care. Each Wednesday, 15 medical students beyond their 3rd year participate. Weekly attendance over one year ensures a longitudinal experience and satisfies the primary care clerkship requirement. Modeled after group practice, students are divided into three patient care teams, each supervised by a designated faculty attending and rotating volunteer attendings from the Yale and New Haven medical communities. As PCPs, students perform general health maintenance, chronic disease management, age-appropriate screening, counseling and patient-care coordination. Follow-up beyond clinic hours is also required. The WEC is supported jointly by Yale-New Haven Hospital and Yale School of Medicine.

Methods/Results: We surveyed WEC students from 2008-2013 on their experience and patients on their clinic perception and satisfaction. Throughout 2008-2013, over 60 medical students have served in the WEC. Student survey indicates that the WEC provides a unique longitudinal clinical experience, not found in the traditional medical school curriculum. WEC allows students to follow disease courses and management outcomes over time, and provides levels of autonomy and responsibility unmatched in traditional rotations. Students unanimously report increased comfort in providing ambulatory care after participating in the WEC. Lastly, 38% of WEC graduates pursued residency in primary care specialties versus 33% among non-WEC graduates.

Conclusion: Unlike other free or urgent care student clinics, the WEC is fully integrated into a well-established PCC of a teaching hospital, enabling students to follow results and care over time. The WEC is a unique experience in terms of degree of responsibility, ownership, and longitudinal exposure to patient care, with students functioning as PCPs. The WEC fulfills primary care clerkship requirements, an innovation that builds structure for regular feedback and evaluation.

The WEC is possible and sustainable by support from Yale School of Medicine, Yale-New Haven Hospital and dedicated volunteer attendings. Billing from encounters contributes to covering facility and staff costs. However, the long-term financial sustainability of the clinic depends on the overall financial health of the Yale-New Haven Health System. While similar opportunities are presently rare, this model can be scaled and implemented elsewhere, especially in light of increasing demand for primary care training.

The Yale Global Mental Health Program: An Experiential Educational Intervention for Teaching in Global Mental Health

Carla Marienfeld, MD, Robert Rohrbaugh, MD

Introduction: Interest in global health has grown among trainees, but there is little data on the impact of a global mental health program (GMHP) on residency training or the residency program.

Methods: The authors compared department of psychiatry residency program curriculum and electives related to GMH, faculty and trainee's international health experiences, faculty mentorship, resident scholarly activity, and funding for global mental health projects for a period of three years before and three years after initiation of a GMHP. They also surveyed residents to determine whether the existence of the GMHP was a factor in their decision to join the residency program.

Results: The establishment of a GMHP was associated with a significant increase in the core curriculum sessions devoted to GMH, the number of funded resident international experiences in GMH, and mentored resident scholarly projects related to GMH. In addition, a new GMH elective was begun. In order to fund these experiences, five new funding sources for GMH related academic activities were identified. Establishment of a GMHP did significantly affect recruitment with new residents reporting the existence of a GMHP as a factor in their decision to join this residency program.

Conclusion: In one residency program, establishment of a formal GMHP has been associated with increased attention to GMH in the core and elective curriculum, the selection of resident academic projects, and has been a significant factor in the recruitment of new residents to the program. Development of new funding sources was required in order to provide these academic experiences.

Yale Internal Medicine Resident as Teacher Group

Kristen Marrone, MD, Geoffrey R. Connors, MD, Jadwiga Stepczynski, MD, Dana Dunne, MD

Clinical education has long been regarded as a strength of the Internal Medicine Residency Program at Yale-New Haven Hospital, though formal training in educational theory and structured resident skill development has been limited. In addition, there are many residents interested in improving the educational output of the residency program while also beginning their own careers in medical education. However, a comprehensive forum for these residents did not exist.

In January 2012, a resident interest group dedicated to promoting, strengthening, and learning about clinical education was founded. The original structure of the meetings was focused on introducing interested participants to the skills and tools necessary to become a strong clinician educator. Subsequently, it has expanded to include active teaching opportunities and didactics in clinical education, as well as educational scholarship, by focusing on research implementation

within the residency program. This is achieved through monthly evening sessions. The first half the session consists of a senior educator leading the group through an educational exercise or learning activity, while the second half involves one or more residents presenting their own work to their peers in a “research in progress” format for critical review.

Educational topics have included sessions on giving and receiving feedback, critical observation skills, Bloom’s Taxonomy, presentation skills for various venues (large group vs. small group, on rounds vs. in classroom), and the use of technology in medical education (specifically, effective use of PowerPoint for presentations). In the past year many active research projects have emerged and are ongoing including 1) the development of a Clinician Educator Distinction for the residency, 2) best implementation model for teaching the One-Minute Preceptor in the ambulatory setting, 3) nighttime curriculum development for the Residency program and 4) teaching scripts for physical diagnosis rounds in the CCU, among others. Future areas of direction include expanding teaching opportunities for residents, creating an evening Symposium series, and formalizing a hospital-wide resident medical education curriculum across all disciplines. Overall, the unique focus on scholarship and research that has served as the foundation of this group has been well received by the residents, as it is consistently well-attended and continues to produce novel educational projects that will serve as the cornerstone of the group going forward into the next academic year.

The One Minute Preceptor Method at Work in The Primary Care Center

Kristen A. Marrone, MD, Jadwiga Stepczynski, MD

The One Minute Preceptor (OMP) method is a commonly used teaching tool in medical education. Our project is currently evaluating the most efficient and successful approach to implement the OMP method into ambulatory education at the Yale Primary Care Center (PCC). All residents who currently have continuity clinic at the PCC were randomized to one of 4 interventions. The intervention focuses on the quality and quantity of exposure to the OMP method that all senior (Post Graduate Year-3, (PGY-3)) residents are provided by PCC attendings. Teaching of the OMP method was delivered in a bolus (a single one hour teaching session) vs. drip (two half hour sessions spread out over two weeks) fashion. The teaching intervention was also randomized such that the material was delivered either in a structured or vague fashion. Thus resulting in a 2 x 2 design such that one group received a bolus structured intervention; one a bolus vague intervention; one a drip structured intervention; and one a drip vague intervention.

We are currently collecting real time feedback and evaluation of each PGY-3’s use of the OMP method in clinic. We hope to determine which intervention provides the most use of the OMP method in clinic, and to show that increased use of the OMP method leads to increased junior resident satisfaction with ambulatory teaching.

The Association between Resident Reflection Rounds and Resident Emotional Distress

Kristen Marrone, MD, Kathleen M. Akgün, MD

Medical residents frequently address end of life (EOL) decision-making and face difficult patient and family interactions during training. EOL and difficult interactions may contribute to resident emotional distress (RED), which is associated with core features of burnout. Formalized debriefing during training may alleviate RED symptoms. We asked if symptoms associated with RED change after implementing formal debriefing sessions with Resident Reflection Rounds (RRR). All Yale-New Haven Hospital Internal Medicine housestaff are invited to participate in RRR, one-hour sessions scheduled approximately every four weeks at Yale-New Haven Hospital and the West Haven VA Hospital. RRR are moderated by volunteer faculty who are asked to focus housestaff reflection on EOL and difficult interactions. Housestaff were asked to complete confidential surveys prior to RRR implementation (October 2013) and after six sessions were completed (April 2014) through the group listserv. Both surveys included demographics, prior training and debriefing experiences and RED-related symptoms and attitudes towards debriefing using Likert items. Participants were also asked to provide free text feedback on RRR. Characteristics and experiences of survey participants were compared using chi-square. Responses to Likert items were dichotomized based on level of agreement. Responses were measured as present if the respondent answered agree or strongly agree. All others were treated as absent. Preliminary analysis suggests that RED is common among Yale-New Haven Hospital Internal Medicine housestaff, that RRR were positively received but that RRR may not change RED-related symptoms among trainees. Future studies are needed to identify strategies to minimize RED and physician burnout in order to foster a positive work environment and achieve physician retention.

A Department Wide Initiative to Promote the Practice of Bedside Teaching Rounds

Naseema Merchant, MD, FCCP, FACP, FHM

Background: Bedside teaching rounds have decreased over time. Bedside teaching rounds have many potential benefits for patients, trainees and attending physicians. Studies have shown that trainees and attending physicians perceive many barriers to bedside rounds and those perceived barriers have played a key role in the currently observed low trend in rounding at the bedside.

Goal: The goal of this project is to improve the frequency and efficacy of bedside teaching rounds for inpatients on Medicine teams.

Objectives of this project are as follows:

1. Understand the perceived barriers to bedside teaching rounds amongst trainees and attending physicians.
2. Develop a process to conduct an efficient, educational and patient centric model of bedside teaching rounds.

3. Develop a trainee and faculty development program to improve the understanding of the value and the actual practice of bedside teaching rounds.

Methods: An anonymous electronic survey questionnaire on the published perceived barriers and advantages of bedside teaching rounds was administered to all Internal Medicine residents as well as students and attendings that rotate on inpatient teams. The results suggested that though most trainees reported had high educational and patient care value with bedside rounds, only a fraction of the trainees preferred this as the mode of rounds, the rest favored hallway rounds, conference room rounds or a combination. The attending physicians had mixed responses to the barriers and advantages of bedside teaching rounds but overall responses were positive towards bedside teaching rounds. Based on the results of this survey and review of literature, we developed our own model for bedside teaching rounds which will be taught at the new intern and new resident orientation at the beginning of each academic year. Teaching strategies will include didactic lectures, small group, videos, home study material and quick reference cards for use on rounds. Mentorship and coaching to junior faculty and trainees will be provided by several faculty champions. A follow up post intervention survey questionnaire similar to the initial pre intervention survey will be administered again to trainees and attendings to assess their perceptions following a comprehensive educational intervention to promote the practice and understanding of bedside teaching rounds.

Conclusions: Bedside teaching rounds are extremely valuable in medical trainee education and patient care. We hypothesize that the establishment of a comprehensive educational and mentorship program to promote the understanding and practice of bedside teaching rounds will positively impact trainee education in the area of history taking and physical diagnosis, professionalism, humanism, patient doctor interaction, patient satisfaction with overall care. Furthermore, these rounds have the potential to enhance the skills of attending physicians as bedside teachers. Future studies will be needed to understand and quantify the impact of this intervention on trainee education, patient satisfaction and metrics of health care delivery.

Team Based Learning & Interactive Approach Foster's Resident Engagement & Interest in Research Methodology & Concepts

Lubna Pal, MBBS, MRCOG (UK)

During informal group discussions, Obstetrics & Gynecology residents at Yale have expressed a need for modification in teaching methodology on research related concepts so as to engage the learner, as well as an interest in a structured research curriculum. We share perceptions of Obstetrics & Gynecology residents on their experience with a pilot pedagogical approach to learning clinical research & methodology through a combination of strategies that aim at engaging trainee as active participant in the learning process.

Summary of the Teaching Contribution of Faculty During the Appointments and Promotions Process at the Yale School of Medicine: A Pilot Study

Ismene Petrakis, MD, Janet Hafler, EdD, John Encandela, PhD, Richard Belitsky, MD

Background, Challenge or Opportunity: Appointments and Promotions Committees in medical centers often have difficulty appraising faculty contributions of teaching as there are not well developed guidelines for what constitutes adequate and exemplary teaching. This stands in contrast to research contributions, which are well defined and widely understood by promotions committees. Yet teaching is required in most tracks, and educational scholarship is a key area for promotion within the Clinician Educator track.

Purpose/Objectives: The Yale School of Medicine Teaching and Learning Center (TLC) was established in 2012 to provide expertise and innovation in educator development in order to foster excellence in education at the Yale School of Medicine. This pilot study is designed to capitalize on the expertise of the TLC, which in conjunction with the academic department will evaluate the teaching contribution of faculty members who are being considered for promotion. A summary letter about the applicant's teaching will be provided to the Chair and be used in the package presented to the Appointments and and Promotion committee.

Methods/Approach: A qualitative research design will be used to analyze the evidence for appointments and promotion purposes regarding teaching performance. *Sample:* A convenience sample of 4 departments was selected, including 3 clinical departments and a basic science department. The Chair of each department was contacted and asked to identify one faculty member who was being considered for promotion during this academic year. *Analysis:* A document analysis according to Miles and Huberman will be conducted. *Results:* A summary letter will be generated for each faculty member for the Chairman to include in the appointment and promotion package.

Outcomes and Evaluation Strategy: This pilot includes (1) an assessment of the time and resources required to analyze teaching data and compile the letters, and (2) consideration of the usefulness of this letter to the Chair and to the appointments and promotions committee. The next step would be to expand the pilot to more candidates and to other departments during the next academic year.

Faculty Development to Acquire Effective Communication Skills: Tailoring Our Communication to Best Suit Our Patients

Andrew Putnam, MD

In our diverse academic medical community, faculty, residents and students are faced with the need to tailor communication with patients to address their actual understanding of their health and their care. To address this, we have developed a program to improve resident and attending communication skills in order to enhance patient-centered care at the hospital. Addressing patient-centered communication skills is important in faculty development at our home institutions, given

an increasingly diverse faculty, resident, and student body. In an interactive session, teaching strategies and skills will be examined through the construct of the communication skills literature. Deliberate decisions around how to tailor our communication will be discussed. The purpose of the workshop is to have participants explore proven strategies for engaging faculty, residents, fellows and students in using appropriate communication skills during a patient/doctor interaction. In this interactive workshop the participants will explore how faculty, residents and students learn to develop effective communication skills.

Using a Small Animal Lab to Develop Clinical Skills

Rita A. Rienzo PA-C, MMSc

Traditionally, pre-clinical students are taught clinical skills in a series of workshops and labs dedicated to teaching individual specific skills, such as knot-tying workshops, suturing sessions or injection labs. In an effort to integrate and reinforce students' skills, we developed a Small Animal Lab that enables students to practice multiple skills in a forum that more closely resembles an actual clinical setting. In a veterinary operatory, students scrub, gown and glove, and are provided with an anesthetized (retired breeder) rat. They prep and drape their subject, mark their incision, inject "anesthetic", make incisions, and practice various suturing and skin closure techniques, while attempting to adhere to the concepts of sterile technique. This session allows students to practice clinical skills, handle surgical instruments, work in operating room garb, handle living tissue, and appreciate the challenges of maintaining a sterile field. Student feedback suggests that this exercise builds confidence and minimizes pre-rotation anxiety, and increases their comfort levels when participating in procedures as they start rotations.

Cultivating a Professional Identity in the First Year Clinical Student

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Professionalism is difficult to define, let alone teach and assess. Aside from courses dedicated to the topic, it is challenging to embed professionalism within the basic and clinical sciences. Common faculty responses to such a proposal include: "It's not my job; I barely have time for my own subject matter" and "As a motivator for students to attend class and come prepared, appealing to 'professionalism' is unsuccessful". This project demonstrates that attention to course structure, formative assessment, and faculty development encourages students to develop professional behaviors in ways that improve their understanding of anatomical concepts. During an introductory lecture, students were apprised of the role of group process and the importance of teamwork. Students were assigned to a Learning Society composed of 20 students and coached in negotiating a Society Agreement. In essence, the Agreements define professionalism in terms of services that students provide to one another. Each student commits to enhancing the learning experience of every other member of the Society. Rather than a vague "come prepared" students are given pragmatic direction on what being prepared means for each group session. The Agreements provide students and faculty a framework for providing ongoing formative feedback

on academic progress and professional behavior. The agreement is revisited three times and discussed in light of a rubric that characterizes novice, intermediate, and sophisticated professional behaviors. Faculty development sessions focused on modeling professional behaviors for managing workshops and labs, and providing feedback. Faculty reported dramatic improvements in student preparedness and student participation in group activities. Rather than eliminate unprofessional behavior, embedding professionalism into the fiber of the course provided a framework for identifying and modifying unprofessional behavior when it occurred.

Creating Instructional Videos for Enhanced Learning

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A collaborative effort between the Yale School of Medicine's Office of Education, Teaching and Learning Center and Medical Library created a facility and support system for the production of instructional videos for the curriculum.

The facility is designed to support faculty in the introduction and use of instructional videos in flipped curricular activities, for orientation to course, clerkship and elective content, for skills training and in faculty development. In addition, opportunities exist for training in best practices for video delivery of curricular content and for developing self-assessment questions to accompany the videos.

M&M for Psychiatrists? A Mental Health Systems Improvement Series (MHSIS)

Louis Trevisan, MD, Beth Grunschel, MD, ScM, Tobias Wasser, MD

Psychiatry's approach to the areas of patient safety and quality improvement has differed significantly from other fields of medicine. Whereas internal medicine, surgery and many other disciplines have been engaged in practice improvement via Morbidity and Mortality (M&M) conferences for decades, the mental health field has been reluctant to adopt this approach. There are numerous potential explanations for this, including the stigma and blaming culture sometimes associated with these forums, the relative rarity of mortality as a result of psychiatric illness or the difficulty in clearly defining other adverse outcomes in mental health. However, there is an increasing understanding in all fields of medicine that paying greater attention to issues of patient safety and quality improvement leads to improved patient care, from which psychiatry is not immune. Developing a culture where it is safe to discuss errors in a manner which focuses on improving safety and quality of care is essential for improving not only clinical care, but also residency training. This is further supported by the ACGME's initiative to institute the Clinical Learning Environment Review (CLER), a program which emphasizes the responsibility of the sponsoring institution for the quality and safety of the environment for learning and patient care (1).

Toward this end, we initiated an M&M like conference series for the mental health department at VA Connecticut, which we entitled the “Mental Health Systems Improvement Series” (MHSIS). The purpose of the MHSIS has been to create a safe and interdisciplinary forum for the structured discussion of adverse outcomes and near misses. The focus of these sessions is on analyzing the systems of care that lead to these unfortunate outcomes and shifting away from a culture of blaming individual providers. The sessions are one hour long, occur once every 2 months, and involve a case presentation followed by discussion and structured analysis of the case. Participants include trainees and faculty from a variety of disciplines (nursing, internal medicine, pain, psychiatry, psychology, social work, etc.). Some of the more distinct aspects of the MHSIS are that: 1) All cases are brought forth voluntarily, helping to decrease blame and promote a culture where it is safe to discuss one’s own potential errors; 2) Each case is reviewed in the session in a structured root cause analysis format using a fish-bone diagram to assess the various factors that contributed to the case; 3) We conclude each session with the group coming together to make recommendations for change based on the analysis and discussion of the case to try and make systemic improvements in care (and because of this have already successfully implemented a number of system-level improvements in care!); and 4) The inclusion of multiple disciplines in contributing to systems-level change.

References:

1. <http://www.acgme.org/acgmeweb/tabid/436/ProgramandInstitutionalAccreditation/NextAccreditationSystem/ClinicalLearningEnvironmentReviewProgram.aspx>
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The Development and Implementation of an Online Educational Module on Palliative Care and End-of-Life Care for Pre-Clinical Medical Students

Chung-Sang Tse, Matthew S. Ellman, MD

The important role of palliative care for patients with serious illness is gaining more recognition. However, many internal medicine residency programs provide only limited exposure to defined palliative care curricular domains for trainees. We intend to evaluate the current Yale internal medicine residency outpatient curriculum of teaching cases for exposure to 8 basic palliative care curricular content domains: pain and symptom management, spirituality, psychosocial concerns, emotional aspects, communication skills, legal/ethical considerations, continuity of care across settings, and hospice care. The teaching cases will also be evaluated against a newly released set of 13 proposed national internal medicine residency palliative care competencies. These cases will be rated by two investigators using a binary system to designate whether they address each palliative care domain or competency. Descriptive statistics will be calculated, including a measure of inter-rater reliability. Gaps in palliative care content will be identified as those content domains and competencies not addressed by the teaching cases. These findings will inform the creation and implementation of new palliative care focused cases to address deficiencies in the current outpatient internal medicine curriculum.

“You Teach, You Tube, You Learn”: You Tube Videos Used in Teaching Eating Disorders in Medical Student Education

Timothy VanDeusen, MD

Overall Goal: You Tube Videos used as a teaching tool effectively creates an avenue for discussion leading to increased understanding and learning about this disease.

Background: Eating Disorders have the highest rate of mortality of any psychiatric diagnosis in the USA. There are approximately 5 million cases of eating disorders diagnosed in the United States, most of them adolescent girls with the mean age of 19. The proliferation of websites supporting the anorexia lifestyle may be a contributing factor in the increasing incidence of the disorder in 15-19 year old adolescents. Most cases initially present to pediatrics or primary care rather than psychiatry, making it imperative that medical students learn how to skillfully elicit symptoms, recognizes signs, diagnose, and treat this disorder

Learning Objectives:

1. To understand eating disorder’s course of illness by viewing videos depicting persons suffering with the disease and hearing their stories first hand.
2. To effectively screen for eating disorders by learning to incorporate questions about diet, body image, etc. in taking a medical history.
3. To acknowledge the powerful messages that media project about body image through modeling, music videos, and sports.

Method: A variety of 3-5 minute video clips on You Tube are used in teaching a didactic course in Eating Disorders to 3rd year medical students and PA students during their psychiatry clerkships (In the past, this course was taught using power point slides only). A question is asked of the group after each video clip is shown. Here are examples of these videos and questions:

- A 13-year-old girl discusses the development of her bulimia.
Question: “Did viewing her video stimulate questions for you? If so, what questions?”
- “ProAna,” a movement that supports the anorexia lifestyle (eg Thinspiration)
Question: “Did viewing this video change your perception of individuals suffering from anorexia? If so, how?”
- The progression of Karen Carpenter’s anorexia, performing in early vs late stage, along with an interview where she denies having the illness.
Question: “What would you say to a person who is in denial of having anorexia, like Karen Carpenter?”
- An interview of the French model, Isabella Caro, who campaigned for awareness and treatment of anorexia by displaying her photos during end stage anorexia on billboards in Europe.
Question: “Do you think society has changed its view of eating disorders in the last 20 years? If so, how?”

Results: Students participate in rich discussions and attempt to answer each other’s questions. They express their opinions openly and agree and/or disagree with one another, learning that there are many ways to view these patients. Feedback from students is positive and felt they learned more by viewing videos than with power point slides.

Discussion: The students pay close attention to these videos, some expressing that they knew very little about eating disorders prior to this class. Some express shock about the images that are being shown. Some students share their past experiences in high school or college, knowing someone who suffered with an eating disorder. The issue of stigma is discussed when students realize they feel comfortable discussing past medical illnesses but were hesitant to discuss any history of eating disorders.

Conclusion: You Tube videos are useful teaching tools and can enhance learning about eating disorders in medical student education.

How Do We Keep Our Residents Safe? An Educational Intervention

Tobias Wasser, MD

Objective: While psychiatric training programs devote a great deal of focus to teaching residents how to assess a patient's risk of suicide, often there is significantly less attention paid to training how to assess for a patient's risk of violence. Despite the fact that most individuals with mental illness do not act out violently and the severely mentally ill are significantly more likely to be victims of violent crime than they are to be perpetrators, a significant number of psychiatry residents are the victims of assault by their patients and few are sufficiently trained in violence risk assessment and management. In a 1999 national survey, one third of psychiatry residents reported receiving no training in this area and another third described their training as inadequate. This is particularly concerning given that 73% of these residents had been threatened and 36% had been physically assaulted by a patient. More recent evidence suggests that this trend is not improving and psychiatric trainees are not alone, though they may be the most affected. From a resident health and well-being perspective, one area for concern is the significant psychological impact patient assaults have on trainees. The adverse psychological consequences include anger, fear, anxiety, post-traumatic stress symptoms, guilt, self-blame, shame, believing that being assaulted is inherent to the profession and a change in career interest. This is especially concerning given that residents are a group already faced with the challenges of long work hours, sleep deprivation, and loss of autonomy, and well known to be subsequently more vulnerable to depression.

Given the high rates of assaults and insufficient safety training for residents, it is crucial to refocus our attention on this area. Numerous efforts have been made to delineate how we might improve resident education in this area. In 1993, the American Psychiatric Association (APA) published an outline for residency training in managing patient violence. Others have added to these recommendations, delineating recommendations for training of 5-10 hours in duration. However, little work has been done to assess the effectiveness of these trainings in improving clinical practice.

Toward this end, we designed and implemented a brief (2 hour) educational intervention at our institution focused on improving residents' ability to recognize violence risk and increase their attention to safety in the psychiatric interview. Our core learning objectives were that residents

would recognize the characteristics of patients and situations which elevate the risk for violence, increase their efforts to be cognizant of their own internal state while sitting with patients and make appropriate adjustments to the interview milieu to attend to their safety. We then assessed whether such a brief intervention could be effective in increasing residents' attention to safety in their clinical care, given prior recommendations in the literature for 5-10 hours of training.

Methods: The subjects were thirteen second-year psychiatry residents. Effectiveness of the intervention was evaluated via the assessment of the residents' written responses describing their first clinical intervention after hearing a case vignette of a potentially violent patient (a "pre-test" prior to the intervention and a "post-test" one month following the intervention). Residents' collected written responses to the case vignettes were then examined to look for any indication of concern for violence or safety. Residents were deemed to have considered safety as a component of their intervention if in their written response they used the words "safety", "violence" or described any action that indicated a consideration for their own safety (e.g. "request security").

Results: The number of residents citing safety concerns increased (38% to 92%), as did the level of sophistication in their proposed interventions. There was a remarkable increase in the number of residents who raised safety concerns in the case of a patient with numerous risk factors for violence. Additionally, the nature of the residents' concerns appeared more direct and pointed following the intervention, with far more residents indicating they would consider safety as a primary concern, conduct an acute risk assessment, or request the presence of security personnel. This suggests that they were more alert for safety-related issues and ready to act in a way that would ensure their own safety. The class discussion in our second session seemed to confirm these findings, as numerous residents recounted feeling they were more cognizant since the first session of their own safety while sitting with patients. Further, the resident responses citing safety concerns following our intervention increased not only in number, but also in their level of sophistication. The post-test responses clearly demonstrate a more nuanced understanding of the topic, with many residents outlining a multi-step or tiered approach to maintaining their safety, which was notably absent in the pre-test responses.

Conclusions: A brief educational intervention focused on violence risk and interview safety can be effective in increasing residents' attention to safety concerns in their clinical care, and further work will be beneficial to confirm and expand upon these findings.

A Longitudinal Study of Health Professional Students: What Experiences are Associated With Positive Attitudes Toward Interprofessional Education?

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Increasing efforts are directed toward improving the quality of interprofessional education (IPE) for health professional students, spurred on by recommendations from the Institute of Medicine and recent accreditation standards for medical schools and physician associate (PA) programs regarding IPE. The success of these efforts are informed by student attitudes, yet there are limited

data on experiences associated with positive attitudes toward IPE. We surveyed a cohort of Yale medical, nursing, and PA students as first-years and then again as third-years, using the Readiness for Interprofessional Learning Scale (RIPLS) and Interdisciplinary Education Perception Scale (IEPS). We collected information on professional program, gender, age, previous degrees, previous health care experience, interprofessional extracurricular, interprofessional courses, and interprofessional personal relationships. We found that positive attitudes toward IPE were associated with demographics, professional school, and interprofessional extracurricular. We recommend that health professional schools consider how admission criteria and interprofessional extracurricular can play a role in improving attitudes, and ultimately behaviors, regarding IPE.

Clinical Embryology Education: How Are Our Radiology Trainees Developing? Potential Utility of a 3D Embryology Education Module as a Vertically Integrated Supplement to Curricula

William Zucconi, DO

Congenital malformations and their sequelae are frequently encountered in radiology practice. A basic knowledge of clinically relevant embryology is therefore important. In training, radiology residents must learn to recognize and accurately classify these potentially complex three-dimensional anatomic aberrations across multiple organ systems. In our program, clinical embryology as it relates to abnormal morphogenesis is not a formal component of the residency curriculum. Surveyed residents and fellows view these topics as important to their specialty, but perceive their knowledge base as inadequate. They indicate a desire for additional training and a preference for a clinically oriented educational module employing three-dimensional embryonic animation over a standard textbook format. The vertical integration of such a module across preclinical, clinical and graduate medical education domains is considered.