

UCSF Education Showcase 2019

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Welcome to UCSF Education Showcase 2019



Dear Friends,

On behalf of the Center for Faculty Educators, we are proud to present the 18th annual Education Showcase, an event that highlights the scholarly work in education of UCSF faculty, learners and staff. Events will be held at at Mission Bay on April 2 and Parnassus on April 3.

Scholarly presentations address important questions and innovations in health professions education. Following a blinded peer review of all submissions, the Academy of Medical Educators (AME) Scholarship Committee selected six plenary presentations based upon their quality and collective relevance to the audience of educators. This year we have 42 mini-oral presentations which also offer opportunities for engagement and dialogue. Additionally, we will host six faculty development workshops chosen to address current topics in our teaching landscape.

Cees P.M. van der Vleuten, PhD, 2018-19 UCSF Presidential Chair, will deliver a keynote address, “Work-based Assessment and Programmatic Assessment”. On Wednesday morning, Dr. van der Vleuten will present a workshop, “Workplace-based Assessment”, and he will lead the Wednesday noon keynote panel, “Assessment Task Force Report: Ideas and plans for assessment of student performance in core clerkships at UCSF”.

For the 13th year, AME will present the Cooke Award for the Scholarship of Teaching and Learning. The AME Scholarship Committee selects award recipients whose work represents outstanding quality and innovation in educational research and/or curriculum development. Please join us for the award presentation at the conclusion of Tuesday’s plenary session.

We extend thanks to our community of educators for contributions that highlight the depth and breadth of educational scholarship at UCSF. In the current climate of significant changes in both clinical care and the education of future clinicians, we are privileged to be amongst so many passionate health professions educators sharing our creative and innovative scholarly work.

Warmly,

Jason Satterfield, PhD
Professor of Clinical Medicine
Director, Haile T. Debas Academy of
Medical Educators Scholarship
Program



Ann Poncelet, MD
Professor of Neurology
William G. Irwin Endowed Chair
Director, Haile T. Debas
Academy of Medical Educators

Patricia O’Sullivan, EdD
Professor, Department of Medicine
Director, Research and Development
in Medical Education
Endowed Chair of Surgical Education


[Education Showcase 2019 Schedule](#)

Online directory of sessions for links to evaluations, Teach for UCSF skills assessments, Livestream recordings  and learning materials: <http://tiny.ucsf.edu/Showcase2019> [live on 4/1]

Tuesday, April 2: Mission Hall, 1599 4th Street at 16th Street, UCSF Mission Bay

8:00am-11:45am MH-1400	UCSF Education Showcase Plenary Session Presentations  <i>Enhancing Pediatric Trainees' Skills in Providing Gender-Affirming Care for Transgender Adolescents Using Standardized Patient Encounters:</i> Stanley Vance, Jr., MD and team <i>Developing a Hands-On Legislative Advocacy Curriculum for Pediatrics Residents:</i> Elizabeth Griffiths, MD, MPH and team <i>Identifying barriers to information sharing in interprofessional vs. intraprofessional debriefing after simulation:</i> Kathryn Robertson, MD and team <i>The Academic Leadership Academy Summer (ALAS) Program:</i> Sarah Schaeffer, MD, MPH and team <i>Faculty perceptions of how constructed response (open-ended) assessments facilitate student learning:</i> Susan Wlodarczyk, MD and team <i>An Experiential Approach to Nutrition Education in Medical School - A Culinary Medicine Curricular Intervention:</i> Diana Thiara, MD and team Keynote Address by Cees van der Vleuten  Presentation of the Cooke Award for the Scholarship of Teaching and Learning	
11:45-12:30pm MH Lobby	Lunch	
12:30-2:30pm MH-1401, 1402	Workshop: Equitable Assessment: Developing Assessment Practices So All Learners Can Succeed (K. Lupton, A. Brown)	LACE it up! Strategies for Optimizing the Learning and Caring Environment (S. van Schaik, C. Lai, B. Gin)
2:30-2:45pm	Break	
2:45-4:45pm MH-1401, 1402	Mini-oral presentations (see schedule for details). Sessions A-1, A-2: 2:45-3:30; Sessions B-1, B-2: 3:30-4:30	

Wednesday April 3: UCSF Library Teaching and Learning Center: 530 Parnassus Ave., 2nd Floor

8:00-9:00am CL-223	Breakfast Roundtable: Works in Progress	
8:00am-11:45 CL-220	Workshop: Steps to Effective Course and Curriculum Development KES and Teach for UCSF certificate (M. Dandu and J. Davis)	
8:30am-11:45am CL-221/222	Workshop: Workplace-based Assessment (C. van der Vleuten)	
11:30am-12:30pm	Lunch (CL-215/216)	
Noon-1:00pm CL-221/222	Assessment Task Force Report: Ideas and plans for assessment of student performance in core clerkships at UCSF  Moderator: C. van der Vleuten	
1:00-3:00pm CL-220/223; CL-221/222	Workshop: Teaching Strategies for Quality Improvement and Patient Safety (C. Wills, B. Kobashi)	Mini-oral presentations (see schedule for details). Sessions C-1, C-2: 1:00-2:00; Sessions D-1, D-2: 2:00-3:00
3:00pm	Refreshments available	
3:00-5:00pm CL-220/223; Room: MU-100	Mini-oral presentations (see schedule for details). Sessions E-1, E-2, 3:00-4:00; Sessions F-1, F-2: 4:00-4:45	Workshop: Time Management Techniques for Academicians (M. Gandhi)

Mini-oral Presentations		
Session A-1: April 2, 2:45-3:30, MH-1401		
4	Wellbeing in graduate medical education: Preventing and mitigating trainee burnout	Jernick
11	Exploring Structural Racism & Health Disparities: An Immersive Experience in the American South for Pediatric Residents	Marbin
32	The Equity Literacy for an Inclusive Training Environment (ELITE) Initiative -- Developing a Resident Diversity Education Toolkit	Schaeffer
Session A-2: April 2, 2:45-3:30, MH-1402		
27	Expanding the UCSF medical student curriculum in OBGYN via the creation of online surgical modules	Weigel
60	UCSF OBGYN Core Clerkship Medical Student Mistreatment Curriculum	Kemmer
20	Expanding Access to OBGYN Surgical Skills Training in the UCSF Medical Student Curriculum	Levy
Session B-1: April 2, 3:30-4:30, MH-1401		
18	Evaluating a Web-based Point-of-care Ultrasound Curriculum for the Diagnosis of Intussusception	Lin
23	Pediatric ForEM Bay Area: A pilot asynchronous learning platform focused on clinical reasoning.	Tat
40	Assessing the Impact of the Clinical Effort Against Secondhand Smoke Exposure (CEASE) Training among Pediatric Residents	Gribben
55	How Preceptors in an Internal Medicine Continuity Clinic Develop Trust in Residents: A Qualitative Study	Penner
Session B-2: April 2, 3:30-4:30, MH-1402		
17	Opening doors to academic medicine: The Pre-Health Undergraduate Program (PUP) at UCSF	Zachek
21	Evolution of the UCSF School of Medicine Wikipedia-editing course in 2017 & 2018	Manocha
38	Harnessing Faculty Development to Train a Community of Health Sciences Faculty in Sustainable Healthcare Education Across the University of California Health Sciences Schools	Teherani
51	Development of Components of a Program of Assessment to Support Self-Regulated, Mastery Learning	Henry
Session C-1: April 3, 1:00-2:00, CL-221		
22	An Exploratory Study of Therapeutic Reasoning Underlying Antibiotic Selection	Abdoler
30	A telehealth curriculum for interprofessional trainees and staff	Smith
33	Could a Shared Fellow Workspace Improve Teaching during Inpatient Subspecialty Consultation?	Block
35	Following up on trainees' use of Motivational Interviewing in primary care: perceptions and practice patterns 9 months post-training	O'Brien

Session C-2: April 3, 1:00-2:00, CL-222		
3	In Pursuit of Honors: A Multi-Institutional Study of Students' Perceptions of Clerkship Evaluation and Grading	Bullock
8	Fostering a Feedback Mindset: Medical Students' Feedback Experiences with Longitudinal Coaches	Bakke
44	Preventing burnout and promoting longitudinal professional identity formation through Assessment, Reflection, Coaching, and Health (ARCH) weeks	Lomen-Hoerth
Session D-1: April 3, 2:00-3:00, CL-221		
6	A Medical Student Curriculum on Gun Violence to Develop Foundational Health Policy Skills	Cordero
16	Impact of a Mainly Online Mindfulness Course on Faculty and Trainee Wellness	Weichenthal
31	Implementation & Evaluation of a Novel GME-Wide Program for Women's Leadership Development	Donzelli
39	Clinician well-being as a foundation of clinical training in primary care: Evaluation of a meditation retreat for interprofessional trainees	Cook
Session D-2: April 3, 2:00-3:00, CL-222		
7	Application of Established Objectives and Milestones to Develop a Model Curriculum for the Pediatric Anesthesia Resident Rotation	Marsh
34	Teaching and Assessing Pharmacology Learning Using Different Approaches in UCSF's Integrated Bridges Curriculum "" Omnes viae Romam ducunt?	Tuan
56	Development of a session to teach Geriatrics and Palliative Care fellows how to assess decision-making capacity in older adults.	Sanchez Lopez
Session E-1: April 3, 3:00-4:00, CL-220		
15	Implementation of a Fellowship Coaching Program to Improve Professional Development, Personal Satisfaction and Wellbeing	Frank
25	Impact of a Simulated Auditory Hallucination Exercise Coupled with a Schizophrenia Speaker on Mental Health Stigma in Pharmacy Students	Hsia
36	Substance use stigma among a online sample of health care students: knowledge, beliefs, and attitudes	Fokuo
42	Patient Advocacy on the Wards: A Medicine Clerkship Curriculum	Daya
Session E-2: April 3, 3:00-4:00, CL-223		
1	The Consult Cognitive Load (CCL) Instrument: Development and Validity Evidence	Brondfield
13	Watch and Learn: Feasibility of Implementing a Resident Oncology Video Curriculum	Brondfield
49	HIV Training Pathways in Residency: A National Survey of Curricula and Outcomes	Budak
50	Using the Learning Sciences to Optimize Medical School Assessment: How do Weekly Quizzes and Constructed Response Examinations Affect Students' Approach to Learning?	Muller-Juge

Session F-1: April 3, 4:00-4:45, CL-220		
43	Rethinking how to introduce the learning sciences: a near-peer approach	Ransohoff
48	Appropriate Diagnosis and Management of Acute Coronary Syndrome by Internal Medicine Interns: A Needs Assessment	Subramanian
57	Assessment of student physical therapists' professionalism	Nesbit
Session F-2: April 3, 4:00-4:45, CL-223		
2	ClinicalReasoning.org: Improving engagement with clinical reasoning teaching materials through visual and website redesign	Ow
14	STUDENTS ARE WATCHING: How surgical residents and attendings deal with difficult situations	Nnamani
61	The Patient Behind the Prescription: A Clinical Learning Experience for Residents in the Management of Chronic Pain and Opioids	Soran

Keynote Address, April 2



Work-based Assessment and Programmatic Assessment

Cees P.M. van der Vleuten, PhD

In a partnership between the UCSF Schools of Dentistry, Medicine, Nursing, and Pharmacy, Cees van der Vleuten, PhD, has been selected as a 2018-19 UCSF Presidential Chair to focus on our medical education community as a visiting professor. Dr. van der Vleuten is a leader in assessment for learning, in which assessments are synthesized to depict learners' progress through a curriculum. He is Scientific Director of The Maastricht School of Health

Professions in The Netherlands, where he developed the assessment framework for several faculty training programs. He has consulted worldwide on programmatic assessment and has published over 600 articles in this field. In 2005, he received the John P. Hubbard Award for his significant contribution to research and development of assessment of medical competence from the United States National Board of Medical Examiners. In 2010, he received a Dutch Royal Decoration for the societal impact of his work, and in 2012, the Karolinska Prize for Research in Medical Education.

In addition to giving the Keynote Address, Dr. van der Vleuten will present a workshop on Workplace-Based Assessment on April 3, and lead the April 3 Keynote Panel, Assessment Task Force Report: Ideas and plans for assessment of student performance in core clerkships at UCSF.

Keynote Panel, April 3

Assessment Task Force Report: Ideas and plans for assessment of student performance in core clerkships at UCSF

A panel discussion led by Cees van der Vleuten, PhD, with the participation of the Chairs of the Presidential Chair Assessment Task Forces

What are the ideas and plans for assessment of student performance in core clerkships at UCSF? The presence of the Presidential Chair Visiting Scholar, Cees van der Vleuten, has allowed us to explore programmatic assessment at UCSF. Five working groups received a charge to address this issue from diverse perspectives. This panel will feature a leader from each work group: Erick Hung, MD, Assessment tools and strategies; Sandrijn van Schaik, MD, PhD, Student, Resident and Faculty Development; Christy Boscardin, PhD, Learner Advancement; Sanziana Roman, MD, FACS, Transition to Residency, and Lynnea Mills, MD, Career Launch. They will describe their charge, summarize briefly their recommendations and highlight a major strength and challenge they face to implement their ideas. Professor van der Vleuten will moderate the session and ask important questions to enrich the conversation. At the end Professor van der Vleuten will summarize and set some expectations should we have a shift toward programmatic assessment.

The Cooke Award for the Scholarship of Teaching and Learning

Presented by Kewchang Lee, MD
Academy of Medical Educators Scholarship Committee

The Academy is pleased to continue the Cooke Award for the Scholarship of Teaching and Learning, established in 2007 to recognize outstanding scholarly works presented at Education Showcase. All submissions to Education Showcase are eligible for this award, which is accompanied by an honorarium. Top-scoring projects were nominated for the award following a blinded peer review of all abstract submissions. The winning abstract was determined by a ballot in which Scholarship Committee members ranked the blinded abstracts, excluding those in which they were involved.

Please join us in congratulating the 2019 recipients:

Stanley Vance, Jr., MD; Sara Buckelew, MD, MPH; Brian Dentoni-Lasofsky, MSN, MSW, PMHNP-BC; Matthew Meyers, MD, MPH; Madeline Deutsch, MD, MPH and Elizabeth Ozer, PHD *for their project:*

Enhancing Pediatric Trainees' Skills in Providing Gender-Affirming Care for Transgender Adolescents Using Standardized Patient Encounters

Equitable Assessment: Developing Assessment Practices So All Learners Can Succeed

Led by: Kate Lupton, MD and E. Alexandra Brown, MD

Learners who are under-represented in medicine (UIM) face bias in assessment that over time may negatively impact their career trajectories. This workshop reviews strategies described in non-medical education settings that can moderate the effects of bias on student assessment. Participants will consider how to apply these strategies in medical education to advance the goals of diversity, equity and inclusion.

During this workshop, participants will participate in small and large group work to:

- Share challenges faced in assessment related to equity
- Discuss barriers and opportunities to applying these strategies
- Reflect on personal assessment decisions and challenges

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

- Describe the potential for bias in assessment of learners at both the structural and individual levels
- Examine current learner assessment practices for bias
- Recommend changes to assessment practices that will provide learners greater opportunity to demonstrate their learning and be successful
- Reflect on personal assessment decisions about individual trainees in order to mitigate the potential for biased decision making

LACE it up! Strategies for Optimizing the Learning and Caring Environment

Led by: Sandriijn van Schaik, MD, PhD, Cindy Lai, MD and Brian Gin, MD

In recent years, several organizations including accreditation bodies have put out a call to action to improve learning environments in the health professions. In this workshop, we will share a new framework for understanding learning environments to guide participants through the creation of actionable plans to optimize their own learning environments. We will use the recommendations from the 2018 Josiah Macy Jr. Foundation consensus conference on learning environments as a basis for this work. We will provide examples and discuss resources available at UCSF through the LACE (Learning and Caring Environment) Initiative in the Center for Faculty Educators.

By the end of this session, participants will be able to:

- Describe key elements of the learning environment and characteristics of optimal learning environments.
- Develop a plan to optimize the participants' own learning environment
- Identify resources at UCSF to help with optimization of learning environments

Steps to Effective Course and Curriculum Development

Led by:

John Davis, MD and Madhavi Dandu, MD, MPH

Do you need to develop a module (online or not), series of classes, course, instructional unit, or program? Have you been developing curricula for many years? Learn to do it the right way. This workshop introduces faculty of all levels to a practical, theoretically sound approach to developing curriculum. During the workshop, participants will work through a six-step process, taking time in small groups to practice the skills learned with expert guidance nearby:

- Identify a problem or need to be solved
- Examine the particular needs of your learners
- Develop goals and measurable learning objectives
- Choose educational strategies that best fit your material
- Devise steps for implementation
- Consider evaluation and feedback

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

- Describe Kern's 6-step process for curriculum development
- Discuss the importance of conducting a needs assessment in curriculum development
- Write SMART-er learning objectives
- Discuss the importance of matching objectives to learning strategies
- Set personal goals for applying the skills learned in this workshop to one's own practice setting, and review a tool designed to assess performance of new teaching skills.

Workplace-Based Assessment

Led by:

[Cees van der Vleuten, PhD](#)

Maastricht University, The Netherlands

UCSF Presidential Chair, 2019

Pre-reading: [Govaerts, M., van der Vleuten, C. P. \(2013\). Validity in work-based assessment: expanding our horizons. Medical Education, 47\(12\), 1164-1174.](#)

Research of reliability of assessment procedures has earned us the pivotal role of sampling across contexts and assessors. Good sampling permits individual samples to be subjective. This allows expert judgment to be part of the assessment process. Expert judgment is needed to assess complex behaviors and competences, particularly in assessment within a work-based learning context. Here the assessment takes place in the unstandardized and unstructured authentic context of the workplace. For assessment to be meaningful of learning, appropriate feedback is needed. Qualitative, descriptive, narrative

information is often more meaningful in the provision of the feedback than quantitative information. Giving informative feedback is a skill that needs to be developed and nurtured.

When participants leave this workshop they are able to:

- Describe the nature of assessment in the workplace and how these contribute to meaningful learning.
- Distinguish between the contributions of workplace-based assessments and individual assessment forms.
- Analyse the quality of the assessment in the workplace.
- Demonstrate skills needed to provide feedback aligned with assessment for learning.

In this workshop we will discuss and experience assessment insights. We will simulate feedback sessions using role play, and demonstrate the role of an electronic portfolio.

Teaching Strategies for Quality Improvement and Patient Safety

Led by: Charlotte Wills, MD and Brent Kobashi, MD

Knowledge and training in quality improvement and patient safety (QI and PS) does not always lead to effective teaching of these topics. Most publications regarding QI and PS education revolve around traditional didactics, lectures, and project-based learning. While these approaches are effective for some learners and in select situations, other innovative strategies may be needed to combat barriers to reaching learners. These barriers include:

- QI/PS viewed as a boring topic
- finding time to teach QI/PS
- difficulty in selecting or completing a project
- resistance to change
- professional identity
- reaching learners of different levels or professions

Some of these barriers can be overcome by using innovative teaching strategies to engage learners and inspire ongoing interest in QI/PS. This workshop aims to improve the teaching skills of medical professionals passionate about QI and PS.

By the end of this workshop, participants will be able to:

- Select or design a strategy that will engage learners in the topics of QI/PS.
- Identify teaching strategies that improve attitudes or highlight professional responsibilities toward QI/PS.
- Select a strategy that aligns best with a variety of QI/PS topics.

This workshop is for any faculty member who would like to improve their teaching skills and gain new strategies to effectively teach QI/PS.

Time Management Techniques for Academicians

Led by: Monica Gandhi, MD, MPH

This workshop will share best practices on time management techniques for academicians, including management of email, time management, meeting management, and project management.

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

- Describe best practices for managing calendars, meetings and scheduling
- Implement several strategies for juggling multiple academic responsibilities while maintaining life-work balance

During this workshop, participants will:

- Become familiar with data on time management challenges among academicians
- Practice with tools and techniques of managing email
- Use the time management matrix

Abstract # 5

Enhancing Pediatric Trainees' Skills in Providing Gender-Affirming Care for Transgender Adolescents Using Standardized Patient Encounters

Stanley Vance, Jr., MD, UCSF, stanley.vance@ucsf.edu; Sara Buckelew, MD, MPH, UCSF, sara.buckelew@ucsf.edu; Brian Dentoni-Lasofsky, MSN, MSW, PMHNP-BC, UCSF, brian.lasofsky@ucsf.edu; Matthew Meyers, MD, MPH, UCSF, matthew.meyers@ucsf.edu; Madeline Deutsch, MD, MPH, UCSF, madeline.deutsch@ucsf.edu; Elizabeth Ozer, PHD, UCSF, elizabeth.ozer@ucsf.edu

Area(s) abstract covers: Medical Student Education (UME),GME,Other (please describe)

Domain(s) addressed: Assessment and Testing, Research, Standardized Patients

Category: Curriculum Evaluation/Educational Research

Abstract:

Purpose: To augment our Trans Youth Curriculum by integrating standardized patient (SP) encounters targeting learners' skills and self-efficacy in caring for transgender youth.

Background: Previously, our curriculum, consisting of online modules and an observership, improved knowledge and self-efficacy. To aid learners in attaining a higher level of proficiency in skills in caring for transgender youth, we expanded the curriculum to include SP encounters.

Methods: Target learners are 4th year med students, peds and psyc interns, and NP trainees on an adolescent medicine block. After completing online modules, learners participate in 2, 20-minute formative SP encounters featuring transgender teens while observed by faculty. After each case, learners receive feedback from the faculty and SP who complete separate skill checklists.

Learners completed assessments pre- and post- online modules, and after the SPEs. All assessments measured self-efficacy through self-reported confidence in evaluating/counseling transgender youth (0-10; 10=completely confident). Friedman testing was used to compare differences in overall self-efficacy scores followed by ad hoc testing via Wilcoxon Signed Rank Tests. For each SPE, total completed checklists items were calculated for the faculty-completed checklist and SP-completed checklist. Change in total checklist scores between cases were compared via Wilcoxon Signed Rank Tests.

Results: 43 learners participated in the new curriculum and most were pediatric interns (58%). Median overall self-efficacy scores improved from pre-module, post-module, and post-SPE assessments from 3.3 to 6.9 to 8.0 ($p < 0.001$). Median faculty checklist scores improved between case 1 and case 2 from 11 to 14 ($p < 0.001$) and median SP checklist scores improved from 11 to 12 ($p = 0.001$).

Conclusions: This study suggests that combined e-learning and SPEs can enhance transgender-related clinical self-efficacy and skills for multidisciplinary pediatric learners.

Reflective Critique: The Innovations proposal and journal review processes have informed this project.

Abstract # 19

Developing a Hands-On Legislative Advocacy Curriculum for Pediatrics Residents

Elizabeth Griffiths, MD, MPH, UCSF, elizabeth.griffiths@ucsf.edu; Zarah Iqbal, MD, MPH, UCSF, zarah.iqbal@ucsf.edu; Manuel Bramble, MD, UCSF, manuel.bramble@ucsf.edu; Jyothi Marbin, MD, UCSF, jyothi.marbin@ucsf.edu

Area(s) abstract covers: GME

Domain(s) addressed: Curricular Innovation, Health Policy, Leadership

Category: Curriculum Development

Abstract:

Purpose: To develop a legislative advocacy curriculum for pediatrics residents that focuses primarily on skills building and direct application to real-world legislative advocacy.

Background: The ACGME requires pediatrics residents to receive training in "advocacy for the promotion of health" among children. Prior surveys of UCSF Pediatric Leaders Advancing Health Equity (PLUS) residents indicated that despite a robust leadership curriculum, legislative advocacy was an area in which residents identified a need for enhanced practical training.

Methods: A legislative advocacy curriculum was developed for UCSF PLUS residents in the 2018-19 year. An initial session included background on legislative advocacy principles, discussion of resident research on legislators, and a lecture on the residents' chosen advocacy issue (housing and homelessness). Subsequent time was devoted to meeting with community organizations focused on the chosen issue, deciding on a legislative bill idea and gathering supporting research, and meeting with two state legislators.

Evaluation Plan: We plan to evaluate our curriculum by including specific questions related to the new legislative advocacy curriculum in the existing year-end PLUS program evaluation. We will ask residents about likelihood of using and confidence in applying specific legislative advocacy skills. We also plan to ask residents open-ended questions about their impressions of the new curriculum and opportunities for future improvement.

Discussion/Dissemination: Initial informal feedback from residents indicates that they strongly valued direct application of legislative advocacy skills to meetings with legislators. One state legislator is exploring introducing a bill based on the residents' idea. We plan to disseminate our curriculum and evaluation at local and national conferences.

Reflective Critique: Based on feedback from legislators, we plan to modify future curricula to strengthen collaboration with community advocacy organizations. We will also modify future curricula based on forthcoming formal resident evaluations.

Abstract # 24

Identifying barriers to information sharing in interprofessional vs. intraprofessional debriefing after simulation

Kathryn Robertson, MD, UCSF, kathryn.robertson@ucsf.edu; Naïke Bochatay, PhD, UCSF, naïke.bochatay@unige.ch; Mindy Ju, MD, UCSF, Mindy.Ju@ucsf.edu; Bridget O'Brien, PhD, UCSF, Bridget.Obrien@ucsf.edu; Sandrijn van Schaik, MD, PhD, UCSF, sandrijn.vanschaik@ucsf.edu

Area(s) abstract covers: GME

Domain(s) addressed: Communication, Feedback, Interprofessional Education, Simulation

Category: Curriculum Evaluation/Educational Research

Abstract:

Purpose

1. To examine feedback nurses give to pediatric residents after interprofessional simulation.
2. To determine what feedback nurses withhold and factors that promote open sharing of feedback.

Background

The ACGME requires multi-source feedback, as well interprofessional teamwork skills. Interprofessional simulation affords residents opportunities to receive feedback from other healthcare professionals and practice teamwork. However, it is unclear how forthcoming nurses are with feedback for residents. Research shows that interprofessional collaboration is often hampered by hierarchy and power differences, which may limit feedback shared across professions. This study aims to examine feedback to residents during interprofessional versus intraprofessional debriefings.

Methods

We conducted a qualitative study analyzing conversations during post-simulation interprofessional and intraprofessional debriefings. During the 1-hour sessions, small groups of residents and nurses work through simulated scenarios, followed by group debriefing. Afterwards, nurses meet separately for further learning and debriefing. An equivalent intraprofessional review does not occur for residents, thus we organized informal sessions. We recorded and transcribed conversations and analyzed qualitative data using an inductive approach, with 2 researchers coding all data. The team met frequently to reconcile codes and discuss emerging themes.

Results

Teamwork was frequently discussed in both interprofessional and intraprofessional debriefings. Nurses rarely provided constructive performance feedback to residents, even though they expressed such feedback in intraprofessional debriefings. Residents expressed the desire for more feedback, particularly constructive.

Discussion

Interprofessional debriefings after simulation offer an opportunity for feedback across professions, yet this occurs infrequently for reasons that are not yet clear. Further study to evaluate barriers is in process and may guide the design of interventions to improve effective multi-source feedback for residents.

Abstract # 37

The Academic Leadership Academy Summer (ALAS) Program

Sarah Schaeffer, MD,MPH, UCSF, sarah.schaeffer@ucsf.edu; Denise M. Connor, MD, UCSF, denise.connor@ucsf.edu; Alicia Fernandez, MD, UCSF, alicia.fernandez@ucsf.edu

Area(s) abstract covers: Medical Student Education (UME)

Domain(s) addressed: Clinical Instruction and Performance, Curricular Innovation, Diversity

Category: Curriculum Development

Abstract:

Purpose: The Academic Leadership Academy Summer (ALAS) Program aims to prepare pre-clinical medical students who are underrepresented in medicine (UIM) to excel in clinical clerkships by developing skills in clinical reasoning, oral presentation, and navigating the clinical environment.

Background: Equity pedagogy suggests that different groups of students may require different teaching strategies to ensure that all succeed. A recent analysis found that UCSF UIM students receive lower clerkship scores and fewer honors grades. This gap likely represents a combination of differential assessment and differential achievement. Novel opportunities for clerkship preparation may address differential achievement.

Methods: ALAS is an academic enrichment summer program for pre-clinical UIM medical students, led by UIM clinician educators. It offers experiential curriculum on effective clinical reasoning, oral presentations, and acculturation to the clinical environment through case-based learning, direct observation, and strength-based coaching. We piloted a 1-day summer program and ½ day pre-clerkship session with students in 2018. We will launch an expanded summer program in 2019. Working in small groups with experienced faculty with expertise around diversity, equity and inclusion, students will benefit from intensive structured feedback and practice in a supportive environment.

Evaluation Plan: Students will evaluate how each session and the program contributed to their learning of clinical reasoning, oral presentation, and acculturation to the clinical environment. Students' clerkship performances will be reviewed through student focus groups, confidential feedback from clerkship faculty, and clerkship evaluations.

Dissemination: The structure and results of the program will be shared locally with School of Medicine (SOM) leadership, and disseminated nationally through scholarly work.

Reflective Critique: We sought feedback from SOM leaders and experts in professional development for UIM students. Feedback from the 2018 pilot programs will inform the full 2019 program development.

Abstract # 41

Faculty perceptions of how constructed response (open-ended) assessments facilitate student learning

Susan Wlodarczyk, MD, UCSF, susan.wlodarczyk@ucsf.edu; Virginie Muller-Juge, virginie.muller-juge@unige.ch; Amy Ransohoff, , UCSF, amy.ransohoff@ucsf.edu; Michelle Tong, , UCSF, ; Karen Hauer, MD, PhD, UCSF, karen.hauer@ucsf.edu; Christy Boscardin, PhD, UCSF, christy.boscardin@ucsf.edu

Area(s) abstract covers: Medical Student Education (UME)

Domain(s) addressed: Assessment and Testing, Faculty Development

Category: Curriculum Evaluation/Educational Research

Abstract:

Purpose:

This qualitative study explores faculty perceptions of the benefits and feasibility of constructed response (open-ended) assessments in pre-clerkship medical education.

Background:

Assessment drives learning, and the format of medical knowledge assessment can influence students' approach to their studying¹. Based on principles from the learning sciences, we implemented a new program of assessment at the UCSF School of Medicine where pre-clerkship students answer constructed response questions on both weekly quizzes and course summative assessments. Faculty receive training, feedback and resources for writing and scoring constructed response questions.

Methods:

In this qualitative study, we conducted ten semi-structured interviews with faculty course directors responsible for creating and grading these assessments in the pre-clerkship foundational sciences curriculum. We analyzed interview transcripts using thematic analysis with sensitizing concepts from the learning sciences.

Results:

Faculty perceive many benefits of this assessment method describing how open-ended questions: 1) encourage a collaborative, integrated approach to test construction that more accurately simulates real clinical problem solving, 2) help faculty focus on testing higher-order explanation and application rather than isolated facts, 3) promote evidence-based learning strategies for students such as retrieval practice, interleaving, elaboration, distributed practice and metacognition and 4) provide faculty nuanced insight into student understanding allowing them to identify learners' deficiencies and revise their teaching and curricula accordingly. Participants described that to implement this type of assessment requires 1) professional development for faculty, 2) protected time for test construction and grading, and 3) robust administrative support.

Reflective Critique:

We plan to incorporate feedback from ESCape to better communicate and disseminate our scholarly work.

1 Wormald et al. Assessment drives learning: An unavoidable truth? *Anatomical Sciences Education* 2009;2(5):199-204

Abstract # 45

An Experiential Approach to Nutrition Education in Medical School - A Culinary Medicine Curricular Intervention

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Area(s) abstract covers: Medical Student Education (UME)

Domain(s) addressed: Evaluation of Programs

Category: Curriculum Development

Abstract:

Purpose: Poor nutrition and physical inactivity are the second leading causes of death in the U.S. Although physicians manage comorbidities of poor nutrition and patients believe physicians should provide nutritional counseling, many physicians do not. Less than half of primary care providers report advising patients about nutrition and less than 14% of residents believe they were adequately trained in nutritional counseling. A needs assessment showed this imbalance for UCSF students who reported deficits in nutrition skills despite rigorous nutrition didactics.

Methods: We implemented a single day culinary medicine intervention in the UCSF School of Medicine with second year medical students. The course was delivered over 4 hours: 1.5 hour cooking session, 1 hour lunch, and 1.5 hour small group case discussion relating cooking methods and materials to diseases and their metabolic and biochemical processes. We gave a validated questionnaire developed by Tulane before and after the intervention to assess beliefs, attitudes, and self-efficacy regarding providing nutritional education to patients, as well as examining personal dietary changes.

Results: 96 (N=180) students completed both pre- and post-surveys. We found statistically significant changes in attitudes and beliefs that physicians should include nutrition counseling during appointments ($p=0.000$) and physicians can affect patients' dietary behaviors ($p=0.001$). Perceived efficacy to independently educate patients about nutrition increased in 23 of 25 topics. Intention to improve students' own dietary habits increased in 9 of 13 areas. Students reported a 67% increase in likelihood to provide nutrition assessment and counseling to their patients ($p=0.000$).

Discussion: The results of this intervention demonstrate that a single day session in culinary medicine is effective in addressing important gaps in medical education, including self-efficacy, which physicians cite as a primary obstacle to counseling patients about nutrition. An abstract with these results has been submitted to the AAMC Annual Meeting.

Abstract # 1

The Consult Cognitive Load (CCL) Instrument: Development and Validity Evidence

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Area(s) abstract covers: GME

Domain(s) addressed: Assessment and Testing, Clinical Instruction and Performance, Metacognition

Category: Curriculum Evaluation/Educational Research

Abstract:

Purpose

To develop an instrument to measure trainee mental effort during consults.

Background

Hospital providers request consults (assistance) from specialist trainees. Consults are critical for trainee learning. However, we have little understanding and no measure of the mental effort that a consult requires. To address this gap, we turned to cognitive load theory (CLT), which describes the mental effort to perform a task (intrinsic load, IL), avoid distraction (extraneous load, EL), and learn the task (germane load, GL).

Methods

We developed the Consult Cognitive Load (CCL) instrument and gathered validity evidence.

Content: We found 59 candidate items (27 IL, 20 EL, 12 GL) in the literature. We chose a four-point agreement scale in consultation with a measurement expert. We exchanged 40 emails with six CL experts who helped drop, refine, and add items.

Response process: We conducted cognitive interviews with a convenience sample of six University of California, San Francisco (UCSF) fellows.

Internal structure: We emailed the CCL to all 97 UCSF internal medicine and psychiatry trainees on consult rotations over three months and used the first 30 responses as a pilot. We calculated Cronbach's alpha for reliability.

Relation to another variable: We correlated total IL (the sum of the IL scores), total EL, total GL, and total CL (IL+EL+GL) with self-rated CL using the Paas scale (Paas CL), a published CL measure.

Results

Based on expert and fellow input, we piloted 12 items (4 IL, 4 EL, 4 GL). IL, EL, and GL reliability coefficients were 0.78, 0.79, and 0.84. Total IL, EL, GL, and CL correlated with Paas CL: $r = 0.39, 0.47, 0.46,$ and $0.58, p < 0.05$ for each.

Discussion

We developed the CCL and gathered evidence for use as a measure of trainee CL during consults. We expect increased reliability and validity as we collect more data. Educators and researchers can use the CCL to measure trainee CL individually or in aggregate and intervene to improve learning (consequential validity).

Reflective Critique

UC Berkeley and Harvard Macy students and faculty proposed modifications.

Abstract # 2

ClinicalReasoning.org: Improving engagement with clinical reasoning teaching materials through visual and website redesign

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Area(s) abstract covers: Medical Student Education (UME), GME, CME

Domain(s) addressed: Clinical Instruction and Performance, Curricular Innovation, Metacognition, Design

Category: Curriculum Development

Abstract:

BACKGROUND

The Exercises in Clinical Reasoning (ECR) series in the Journal of General Internal Medicine is a unique series of 30+ case-based problem-solving manuscripts. For selected cases, the team has produced online teaching materials. Site analytics reveal that: although 8100 users accessed these materials in 2017, engagement is poor, with 90% of users visiting only one page in the website (i.e. the bounce rate = 90%).

PURPOSE

The ECR editorial team has hypothesized that the lack of engagement is due to poor website design.

Objectives:

1. Create a new, streamlined, and easy-to-use ECR website to promote free access to case-based clinical reasoning materials.
2. Evaluate for increased user engagement. The specific target is to reduce the bounce rate from ~90% to 70%, measured from 9/1/18 to 3/1/19.

METHODS

Site Creation: ClinicalReasoning.org was created on WordPress using the foundational principles of visual design — proximity (related items together), alignment (items in line), repetition (consistent patterns), and contrast (large visual differences).

Engagement: Site statistics, including bounce rate, were captured using Google Analytics. Data from the original website was captured from 1/1 to 12/31/17. Data from the redesigned website was captured from 9/1 to 12/1/18. Statistics utilized N-1 chi-squared.

RESULTS

ClinicalReasoning.org went live on 9/1/18, providing free access to the ECR teaching materials.

Site statistics revealed a large and statistically significant improvement in bounce rate from 87.70% (n = 8100 views) to 47.49% (n = 1625 views), $p < 0.0001$.

DISCUSSION

The bounce rate improvement was much greater than our goal of 70%. Coupled with measurable improvements in website design (not shown), this likely signifies that poor website design suppressed underlying user interest.

REFLECTION

The freedom of web resources increases accessibility of educational materials, but also allows for poor design to stifle user engagement. Using visual design principles when creating educational material greatly increases immediate visual appeal and long-term user engagement

Abstract # 3

In Pursuit of Honors: A Multi-Institutional Study of Students' Perceptions of Clerkship Evaluation and Grading

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Area(s) abstract covers: Medical Student Education (UME)

Domain(s) addressed: Assessment and Testing, Diversity

Category: Curriculum Evaluation/Educational Research

Abstract:

Purpose: To examine medical students' perceptions of the fairness and accuracy of core clerkship assessment, the clerkship learning environment and their relationship to students' achievement.

Background: There are concerns about the fairness and accuracy of core clerkship grades. Students from groups under-represented in medicine (UIM) are less likely to earn top grades, raising concerns of bias.(Teherani, 2018) Stereotype threat exacerbates group differences in performance as members of stereotyped groups (e.g. UIM students), worried about conforming to expectations for their group, consequently underperform.(Steele, 1997)

Method: Fourth-year medical students at six institutions completed a survey assessing perceptions of clerkship assessment, perceptions of the learning environment and honors earned. Investigators used multivariable regression to examine predictors of honors earned. Qualitative content analysis of responses to an open-ended question yielded students' recommendations to improve clerkship grading.

Results: Overall response rate was 71% (666/937). Only 44.4% of students agreed that grading was fair. UIM students were more likely to experience stereotype threat (55.7% vs 10.9%, $P < .0005$). Honors earned was positively associated with perceived accuracy of grading and interest in competitive specialties, and negatively associated with stereotype threat. 396 students gave strategies to improve clerkship grading: eliminating honors, training evaluators, and rewarding improvement on clerkships.

Discussion: Our results suggest a need to redefine the culture of assessment on core clerkships to better support students' learning.

Reflective Critique: The authors used town halls, literature review and survey pilot testing to gather feedback and improve our project.

Teherani A, Hauer KE, Fernandez A, King TE, Lucey C. How Small Differences in Assessed Clinical Performance Amplify to Large Differences in Grades and Awards. *Acad Med.* 2018 Sep;93(9):1286-1292.

Steele CM. A threat in the air. How stereotypes shape intellectual identity and performance. *Am Psych.* 1997;52(6):613-629.

Abstract # 4

Wellbeing in graduate medical education: Preventing and mitigating trainee burnout

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Area(s) abstract covers: GME

Domain(s) addressed: Motivation, Patient Care, Professionalism

Category: Curriculum Evaluation/Educational Research

Abstract:

Purpose: This project investigated current stressors affecting UCSF Fresno resident physicians and fellows and the adaptive coping strategies employed to mitigate work-related burnout.

Background: Burnout affects as many as half of United States physicians, including trainees. Physician burnout is associated with lower patient satisfaction, reduced health outcomes and may increase healthcare costs. Because wellbeing habits may be "imprinted" during residency, helping trainees prevent and/or mitigate burnout may have long-lasting effects.

Methods: We sought to improve our knowledge of current stressors affecting trainees by anonymously surveying members of the UCSF Fresno resident and fellow community to determine how wellbeing resources could target trainee needs at an individual- and systems-level at UCSF Fresno.

Results: Trainees reported working an average of 75 hours per week and identified time pressures and duties of training as the biggest contributors to feelings of stress. Seventy-eight percent of trainees reported feeling burnt out several days in the 2 weeks prior to survey administration, with 10% indicating daily feelings of burnout. Most trainees felt more free time would decrease stress, others indicated increased salary or other services, such as house cleaning and counseling, would be helpful.

Discussion: Trainees identified their peers as the most valuable resource in preventing and mitigating feelings of stress and burnout. Similarly, most trainees indicated they would reach out to their peers, rather than their chief resident or program director, if experiencing emotional or mental health problems. Therefore, teaching trainees to recognize and respond to burnout and emotional distress in their peers may be a valuable approach to wellbeing.

Reflective critique: I presented the results of this survey to the Wellness Committee meeting in July 2018 where members had an opportunity to discuss the findings. The Wellness Committee at UCSF Fresno organizes programming and services for residents and fellows aimed to prevent and mitigate burnout and its secondary effects.

Abstract # 6

A Medical Student Curriculum on Gun Violence to Develop Foundational Health Policy Skills

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Area(s) abstract covers: Medical Student Education (UME)

Domain(s) addressed: Curricular Innovation, Health Policy, Leadership

Category: Curriculum Development

Abstract:

Purpose: To develop a medical school curriculum that incorporates health policy and advocacy skills through application to current events.

Background: Gun violence is a unique public health crisis in the United States, with significantly increased public attention since the 2018 Parkland Shooting. While students learn about health advocacy and policy theory, they rarely have the opportunity within the curriculum to apply these skills to a current event. We addressed this gap by creating the session "Current Case in Health Policy: Gun Violence" as a part of the UCSF Bridges Foundational Sciences course Health and Society.

Methods: The Kerns 6-step model for curriculum development was used to define the problem and assess learner needs for Health and Society. A 2-hour small group session was co-authored by a student and faculty member to address course themes of health policy, advocacy, and disparities as applied to current events related to gun violence. Foundational policy theory including the Issue-Attention Cycle, history of health policy, and politics in the U.S from the literature was incorporated.

Results: "Current Case in Health Policy " " Gun Violence" was successfully implemented in the 2018 Health and Society course. In student evaluations of the course, 57% selected this small group as the most valuable of the small groups in the course. In qualitative comments, students indicated a desire to further practice gun safety discussions with patients.

Discussion: Students appreciated the opportunity to apply policy and advocacy skills to a current event of importance to them. This small group can be adapted to any current event while retaining foundational policy and advocacy skill application. We plan to share curricular materials via national conference presentations and manuscript submission.

Reflective Critique: The updated session will run again in the 2019 Health and Society course with opportunity for further evaluation. We will continue to modify content and seek opportunities for integration with other Bridges elements.

Abstract # 7

Application of Established Objectives and Milestones to Develop a Model Curriculum for the Pediatric Anesthesia Resident Rotation

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Area(s) abstract covers: GME

Domain(s) addressed: Clinical Instruction and Performance, Curricular Innovation, Residency

Category: Curriculum Development

Abstract:

Purpose:

The goal of our project is to create the first comprehensive curriculum for pediatric anesthesia resident rotations based on published educational objectives and residency milestones.

Background:

The Society for Pediatric Anesthesia (SPA) has published a list of educational objectives for knowledge and skill acquisition for pediatric anesthesia residency rotations. The ACGME has developed general milestones for anesthesia resident evaluation. However, there is no published curriculum for pediatric anesthesia residency rotations that incorporates these objectives and milestones and includes materials to support self-guided study, faculty, and competence assessment. Anesthesia Toolbox is an innovative, collaborative online platform designed to provide peer-reviewed resources for education in anesthesiology for residents, fellows, and faculty.

Methods:

The curriculum was created from the SPA objectives and ACGME milestones. The curriculum specifies educational content required to fulfill these goals and was vetted by the Pediatric Anesthesia Program Directors Association. Educational content includes competency assessment tools, materials for self-guided study and assessment (podcasts, videos, online modules, and quizzes), and information to support faculty-directed educational sessions (lectures, problem-based learning discussions, simulation scenarios, OSCEs, skills training guides). The content is sourced from multiple institutions, peer-reviewed, and available on Anesthesia Toolbox.

Evaluation Plan:

Pediatric anesthesia rotation directors will be surveyed to evaluate the curriculum. Residents and faculty will be surveyed to assess satisfaction and utility.

Dissemination:

Toolbox provides a platform for the international dissemination of our new curriculum in pediatric anesthesia (used by over 45 anesthesia departments). We plan to present our work at Society for Education in Anesthesia 2019.

Reflective Critique:

Feedback has been provided by the editorial staff of Anesthesia Toolbox, and further feedback from rotation directors will be used to refine the content.

Abstract # 8

Fostering a Feedback Mindset: Medical Students' Feedback Experiences with Longitudinal Coaches

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Area(s) abstract covers: Medical Student Education (UME)

Domain(s) addressed: Communication, Curricular Innovation, Feedback

Category: Curriculum Evaluation/Educational Research

Abstract:

Purpose:

To explore medical students' experience of feedback discussions with longitudinal coaches.

Background:

Feedback is important for medical students' development. Recent conceptualizations of feedback as a dialogue between feedback provider and recipient point to longitudinal relationships as a facilitator of effective feedback discussions. Coaching may enhance feedback dialogue, contextualized within the learner's developmental trajectory.

Methods:

In this qualitative study, second-year medical students participated in semi-structured interviews. Interview questions addressed experiences receiving feedback from their coach, how and when they used this feedback, and how their relationship with their coach influenced their engagement in feedback discussions. We analyzed interviews using a constructivist grounded theory approach.

Results:

Seventeen students participated. We identified three major themes: (1) Students' development of a feedback mindset - over time, students came to view feedback as invaluable to their training; (2) Setting the stage for feedback - establishing feedback routines and a low-stakes environment for developing clinical skills were important facilitators of feedback discussions; (3) Interpreting and acting upon feedback.

Discussion:

Through iterative feedback discussions with coaches, students came to view feedback as essential for their growth and learning. Longitudinal coaching relationships can positively influence how students conceptualize and engage in feedback discussions.

Reflective Critique:

We sought feedback on the project through pilot interviews, an ESCAPE session, and consultation with an outside expert educator, that helped clarify messages and frame the discussion.

References:

1. Ramani S, KÄ¶nning KD, Ginsburg S, van der Vleuten CPM. Twelve tips to promote a feedback culture with a growth mind-set: Swinging the feedback pendulum from recipes to relationships. *Med Teach*. February 2018;1-7.

2. Carless D, Boud D. The development of student feedback literacy: enabling uptake of feedback. *Assess Eval High Educ.* 2018;43(8):1315-1325.

Abstract # 11

**Exploring Structural Racism & Health Disparities:
An Immersive Experience in the American South for Pediatric Residents**

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Area(s) abstract covers: GME

Domain(s) addressed: Cultural Competence, Curricular Innovation, Diversity, Leadership

Category: Curriculum Development

Abstract:

Purpose: Describe a novel learning experience for pediatric residents in structural racism and health disparities.

Background: The PLUS: Pediatric Leaders Advancing Health Equity program engages residents in a longitudinal health equity leadership curriculum, and uses critical race theory to examine the impact of structural racism on health. Frameworks for teaching structural racism emphasize understanding historical context; this curriculum was lacking in PLUS. We sought and received funding for an educational experience in the American South to immerse residents in history while deepening knowledge in learning areas related to structural racism. This approach is supported by educational literature on transformative travel experiences.

Methods: Grounded in experiential and sociocultural learning theories, the trip engages an existing, cohesive community in encounters, reflection and application of new insights. In April 2019, 28 PLUS residents and faculty will spend 4 days visiting historical sites, the Center for Disease Control, and meeting with civil rights and community leaders in Tuskegee, Montgomery, Selma, and Birmingham, AL, and Atlanta, GA. Participants have co-created a syllabus with both historical background and reflection questions. Daily individual and structured group reflections will allow learners to connect new insights to existing knowledge,

and consider their own roles in dismantling structural racism. Upon returning to UCSF, learners will participate in ongoing discussions linking trip experiences to clinical practice and community projects.

Evaluation Plan: Using mixed methods to capture short and long term impacts, learners will participate in: 1) online real-time written and visual reflections 2) an end-of-trip survey, and 3) surveys 6, 12 and 36 months after the trip

Dissemination: Outcomes will be shared via Grand Rounds, posters submitted to APPD and PAS, and an article summarizing the contribution of this experience to participants' development.

Reflective Critique: Presented to ESCape in 2018; incorporated feedback from residents, faculty and community members.

Abstract # 13

Watch and Learn: Feasibility of Implementing a Resident Oncology Video Curriculum

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Area(s) abstract covers: GME

Domain(s) addressed: Clinical Instruction and Performance, Computers and Technology, Residency

Category: Curriculum Evaluation/Educational Research

Abstract:

Purpose

Evaluate the feasibility of implementing a resident oncology video curriculum.

Background

ACGME survey results show that 40% of University of California, San Francisco (UCSF) internal medicine (IM) residents are dissatisfied with their oncology education. A needs assessment revealed that UCSF residents desired online oncology resources. To meet this need, we sought oncology videos targeted to residents but found none. We used cognitive theory of multimedia learning principles to develop an oncology video curriculum and evaluated three feasibility components: practicality, acceptability and implementation.

Methods

We chose common malignancies from the ABIM blueprint. We made five modules with 10-minute videos of UCSF oncologists discussing resident-level content and pre/post test questions. After a pilot, we sent module links to all IM residents on ambulatory oncology rotations over four months (n = 25). We compared pre/post test scores with a paired t test and surveyed residents.

Results

Practicality: 72% (18 of 25) completed at least one module; 32% completed all five. The mean test score improved after module completion (50% compared to 87% correct, p = 0.002). Acceptability: 48% (12 of 25) completed the survey. 92% felt strongly that the videos contributed to their knowledge. 92% recommended the videos to others. Implementation: Residents praised the length, take home points, and test questions. Finding time for the modules was difficult. Suggestions included focusing on fundamentals and creating videos for all major cancers.

Discussion

We determined that a resident oncology video curriculum is feasible by providing practicality, acceptability, and implementation evidence. Based on resident comments, we recommend formally protecting time for module use. We will expand the curriculum, focusing on fundamentals. We will track ACGME survey results and clinical performance to evaluate impact. We aim to publish the modules online. Educators may use similar videos to address educational gaps in a variety of specialties.

Reflective Critique

We obtained feedback at ESCape.

Abstract # 14

STUDENTS ARE WATCHING: How surgical residents and attendings deal with difficult situations

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Area(s) abstract covers: Medical Student Education (UME)

Domain(s) addressed: Communication, Patient Care, Reflection

Category: Curriculum Evaluation/Educational Research

Abstract:

Purpose: To examine clerkship students' perceptions of how surgical residents and attendings dealt with difficult situations.

Background: Many institutions monitor the clinical learning environment to ensure that all are treated with respect. Procedural faculty often are cited for disrespectful comments. We anticipated that difficult situations could evoke a myriad of behaviors.

Methods: Our students write a reflection during their surgery clerkship responding to, "What lessons did you learn from how a resident or a faculty member dealt with a difficult situation?" We used content analysis to examine 5 years of data. Three authors read all the reflections, developed the codebook and coded all reflections. All authors reviewed the resulting themes.

Results: Of 651 reflections, 83% addressed communication and 17% specific skills or content. Most students wrote positive reflections. Communications fell into 2 themes: approach and non-verbal skills. Approach included tone (warm, supportive), style (patient-centered, acknowledging perceptions, establishing trust) and demeanor (matter-of-fact, calm, honest). Non-verbal-skills included patience (space to listen, silence, time) and position (sit/kneel, touch). Students wrote about non-verbal team communication and also included political and collaborative communication. Students observed physicians acknowledging errors and discussing them in M&M with communication characterized by both approach and non-verbal skill. Negative communication observations were discussed in 7% of reflections and covered themes including inappropriate tone, avoidance, and untimely communication.

Discussion: Students greatly admired surgical resident and attending communication skills. Many highlighted how they wanted to incorporate these skills into their own practices. A limitation of this study is that these reflections were a clerkship requirement that may have caused students to write more positive observations. However, their reflections had no impact on their grade.

Reflective critique: We incorporated feedback received at ESCape.

Abstract # 15

Implementation of a Fellowship Coaching Program to Improve Professional Development, Personal Satisfaction and Wellbeing

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Area(s) abstract covers: GME

Domain(s) addressed: Clinical Instruction and Performance, Feedback, Mentoring

Category: Curriculum Development

Abstract:

Background: Coaching for professional development can improve performance, personal satisfaction, and wellbeing. We hypothesize that implementation of a structured coaching program will improve fellows' satisfaction with program training and wellbeing, which is particularly important in Pulmonary and Critical Care Medicine (PCCM), the specialty with the highest burnout risk.

Methods: We designed a coaching program for the UCSF PCCM Fellowship program using the literature and UCSF faculty expertise. Three coaches were recruited to work with 7 fellows (21 ACGME fellows). Trained coaches meet with fellows at least monthly; agendas include positive psychology techniques, approaches to improve emotional intelligence, and leadership skills. Areas of focus include residency-to-fellowship transition, work-life integration, career choice, mentor selection, clinical evaluations, and available resources. Coach meeting structure centers around individual personal and career goal-setting.

Implementation: Coach salary support was provided by a grant from the Nina Ireland Program in Lung Health. Coach training included sessions on positive psychology, learner engagement, and self-reflection and courses on relationship-centered communication, feedback, and diversity, equity, and inclusion.

Evaluation Plan: We will assess fellows' program satisfaction, wellbeing, satisfaction with career choice, career development options, and procedure-related competency. Metrics will be compared with data from before program implementation. Ultimately we will examine other outcomes such as burnout and professionalism.

Discussion: Implementation of a fellowship coaching program focused on developing a deep mutual understanding of each fellows' career objectives, clinical performance and positive psychology is feasible in an academic program oriented toward clinical and research training. The anticipated outcomes include improved program satisfaction, wellbeing, and satisfaction with career development opportunity.

Reflective Critique: We will get feedback from the Association of PCCM Program Directors.

Abstract # 16

Impact of a Mainly Online Mindfulness Course on Faculty and Trainee Wellness

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Area(s) abstract covers: GME

Domain(s) addressed: Curricular Innovation, Reflection, Wellness

Category: Curriculum Evaluation/Educational Research

Abstract:

Purpose

To evaluate the impact and feasibility of an eight-week mainly app-based mindfulness course on health professionals' wellness.

Background

More than half of US physicians experience symptoms of burnout. Evidence shows developing mindfulness practices decreases physician burnout and increases engagement. Recent studies suggest that even brief mindfulness meditation interventions may be effective.

Methods

Instead of a traditional Mind-Body Stress Reduction program consisting of 8-10 weekly 2.5-hour group training, we developed an eight week course utilizing the Headspace App to meditate 3-10 min at least four times a week, online supplemental videos, and a mid-course meeting to practice meditation as a group. Participants included medical students, residents, and faculty. Prior to each course, participants were asked anonymously to complete the Professional Quality of Life Scale (ProQOL) which measures burnout, secondary traumatic stress, and compassion satisfaction. Participants were also surveyed at the end of each course with additional qualitative questions on the impact of the course. Analyses were performed using independent samples T-test.

Results

Fifty-four and thirty participants completed the ProQOL at pre- and post- course, respectively. There were no statistically significant differences between the responses on the ProQOL, but trends were in a positive direction and consistent with qualitative responses, including feeling more relaxed, more aware and present, less overwhelmed, more accepting and getting better sleep. Course feasibility was measured by engagement with meditations on Headspace based on self-report.

Discussion

Despite the non-randomized design and small sample size resulting in lack of statistical significance, preliminary results are encouraging. The unique app-based training allowed feasibility and flexibility, however, lack of time remained the biggest barrier to practice.

Reflective Critique

Due to investigator concerns about lack of anonymity and survey fatigue, survey questions were brief and not mandatory. High dropout rate limited pre- and post-intervention analyses. Lastly, course feasibility was not monitored objectively; instead, it was based on self-report.

Abstract # 17

Opening doors to academic medicine: The Pre-Health Undergraduate Program (PUP) at UCSF

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Area(s) abstract covers: Medical Student Education (UME), Pre-Medical Student Education

Domain(s) addressed: Diversity, Evaluation of Programs, Mentoring

Category: Curriculum Evaluation/Educational Research

Abstract:

Purpose: To evaluate the Pre-Health Undergraduate Program, a one-month experience designed to introduce underrepresented minority (URM) undergraduate students to careers in clinical research through coursework and near-peer mentorship.

Background: Increasing diversity in biomedical research is needed. Few pre-professional programs expose URM students to academic medicine using a near-peer mentoring strategy.

Methods: We used a socio-cultural and communities of practice theoretical framework. Descriptive statistics assessed participant demographics using program application data from 2011 to 2017. We tracked participants' 2 and 5-year professional outcomes and surveyed intentions to pursue a research career.

Results: Of 116 participants, 63% were female, 34% were male and 2% were transgender. Nearly half (43%) were Asian/Pacific Islander, 5% were African American, and 28% were Latinx. 24% came from a disadvantaged background, and 44% reported being in the first generation to attend college. Of 49 and 35 students who provided 2 and 5-year follow-up data, 78% and 94% attended graduate school, 33% and 46% published manuscripts or abstracts, and 35% and 66% presented at scientific conferences. At 2 and 5 years following program completion, 88% and 89% reported that they were likely to pursue a research career, and 92% and 94% said that PUP was a positive influence on their career goals.

Discussion: A relatively brief learner-centered URM program based on near-peer mentorship results in high satisfaction. Following the program, a high proportion of students gained admittance to graduate school and reported intention to pursue a research career. Programs that emphasize early deliberate exposure to a community of near-peer health researchers may result in diversifying the biomedical research workforce.

Reflective Critique: We solicited feedback from mentors and learners in the UCSF Health Professions Education Pathway. From this, we structured our project design around the theoretical frameworks and focused the initial analytic approach on quantitative outcomes.

Abstract # 18

Evaluating a Web-based Point-of-care Ultrasound Curriculum for the Diagnosis of Intussusception

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Area(s) abstract covers: GME, CME

Domain(s) addressed: Assessment and Testing, Competencies, Longitudinal Educational Activities, Patient Care

Category: Curriculum Evaluation/Educational Research

Abstract:

Purpose: This study describes the development and planned evaluation of a web-based curriculum for point-of-care ultrasound for intussusception (POCUS-I).

Background: Intussusception is a pediatric medical emergency but can be difficult to diagnose due to nonspecific symptoms. Radiology-performed ultrasound is the diagnostic study of choice but may lead to delays due to lack of availability. POCUS-I studies have showed excellent accuracy and reduced lengths of stay (1-2), but there are limited POCUS-I training materials for pediatric emergency medicine (PEM) providers.

Methods: We developed a POCUS-I curriculum using the Kern framework for PEM faculty and fellows. Our objectives were to know the indications for POCUS-I, how to acquire and interpret images, and how to implement POCUS-I into practice. The curriculum consists of an online module and hands-on practice and was reviewed by a pediatric radiologist. For assessment, we use 1.) a survey on comfort with POCUS-I 2.) a researcher developed knowledge and image test and 3.) a direct observation POCUS-I checklist.

Evaluation: Prior to the curriculum, approximately 15 participants will take assessments 1 and 2. After the curriculum, they will take assessments 1, 2 and 3. During the following 3 months, scans completed by participants will be monitored and after 3 months, participants will complete the three measures again. We will examine scores across the time periods and will report the number of scans completed in the 3-month period and correlate with the last performance assessment.

Discussion/Dissemination: We plan to disseminate our project through presentations as well as journal publications. As our curriculum is primarily web-based, we will be able to disseminate it to additional learner groups.

Reflection: We have received helpful feedback during our ESCape presentation and meetings with Dr. O'Sullivan including more clearly explaining the development of our curriculum and our methods of evaluation.

1. Riera A et al. Ann Emerg Med. 2012 Sep;60(3):264-8.
2. Kim et al. Pediatr Emerg Care. 2017 Sep [Epub ahead of print].

Abstract # 20

Expanding Access to OBGYN Surgical Skills Training in the UCSF Medical Student Curriculum

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Area(s) abstract covers: Medical Student Education (UME)

Domain(s) addressed: Career Choice, Curricular Innovation, Simulation

Category: Curriculum Development

Abstract:

Purpose: Hands-on surgical skills training is limited in the current preclinical curriculum. This project aims to expand student access to laparoscopic training. We hypothesize this will help students feel more prepared during clerkships and increase overall interest in OBGYN.

Background: The OBGYN Surgical Skills elective is the only preclinical course that teaches hands-on OBGYN techniques. A Harvard study concluded student exposure to GYN surgical simulations led to significantly higher confidence in laparoscopy and increased interest in a surgical career. [1] At UCSF, student desire for this training is high; in 2017, 46 students applied for the OBGYN elective, for which only 20 spots were available due to lack of funding for supplies. As a result, four UCSF MS3s and Dr. Jeanette Lager came together to address this issue.

Methods: This project has three phases: (1) obtaining funding (\$30k) from the Mount Zion Health Fund to acquire surgical equipment, (2) surveying students in the OBGYN elective before and after they used said equipment, and (3) analyzing data from the survey, clerkship exit interviews and enrollment. Phase 3 of the project is ongoing.

Results: We surveyed MS2s who attended the OBGYN elective in 2018. Of 28 attendees, 17 completed both surveys and 11 met attendance-based inclusion criteria. 11/11 (100%) felt the hands-on sessions helped them feel better prepared for their OBGYN clerkship, and 7/11 (64%) felt additional time with laparoscopic training would aid in their learning. Full results of the Phase 3 analysis will be presented at a future date.

Discussion: We will disseminate a written curriculum for the elective and apply to the APGO Annual Meeting to present the complete results of this project.

Reflective Critique: The survey results and feedback from OBGYN clerkship exit interviews will guide how to optimize access to the surgical equipment.

[1] Nitschmann, et al. "Gynecological Simulation Training Increases Medical Student Confidence & Interest in Women's Health." *Teaching & Learning in Medicine*, 2014, p160

Abstract # 21

Evolution of the UCSF School of Medicine Wikipedia-editing course in 2017 & 2018

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Area(s) abstract covers: Medical Student Education (UME)

Domain(s) addressed: Communication, Curricular Innovation, Global Health

Category: Curriculum Development

Abstract:

Purpose: Since November 2013, UCSF has offered an elective course that allows students to hone their communication skills and widen their perceptions of being a health care provider by editing Wikipedia.

Background: While Wikipedia is easily accessible and one of the most frequently consulted sources for health topics, Wikipedia quality charts have indicated that health articles tend to lack reliable sources. Editing Wikipedia health articles serves as an opportunity for health professional students to use their emerging expertise to improve access to health information. Since our initial course, health professional schools in Israel, Canada, Australia, and the UK have embedded Wikipedia-editing into their curricula.

Methods: Courses and modules assigned by instructors introduce students to Wikipedia's editorial tools. Course dashboards track student adherence to assignments, and the number of edits, words and images added. In 2018, we added virtual, synchronous break-out groups via Zoom video-conferencing.

Results: In fall 2018, 20 UCSF MS-4's made 628 edits to 21 pages, adding 41,700 words and 4 images to pages viewed 291,000 times during the course active days. Students enthusiastically endorsed the zoom breakout groups.

Discussion: Students gain valuable experience in communicating technical health information in a manner that is accessible to the general public. Between 2013-2018, a total of 129 medical students completed the course, making 4,381 edits to 101 Wikipedia pages. Those pages were viewed 2,825,057 times during the students' active editing days.

Reflective Critique: We will continue to modify course structure and encourage other professional schools to embrace Wikipedia editing as a teaching and learning strategy.

References: Azzam A, Bresler D, Leon A, Maggio L, Whitaker E, Heilman J, Orlovitz J, Swisher V, Rasberry L, Otoide K, Trotter F, Ross W, McCue JD. Why Medical Schools Should Embrace Wikipedia: Final-Year Medical Student Contributions to Wikipedia Articles for Academic Credit at One School. *AcadMed*. 2016; ePub ahead of print: doi: 10.1097/ACM.0000000000001381

Abstract # 22

An Exploratory Study of Therapeutic Reasoning Underlying Antibiotic Selection

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Area(s) abstract covers: Medical Student Education (UME), GME, CME. Study focused on attendings but has implications for medical education broadly.

Domain(s) addressed: Health Care, Metacognition, Research, Clinical Reasoning

Category: Curriculum Evaluation/Educational Research

Abstract:

PURPOSE

To explore the reasoning that underlies physicians' choice of antibiotics.

BACKGROUND

Clinical reasoning research has helped illuminate how clinicians make diagnoses but offers less insight into management decisions. The need to understand therapeutic choices is particularly salient within Infectious Diseases, where antibiotic prescribing has broad implications given increasing rates of antimicrobial resistance. Researchers have examined general factors underlying antibiotic prescribing but the process by which physicians choose a specific antibiotic regimen remains unclear.

METHODS

We conducted individual interviews with a purposeful sample of Hospitalists and Infectious Diseases attendings. Our semi-structured interview explored the reasoning underlying antibiotic choice through clinical vignettes. We identified steps and factors after 12 interviews then conducted 4 more to confirm and refine our findings. We generated a codebook through an iterative, inductive process and used Dedoose to code the interviews and facilitate analysis.

RESULTS

We identified 3 interrelated antibiotic reasoning steps (Naming the Syndrome, Delineating Pathogens, Antibiotic Selection) and 5 factors involved in the reasoning process (Host Features, Case Features, Provider and Healthcare System Factors, Treatment Principles, Antibiotic Characteristics). Participants considered host and case features when determining likely pathogens and antibiotic options; the other 3 factors influenced antibiotic selection. From these data, we developed an antibiotic reasoning framework.

DISCUSSION

Our antibiotic reasoning framework details the cognitive processes underlying antibiotic choice. Our results build on general therapeutic reasoning frameworks, elaborating factors specific to ID. Our framework has implications for medical education and antimicrobial stewardship.

REFLECTIVE CRITIQUE

We shared project plans with clinical reasoning experts and piloted interviews, which helped improve our vignettes. Expert feedback also improved project alignment with the therapeutic reasoning literature.

Abstract # 23

Pediatric ForEM Bay Area: A pilot asynchronous learning platform focused on clinical reasoning.

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Area(s) abstract covers: GME, Faculty Development

Domain(s) addressed: Clinical Instruction and Performance, Computers and Technology, Patient Care

Category: Curriculum Development

Abstract:

Purpose

To develop and implement an asynchronous learning forum focused on challenging cases in Pediatric Emergency Medicine (PEM) and clinical reasoning.

Background

Clinical reasoning—how clinicians process and apply knowledge—is an important skill that develops with case-based experience and clinical context. This is important in the pediatric emergency department setting, where clinicians face time-sensitive, diverse clinical problems often without evidence-based solutions. The breadth of cases an individual clinician encounters is variable, resulting in inconsistent opportunities to hone clinical reasoning strategies. Existing learning opportunities (i.e. case reports, M&M) are intermittent and focus on rare cases.

An asynchronous learning strategy may be uniquely fitted to PEM learning (Sadosty, Goyal, Hern, Kilian, & Beeson, 2009). Studies demonstrate improved knowledge acquisition and non-inferiority with traditional lecture formats (Burnette, Ramundo, Stevenson, & Beeson, 2009; Pourmand, Lucas, & Nouraie, 2013). However, clinical reasoning has not been well-studied in asynchronous formats.

We aim to create an asynchronous online group for PEM providers, present selected challenging cases, and encourage online case discussions.

Methods

We piloted a case series focused on clinical reasoning scenarios using an online platform called "DocMatter"². PEM faculty and fellows at UCSF were enrolled and instructed on using the platform. The cases were submitted by faculty, deidentified, and modified to focus on key clinical questions. Cases included a vignette and focused clinical questions.

Evaluation plan

We will analyze site usage data to measure engagement and written responses to cases with thematic analysis. Written responses are the clinical reasoning comments made by faculty and fellows. Usage data will include visits to each case and time spent reviewing cases.

Dissemination

After the initial pilot, we plan to expand to other regional emergency providers. Eventually, we plan to make it available for all clinicians who care for children in our area.

Abstract # 25

Impact of a Simulated Auditory Hallucination Exercise Coupled with a Schizophrenia Speaker on Mental Health Stigma in Pharmacy Students

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Area(s) abstract covers: Medical Student Education (UME), Pharmacy Student Education

Domain(s) addressed: Curricular Innovation, Research, Simulation,

Category: Curriculum Evaluation/Educational Research

Abstract:

Purpose: The goal was to evaluate effects of a schizophrenia speaker and hallucination simulation on mental health stigma in pharmacy students.

Background: Mental health stigma involves three domains: empathy, social distance, and attitudes. Hallucination simulations improve empathy, but produce mixed effects on social distance and attitudes. Comparatively, direct contact with mental health patients improves social distance and attitudes. Combining these interventions may decrease stigma without worsening social distance and attitudes.

Methods: 121 pharmacy students listened to a schizophrenia speaker and then completed tasks while listening to an auditory hallucination simulation. Students completed the Opening Minds Stigma Scale for Health Care Providers (OMS-HC) via Qualtrics prior to the speaker and after the simulation. Students were also asked to describe how their perception changed.

Results: 63(52%) of the students completed both surveys. Wilcoxon-signed rank tests and thematic analysis of comments were conducted. There was a decrease in overall OMS-HC score ($p=0.005$), specifically in the attitudes ($p=0.004$) and disclosure/help-seeking ($p=0.005$) subscales. There was no change in the social distance subscale ($p=0.182$). Students described new awareness, reduced stigma, sympathy/empathy, inspiration/admiration, discomfort, and a changed approach to patient care. Sympathy/empathy was the most common theme, being present in over 80% of comments and commonly co-occurring with patient care.

Discussion: Combining a schizophrenia speaker with a hallucination simulation decreased mental health stigma among student pharmacists across domains of attitudes and disclosure/help-seeking, with no effect on social distance. Students voiced feelings of sympathy/empathy when describing their changed perception. These results will be shared via poster presentations at psychiatric and academic pharmacy conferences.

Reflective Critique: Feedback on the exercise was solicited from students after the exercise via debriefings and Qualtrics. Based on feedback, exercises will be modified for next year.

Abstract # 27

Expanding the UCSF medical student curriculum in OBGYN via the creation of online surgical modules

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Area(s) abstract covers: Medical Student Education (UME)

Domain(s) addressed: Clinical Instruction and Performance, Curricular Innovation, Simulation

Category: Curriculum Development

Abstract:

Purpose: In the Bridges curriculum, materials and time available for student preparation in the OR learning environment is limited, leaving many students feeling unprepared for surgical clerkships. As a result, we set out to create video modules on common OBGYN surgeries and gynecologic specific anatomy review for F2 students. Four videos are in production, with content on myomectomies, cesarean sections, ovarian cyst removals and salpingectomy-oophorectomies, including surgical footage. Our objective is to bolster surgical content in the OBGYN curriculum while providing continuity with F1 material. We hypothesize students will feel more prepared for the OR during their OBGYN clerkships with access to these videos.

Background: Bridges students are away from clerkships one day a week, making the time spent on the rotation imperative. By implementing modules to view at home, students can participate more actively during clinical time. Our videos build upon the F1 curriculum, supplementing existing material to match the advancing level of medical students; for example, Dr. Lager's F1 video on fibroids will link to a video on myomectomy in F2.

Methods: Prior to their first OR day, F2 students will be encouraged to view the modules, which will be posted on the OBGYN core clerkship iRocket page. Their utility will be assessed by quantitative data from MedHub clerkship evaluations (ex: rate the usefulness of the videos in your clerkship preparation), and qualitative feedback from clerkship exit interviews.

Evaluation Plan: As exit interviews and evaluations are required of all students upon finishing their OBGYN rotation, we expect 100% of F2 students (~160/yr) to contribute data to our project once the videos are available (goal of 4/2019). A successful outcome will constitute >50% of students replying the videos were useful in their studies.

Dissemination: We will apply to APGO's annual meeting in Feb 2020 to disseminate these results.

Reflective Critique: Student evaluation feedback will help modify when in the curriculum the videos appear and their accessibility on iRocket.

Abstract # 30

A telehealth curriculum for interprofessional trainees and staff

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Area(s) abstract covers: Medical Student Education (UME), GME, Interprofessional trainees and staff

Domain(s) addressed: Computers and Technology, Curricular Innovation, Interprofessional Education, Patient Care

Category: Curriculum Development

Abstract:

Purpose: To teach trainees and staff to perform telehealth home visits

Background: Access to medical care for rural and underserved patients is adversely affected by time and cost burdens associated with travel. The Department of Veterans Affairs introduced VA Video Connect (VVC) in July 2017 to connect Veterans to their care team via a secure online platform. Although the tools are available and such visits improve access to care, VVC visits are underutilized because providers lack the training, confidence and skills necessary to conduct them.

Methods: We used Kern's six step model of curriculum development to develop a VVC curriculum for residents, students and staff from medicine, nursing, pharmacy and psychology. Based on identified needs, the curriculum consists of 3 one hour-long sessions delivered over 6 months. Topics covered include equipment and technology, safety, contingency planning, documentation, VA issued tablets and peripheral devices, virtual physical exam, appropriate health concerns for video visits and integration into clinic workflow.

Evaluation Plan: Our evaluation plan includes participation (attendance records), satisfaction with session quality (end of session survey), self-assessed comfort and ability to perform telehealth visits (end of session surveys and end of curriculum focus group), and actual performance of video visits (tracked through VA dashboards).

Dissemination: Routine telehealth utilization will expand in the VA and nationally. Our innovative curriculum could be the basis for a national standard for telehealth education. We have submitted an abstract to Society of General Internal Medicine Annual Meeting and intend to make the curriculum available to other VAs.

Reflective Critique: Multiple stakeholders have provided feedback on the curriculum including the acting Telehealth Lead for Primary Care with the VA and several leaders of primary care and telehealth at the SFVA.

Abstract # 31

Implementation & Evaluation of a Novel GME-Wide Program for Women's Leadership Development

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Area(s) abstract covers: GME

Domain(s) addressed: Diversity, Evaluation of Programs, Leadership

Category: Curriculum Evaluation/Educational Research

Abstract:

Purpose: We implemented and evaluated UCSF WILD-GME (Women in Leadership Development), a novel GME program for women trainees to develop leadership skills in a community of peers.

Background: Significant gender disparities remain at all levels of medical leadership. Literature review of women's leadership programs in business and medicine are framed around providing a safe environment for identity work and recognizing the role of unconscious bias.

Methods: WILD offers monthly skill-building seminars on topics including mentorship, networking, public speaking, and identity formation. Our evaluation methodology is a multi-modal strategy including collection of demographic data, pre/post surveys, post-program focus groups, and session-specific surveys. We tested the difference in confidence related to leadership objectives between pre- and post-surveys, rated on a 5-point Likert scale. Qualitative analysis of focus groups will examine WILD's impact on participants who attended multiple sessions.

Results: 80 women in WILD have been included in the evaluation so far, with survey response rates ranging from 71% to 92% per event. WILD participants represent 14 clinical departments, with the most participants from Internal Medicine (n=39, 49%). 19 participants (31%) attended more than one session. The average number of participants per session was 28 (range 17-43). Preliminary data show a significant increase in confidence in three objectives: understanding family leave rights (mean 3.79 vs. 2.39 at baseline, $p=.0001$), negotiating a contract (mean 3.88 vs. 2.22, $p<.0001$), and garnering political influence (mean 2.55 vs. 3.73, $p=.0002$).

Discussion: In its first year, WILD has been well attended by trainees across medical subspecialties, and participants report greater confidence in leadership domains post-intervention. Future directions include forming a longitudinal cohort of women within WILD to build a community of practice and incorporate structured mentorship and 360-degree feedback.

Reflective Critique: Evaluation strategy was modified based on feedback from HPE Pathway Directors and WIP.

Abstract # 32

The Equity Literacy for an Inclusive Training Environment (ELITE) Initiative -- Developing a Resident Diversity Education Toolkit

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Area(s) abstract covers: GME

Domain(s) addressed: Competencies, Curricular Innovation, Diversity, Residency

Category: Curriculum Development

Abstract:

Purpose: The Equity Literacy for an Inclusive Training Environment (ELITE) Initiative seeks to create an online diversity education toolkit to deliver fundamental diversity, equity and inclusion (DEI) content for residents across all specialties.

Background: Residents are key members of the academic clinical and learning environment. To create an inclusive and equitable climate, residents need tools to promote DEI in their roles as learners, teachers, and clinicians. Currently, most UCSF DEI content targets students or faculty, with no coordinated curricula specifically for residents.

Methods: We developed a proposed curriculum of foundational DEI topics from literature review and the authors' expertise. We then conducted semi-structured interviews with Program Directors and departmental DEI experts to create a map of existing resident DEI content and needs assessment by program. We integrated these with the proposed curriculum to create the ELITE Toolkit structure.

Evaluation Plan: The ELITE Toolkit will contain 3 introductory DEI sessions that can be utilized as-is by any residency. Through train-the-trainer seminars, select faculty in each program will develop 3 advanced-topic DEI sessions tailored to their residency's specific needs. All sessions are being developed in parallel with the Differences Matter Group 2's work to create Residency DEI Competencies. Evaluation will include the breadth and depth of Toolkit update by residencies and evaluation of residents' progression in the different DEI Competencies.

Dissemination: With GME diversity and curriculum leadership, we will create a hub to host, provide training for, and disseminate the ELITE Toolkit across residencies. We will also publicize our work through publications and conference presentations.

Reflective Critique: We first elicited feedback on the proposed curriculum from residency Program Directors, and institutional DEI and curriculum leaders. This feedback led to the creation of the train-the-trainer model for advanced-topic session development and informed the session order.

Abstract # 33

Could a Shared Fellow Workspace Improve Teaching during Inpatient Subspecialty Consultation?

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Area(s) abstract covers: GME

Domain(s) addressed: Communication, Health Systems, Quality Improvement, Residency

Category: Curriculum Evaluation/Educational Research

Abstract:

Purpose

To explore the perceived value of a shared fellow workspace and its potential to improve teaching and communication during inpatient consultation.

Background

Consultation represents an opportunity for interns and residents (housestaff) to learn from fellows. Face-to-face (FTF) interactions improve teaching and communication but they occur rarely.

Methods

We conducted online surveys and 2 focus groups, inviting all 2018-19 UCSF Internal Medicine housestaff and first- and second-year medicine subspecialty fellows to participate. Survey questions addressed workflow, teaching and communication. Focus groups further explored survey findings. We calculated descriptive statistics for surveys and identified themes from focus groups.

Results

Of 282 trainees (181 housestaff, 101 fellows), 185 (66%) completed the survey. Respondents confirmed that FTF consult interactions are rare. Almost all housestaff (96%) do not think they could find a given fellow in the hospital without paging or calling. While fellows value FTF interactions with each other, 86% have such interactions less than weekly, and 60% of fellows feel estranged from the Department of Medicine.

In a focus group, 11 fellows from 8 subspecialties described being lonely and willing to try a shared workspace. However, procedural obligations would preclude some fellows from working there, and most prefer to round in private. In the housestaff focus group, 4 interns and 4 residents said they want more FTF interactions and described receiving conflicting recommendations from subspecialists due to poor communication. Both housestaff and fellows reported that time constraints and the inability to recognize other trainees limit FTF interactions.

Discussion

FTF interactions during consultation are valued but rare. Hospital design disfavors FTF interactions; hindering teaching and communication. Fellows would trial a shared workspace and housestaff would go there to discuss patients.

Reflective Critique

While we had envisioned a shared workspace as a 24/7 resource, we now understand that fellows also need private offices.

Abstract # 34

Teaching and Assessing Pharmacology Learning Using Different Approaches in UCSF's Integrated Bridges Curriculum--*Omnes viae Romam ducunt?*

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Area(s) abstract covers: Medical Student Education (UME)

Domain(s) addressed: Basic Science Education, Communication, Evaluation of Programs

Category: Curriculum Evaluation/Educational Research

Abstract:

PURPOSE

To evaluate the association between different teaching strategies of pharmacology content and performance on open-ended question (OEQ) exams.

BACKGROUND

The UCSF Bridges curriculum is an integrated, organ systems-based curriculum. Students learn via multiple modalities including A) live lectures, B) small groups, C) online videos, D) click-through online PowerPoints and E) interactive case-based wrap-up sessions co-taught with clinicians. Summative assessments for each block are OEQ and require application of knowledge. Pharmacology-specific OEQ scores were gathered from all blocks that taught and assessed pharmacology: Ground School, "GS" (modalities A&B&C&E); Airways, Blood, Circulation, "ABC" (A&B&D); Renal, Endocrine, GI, and Nutrition, "REGN" (A&B&C&E+flashcards on exam); Pathogens & Host Defense, "PHD" (C&E+flashcards on exam); and Brain, Movement, & Behavior, "BMB" (C&E).

METHODS

We collected pharmacology OEQ scores from medical students in the 2017-2018 academic year. OEQs were scored by trained faculty on a scale of 1-6 using a holistic rubric: "meets expectations" (5,6), "borderline" (3,4) or "does not meet expectations" (1,2). OEQ scores were averaged and results were analyzed using repeated measures analysis of variance in SPSS software. Three students who did not complete all blocks were removed from analysis.

RESULTS

Data was considered continuous and scores were not normally distributed. Mean performance on pharmacology OEQs was significantly different across blocks (GS: 5.56 \bar{i} , \pm 0.03; ABC: 5.21 \bar{i} , \pm 0.03; REGN: 5.07 \bar{i} , \pm 0.03; PHD: 4.99 \bar{i} , \pm 0.03; BMB: 5.45 \bar{i} , \pm 0.03; \bar{i} , \pm SEM, n=149).

DISCUSSION

The class average in all blocks was >4.99, suggesting that a variety of teaching methods are effective. The small differences across blocks may be related to the specific methods used in each block. This work will be made available to block directors and has been submitted for presentation at IAMSE 2019.

REFLECTIVE CRITIQUE

We met with Patricia O'Sullivan for statistical analyses and study design. This abstract was reviewed by M. Dandu at an abstract workshop and suggestions were incorporated.

Abstract # 35

Following up on trainees' use of Motivational Interviewing in primary care: perceptions and practice patterns 9 months post-training

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Area(s) abstract covers: GME, NP Education

Domain(s) addressed: Communication, Patient Care, Primary Care

Category: Curriculum Evaluation/Educational Research

Abstract:

Purpose

To explore how physician and NP trainees use Motivational Interviewing (MI) with primary care patients and what factors influence use after receiving training and demonstrating significant improvement in MI skills.

Background

The efficacy of motivational interviewing (MI) training for clinicians is relatively well established based on pre-post observations of MI skills, but few studies have followed up with clinicians to examine application and continued use in practice.

Methods

In Jan/Feb 2018, 18 medicine residents and 8 NP students/residents participated in 2hrs of training in MI and received detailed feedback based on direct observation of a phone visit with a standardized patient. MI skills improved significantly after training. Nine months later we surveyed trainees about their use of MI with primary care patients and invited 23 trainees to participate in a 30 minute interview about their perceptions of and experiences using MI. We calculated descriptive statistics from survey results and analyzed the interview transcripts thematically.

Results

16 IM residents and 5 NP trainees completed the survey (81% response). The majority of IM residents reported using MI rarely or occasionally (69%) while all NP trainees reported using MI frequently or very frequently (100%). 15 IM residents and 3 NP trainees participated in interviews (78% of those invited). Interview themes revealed widespread endorsement of MI conceptually, but difficulty implementing it in practice due to time constraints, need to prioritize "medical issues," perceived lack of skill, and unreceptive patients. Differing impressions of the goals of MI (engaging patients in a conversation vs. actual behavior change) appeared relevant to use.

Discussion

A next step for training may be to model MI use in real primary care visits and scaffold training so trainees experience increasingly complex encounters.

Reflective Critique

Our findings guided changes to the 2019 MI curriculum to emphasize patient engagement in change talk as achievable goals rather than immediate behavior change.

Abstract # 36

Substance use stigma among a online sample of health care students: knowledge, beliefs, and attitudes

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Area(s) abstract covers: Medical Student Education (UME)

Domain(s) addressed: Communication, Interprofessional Education, Patient Care

Category: Curriculum Evaluation/Educational Research

Abstract:

Purpose: This project explored the relationship of substance use treatment knowledge, beliefs of addiction (free will vs. disease), clinical training, confidence to diagnose substance use disorders (SUDs) and personally knowing someone with SUD to explicit stigmatizing attitudes toward people with SUD among healthcare students.

Background: Healthcare providers, hold negative attitudes towards persons with SUD that are similar to the attitudes held by the general public. These negative attitudes impact the health related professional services (e.g., medical, nursing, psychological, pharmaceutical) received by persons with SUD. Healthcare students identified the lack of substance use treatment knowledge, professional confidence and training as key causes of explicit stigmatizing attitudes.

Methods: A national sample of 110 clinical healthcare students was recruited through a Qualtrics recruitment panel. Participants provided information on clinical training and completed the Drug Problems Perceptions Questionnaire, the Addiction Belief Scale, the Substance Use Treatment Knowledge Questionnaire, and a confidence to diagnose and treat persons with SUD questionnaire.

Results: Personally knowing someone with SUD ($F(2,107) = 9.05, p < .005, R^2 = .15$), addiction belief ($F(1,108) = 3.85, p < .005, R^2 = .034$) and hours of coursework in substance use treatment ($F(3,102) = 7.02, p < .005, R^2 = .17$) predicted explicit attitudes related to working with persons with SUD. Hours of supervised clinical work predicted confidence and preparedness to diagnose and treat SUD ($F(3,102) = 8.91, p < .005, R^2 = .21$).

Discussion: Knowledge of factors impacting healthcare students' explicit attitudes towards persons with SUDs can be used to reduce provider stigma, such as in a targeted SUD inter-professional educational intervention of attitudinal change and clinical training curricula for healthcare students. We plan to publish these results in a peer-reviewed journal.

Reflective Critique: Our research study used feedback from addiction medicine educators on the appropriateness of the substance use knowledge questions.

Abstract # 38

Harnessing Faculty Development to Train a Community of Health Sciences Faculty in Sustainable Healthcare Education Across the University of California Health Sciences Schools

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Area(s) abstract covers: faculty development

Domain(s) addressed: Curricular Innovation, Faculty Development, Global Health, Climate change and Health

Category: Curriculum Development

Abstract:

Purpose

To train a community of University of California (UC) health sciences (HS) faculty on sustainable healthcare education (SHE) (i.e. education about the impact of climate change, ecosystem alteration, and biodiversity loss on health as well as the impact of the health care industry on the aforementioned and sustainable solutions for both).¹

Background

Climate change and ecosystems degradation present the "greatest threat" to public health.² HS faculty are in a critical position to educate their learners about SHE. However, few HS faculty have SHE knowledge. Building faculty development communities promises to prepare faculty in new learning such as SHE and creates a "social community of likeminded individuals who share a passion."³

Methods

Using the train-the-trainer model, the investigators developed a SHE workshop to train 2 faculty at the 6 University of California HS schools who in turn taught 20 HS faculty at their own institutions. The workshop covered the impact of climate and ecosystems on health, SHE principles and resources, and evidence-based pedagogies to teach SHE. Surveys were administered post the train-the-trainer and campus-based workshops, and the courses transformed and the number of learners impacted documented.

Results

The workshop provided 100% of the train-the-trainer faculty with SHE resources and 85% with guidance on how to incorporate SHE into their teaching. The campus-specific workshop was conducted at one campus and the other 5 will be completed by August 2019. 85% of the faculty trained at the one campus found the workshop valuable and incorporated what they learned into their teaching. The faculty integrated SHE into 21 courses such as biomaterial science, epidemiology, medical anthropology, and clinical pharmacy reaching 1300+ learners.

Discussion

Cohesive faculty development provides HS faculty with vital training in SHE which reaches many learners.

Reflective Critique

We submitted our work to various forums for feedback. We are applying for a grant to expand our efforts.

References

Abstract # 39

Clinician well-being as a foundation of clinical training in primary care: Evaluation of a meditation retreat for interprofessional trainees

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Area(s) abstract covers: GME, Interprofessional graduate training

Domain(s) addressed: Curricular Innovation, Evaluation of Programs, Interprofessional Education, Clinician well-being

Category: Curriculum Evaluation/Educational Research

Abstract:

Purpose: To evaluate a meditation retreat, one part of a curriculum development initiative to integrate well-being into interprofessional clinical training.

Background: Research suggests that mindfulness, emotional awareness, and prosocial skills and attitudes (e.g., empathy and compassion) can be taught, are vital to clinician well-being, and improve patient care. Few curricula explicitly teach this content during clinical training, so we piloted a mindfulness and emotion skills-based retreat as part of a larger curriculum.

Methods: In October 2018, two VA-based educators partnered with an expert from the Greater Good Science Center to facilitate a 6-hour retreat for trainees in SFVAMC Primary Care. Activities included mindfulness meditation, emotion mapping, and communication practices. We evaluated needs and acceptability using a post-retreat survey.

Results: 13 trainees, including medical interns, NP students and residents, psychology fellows, and pharmacy residents, voluntarily attended the retreat and completed the survey. Trainees' reasons for attending varied by profession and included well-being, skill development, and clinical application. 8 participants (62%) were naive to mindfulness practice. 12 (92%) rated the topics and activities of the retreat as very or extremely important to their clinical training, and 11 (85%) were very or extremely interested in having continued support in these domains as part of their professional education. 11 (85%) agreed or strongly agreed that they were likely to make changes to clinical work and professional relationships as a result of the retreat.

Discussion: Findings indicate strong support for the content and format of the retreat among a self-selected group of interprofessional trainees. Variation among professions warrants further exploration via targeted needs assessment. Next steps include additional retreats, evaluation, and iterative curriculum development to support ongoing instruction and practice.

Reflective Critique: We will use findings from this evaluation and input from other stakeholders for curriculum development.

Abstract # 40

Assessing the Impact of the Clinical Effort Against Secondhand Smoke Exposure (CEASE) Training among Pediatric Residents

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Area(s) abstract covers: GME

Domain(s) addressed: Curricular Innovation, Patient Care, Primary Care, Residency

Category: Curriculum Evaluation/Educational Research

Abstract:

Purpose:

This project evaluated the effectiveness of an educational curriculum for teaching pediatric residents how to help pediatric patients' parents quit smoking across 5 University of California (UC) sites.

Background:

40% of US children are exposed to second-hand smoke (SHS) and experience adverse health outcomes. Pediatricians can provide caregivers who smoke with smoking cessation support and referrals, yet pediatric residents are usually not trained to deliver these services. The Clinical Effort Against Secondhand Smoke Exposure (CEASE) is an evidence-based training of motivational interviewing, prescribing nicotine replacement therapy (NRT), and referring smokers to a quitline to increase pediatric providers' ability to address SHS exposure.

Methods:

Residents at each UC were e-mailed a retrospective pre-post survey at the end of the academic year (June, 2018). SHS knowledge and self-efficacy at performing quitting interventions were separately assessed using Likert and numeric scales. Independent t-tests compared training participant responses with those who were not trained. Paired-sample tests assessed pre-post differences among training participants.

Results:

139 residents (44%) across 4 of the 5 UCs completed the survey; of the respondents, 34% received the CEASE training. Most training was provided by faculty at noon conference or continuity clinic. There were no significant pre-test knowledge differences in self-efficacy between those trained and those not, but pre-test knowledge was significantly greater for those trained. All post-test scores were significantly greater for those trained vs not ($p < .001$). Training participants showed significant pre-post gains on all knowledge and self-efficacy items ($p < .001$).

Discussion :

CEASE training adapted for pediatric residents was feasible to implement and increased knowledge and self-efficacy to address SHS. Ongoing quality improvement efforts are needed to reach more trainees.

Reflective Critique:

Based on resident feedback, the CEASE curriculum is being evaluated to be more interactive and have more online content.

Abstract # 42

Patient Advocacy on the Wards: A Medicine Clerkship Curriculum

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Area(s) abstract covers: Medical Student Education (UME)

Domain(s) addressed: Curricular Innovation, Patient Care, Patient Advocacy

Category: Curriculum Development

Abstract:

Purpose: The advocacy curriculum teaches medical students how to: 1) elicit social determinants of health (SDOH) that impact patient care, 2) utilize specific skills to promote health equity, and 3) reflect upon these experiences in order to shape their own perspectives of advocacy.

Background: Patient advocacy is taught in classrooms as a core concept of medicine, yet it is rarely emphasized in experiential training on clinical rotations. A needs assessment at our institution showed that although 87% of surveyed third-year medical students agreed/strongly agreed that advocacy education in clinical clerkships was important to their professional development, only 26% agreed that they had received formal education on strategies to advocate for patients in the inpatient setting.

Methods: Since January 2018, students rotating in their internal medicine clerkship at Moffitt-Long Hospital participate in this curriculum, which includes: 1) faculty-led introductory workshop, reviewing interdisciplinary roles and advocacy tools, 2) individual assignments where students advocate for a patient within the context of their SDOH, 3) post-activity written reflection and report to wards team with feedback, and 4) faculty-led debriefing workshop, sharing challenges and future advocacy strategies.

Results: Surveys showed that after the curriculum, 100% of students agreed/strongly agreed that they felt confident in their skills to advocate for patients in the inpatient setting, compared to 35% before the curriculum. 93% of students agreed/strongly agreed that this curriculum helped them work closely with patients to ensure they received equitable and appropriate care.

Discussion: This curriculum uniquely augments students' learning and confidence surrounding advocacy concepts by applying their SDOH knowledge into action with practical skills.

Reflection: Based on feedback, we will continue to emphasize the importance of interdisciplinary teamwork in achieving health equity, and incorporate new resources to help students build a foundation for system and community-wide advocacy.

Abstract # 43

Rethinking how to introduce the learning sciences: a near-peer approach

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Area(s) abstract covers: Medical Student Education (UME)

Domain(s) addressed: Curricular Innovation, Metacognition

Category: Curriculum Development

Abstract:

Purpose: In this session, we aimed to make evidence-based learning strategies more accessible and increase the likelihood that students would adopt them.

Background: Evidence-based learning strategies may not be intuitive and can differ from traditional study methods that students previously used. Our first-year curriculum included a lecture by faculty that introduced students to effective study strategies, however, a focus group of students who participated in the original lecture revealed the need to move away from abstract theory and provide more concrete examples specific to learning medical sciences. Students emphasized that our previous approach created defensiveness. To make evidence-based learning strategies more accessible, we revised our teaching approach.

Methods: In response to this feedback, we designed and implemented a new interactive session with specific examples of learning strategies for their unique curriculum. Importantly, a second-year medical student primarily designed and facilitated the session. Through concrete examples, the peer-teacher then demonstrated how students could adapt learning strategies to align with effective learning science principles.

Evaluation Plan: Evaluations of our new approach supported how a near-peer creates a more supportive, less corrective tone to enhance the likelihood of students incorporating these techniques. This innovative session received high numeric ratings from students. In delayed-session evaluation, most students endorsed that they had subsequently tried a new evidence-based learning technique.

Discussion: After multiple attempts to integrate the learning sciences into our formal curriculum, a key lesson was that having a near-peer as the primary facilitator for this session was instrumental.

Reflective Critique: We plan to incorporate feedback from ESCape to inform changes to this session for the next academic year.

Abstract # 44

Preventing burnout and promoting longitudinal professional identity formation through Assessment, Reflection, Coaching, and Health (ARCH) weeks

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Area(s) abstract covers: Medical Student Education (UME)

Domain(s) addressed: Curricular Innovation, Longitudinal Educational Activities, Professionalism

Category: Curriculum Development

Abstract:

Purpose

To describe the implementation and evaluation of a new medical school curriculum at UCSF.

Background

ARCH weeks were developed to foster personal wellness while also ensuring students' progress towards competence on the foundation of a learner-driven, program-guided approach to lifelong learning. The eight ARCH weeks in the new medical school Bridges curriculum are organized around six threads: 1) Assessment, 2) career exploration, 3) coaching, 4) professional identity formation (PIF), 5) team-learning and communication skills, and 6) well-being. Competency

Methods

Approximately 500 UCSF medical students have participated in the 12 ARCH weeks to date, spanning 3 classes. The program is evaluated by students at the end of each ARCH week with open ended questions focusing on each ARCH thread and closed ended questions with numerical scores. Similar questions are asked each year to evaluate the outcome of any changes made. Reflective questions of students in clerkships about the most impactful pre-clinical ARCH sessions are also asked.

Results

Evaluation data from the students indicate the program to be highly rated (3.4-4.2/5), especially for the hidden curriculum PIF session, which was also cited by students as the most important part of ARCH in preparing students for clerkships. Response to the open ended evaluation questions provided significant direction to inform future ARCH weeks.

Discussion

Tracking of students' progress post-graduation will be critical to evaluate the success of ARCH in addition to responses from selected questions on the graduation questionnaire starting with the class of 2020 to compare with data from prior years. Responses may be confounded by other changes in the curriculum in addition to ARCH, but career exploration and wellness are primarily covered in ARCH.

Reflective Critique

Formal evaluation of each ARCH week will continue to inform development of subsequent weeks along with feedback from disseminating the work more broadly.

Abstract # 48

Appropriate Diagnosis and Management of Acute Coronary Syndrome by Internal Medicine Interns: A Needs Assessment

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Area(s) abstract covers: GME

Domain(s) addressed: Evaluation of Programs, Residency

Category: Curriculum Evaluation/Educational Research

Abstract:

Purpose

We performed a needs assessment to determine internal medicine interns' ability to accurately diagnose and manage acute coronary syndrome (ACS).

Background

ACS is common and associated with significant morbidity and mortality. The ability of interns to diagnose and manage ACS is unclear.

Methods

We administered a test with case-based open-ended questions to medicine interns at a large urban medical center four months into their training. We assessed their ability to diagnose ACS, differentiate ACS from other types of myocardial infarction (MI), manage these conditions with guideline-based therapies, and provide a pathophysiologic basis for each therapy. Ideal responses were determined by a consensus of two cardiologists resulting in a rubric with point values for correct responses. We descriptively analyzed responses and excluded incomplete assessments.

Results

81% of learners completed the assessment. Interrater reliability for the scoring rubric was excellent ($\hat{\kappa}=0.74$). In the demand ischemia case, 44% properly managed demand ischemia due to sepsis, 69% inappropriately treated as ACS, and 10% inappropriately managed both sepsis and ACS. In the ACS case, 15% provided complete guideline-directed medical therapy and 4% also provided accurate pathophysiologic basis for each therapy. Comparing respondents who had completed a prior cardiology rotation and those who had not, there were no differences between mean scores (53% vs. 46%), number properly managing demand ischemia, and number providing complete guideline-directed medical therapy for ACS (all $p>0.20$).

Discussion

In our study, medicine interns performed poorly in diagnosing and managing ACS. Completion of a cardiology rotation was not associated with differences in these abilities. This suggests the need for improved educational methods when teaching ACS diagnosis and management.

Reflective Critique

Feedback from experts in cardiology, education, and statistics guided development of this study's rubric, assessment tool, and analysis. These mentors will continue to inform the future course of this project.

Abstract # 49

HIV Training Pathways in Residency: A National Survey of Curricula and Outcomes

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Area(s) abstract covers: GME

Domain(s) addressed: Evaluation of Programs, Residency, HIV

Category: Curriculum Evaluation/Educational Research

Abstract:

Purpose: This project aims to (1) describe graduate medical education HIV training pathways in family and internal medicine residencies in the US, (2) assess their graduate practice outcomes, and (3) identify potential barriers to graduates finding jobs in HIV primary care.

Background: Dramatic improvements in life expectancy for people living with HIV (PLWH) have resulted in an increase in HIV prevalence, but there is a growing shortfall of HIV primary care providers. One proposed solution to address this workforce shortage is to integrate robust HIV training into residency programs. Currently 10 internal medicine (IM) and two family medicine (FM) residencies have dedicated HIV curricula. Although the first pathway was created in 2008, little is known about the goals, structures, and outcomes of these programs. Given that pathways can mitigate this provider workforce shortage, we sought to determine if graduates of these programs are providing primary care for PLWH.

Methods: We will survey HIV pathway directors using a 33-item quantitative survey, which was developed in Qualtrics by all authors. Survey items focus on program organization, curricular content, graduate outcomes, and challenges. Survey development included the following: three content experts reviewed items; seven medical students, residents, fellows, and faculty participated in cognitive interviews; two pathway directors piloted the survey.

Evaluation Plan: The survey was disseminated in January 2019, and results are pending. We will use descriptive statistics to summarize the responses.

Dissemination: We will submit an abstract to the UCSF Inquiry Symposium (May 2019) and the Infectious Diseases Society of America annual meeting (October 2019). The target journal for the manuscript will be a general internal medicine journal.

Reflective Critique: We adjusted survey items after cognitive interviews at the Health Professions Education Pathway work-in-progress session and after input from pilot participants.

Abstract # 50

Using the Learning Sciences to Optimize Medical School Assessment: How do Weekly Quizzes and Constructed Response Examinations Affect Students' Approach to Learning?

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Area(s) abstract covers: Medical Student Education (UME)

Domain(s) addressed: Assessment and Testing

Category: Curriculum Evaluation/Educational Research

Abstract:

Purpose:

We aim to explore 1) how weekly formative quizzes (constructed response questions and multiple-choice questions) and summative constructed response exams influence medical students' learning strategies and 2) how students' learning strategies align with recommended approaches on learning sciences theories.

Background:

To be competent in practice, physicians require conceptual understanding, long-term retention, and knowledge-application strategies. Assessment drives learning, and assessment design can promote effective learning strategies from the learning sciences. UCSF School of Medicine designed a program of weekly formative quizzes and summative constructed response exams to promote students' use of effective learning strategies.

Methods:

In this qualitative study, semi-structured interviews with 16 second-year medical students addressed preparation for quizzes and summative exams. Three researchers analyzed transcripts using thematic analysis informed by sensitizing concepts from the learning sciences.

Results:

Preliminary themes address learning sciences theories students employed while studying:

Elaboration: Most students used elaboration techniques (e.g. creating concept maps). Some used quizzes to make connections between different topics.

Interleaving: Alternating among topics while studying varied by course, and was more common when students could readily identify connections.

Retrieval: To identify knowledge gaps, most students used retrieval techniques (e.g. quizzing peers, attempting weekly formative quizzes from memory).

Distribution: Most students endorsed studying continually, and most intensively in the week before a summative exam. Formative quizzes helped distribute studying over time rather than cramming.

Discussions:

Medical students are prompted by weekly quizzes and constructed response exams to use recommended learning strategies. They engage in metacognition as they navigate how to study the large body of knowledge.

Reflective critique:

We received and incorporated reviewer feedback on a similar submission to the WGEA conference.

Abstract # 51

Development of Components of a Program of Assessment to Support Self-Regulated, Mastery Learning

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Area(s) abstract covers: GME

Domain(s) addressed: Assessment and Testing, Competencies, Feedback, Residency

Category: Curriculum Evaluation/Educational Research

Abstract:

Purpose

Implement a program of assessment using an EPA-based competency framework and assess its feasibility and utility.

Background

Assessments are a critical element of competency-based medical education and provide valuable feedback for learners, potentially enhancing self-regulated learning. Entrustable Professional Activities (EPAs) - essential, observable activities that in aggregate define a profession – offer a framework for creating a Program of Assessment (PoA) that aligns learner goals and more holistic assessment data. Large scale implementation and use of an EPA-based assessment framework in residency has not been previously described.

Methods

Using a PoA model (van der Vleuten), we created workplace-based observation forms for 12 of 17 EPAs from the American Board of Pediatrics. Supervisors and residents co-completed assessments using an electronic, mobile-accessible platform. We implemented the system for all pediatric residents in July 2017 and measured key implementation process indicators. We surveyed second- and third-year residents about their experience.

Results

We implemented the program in 75% of our training environments and collected assessments from all 3 resident cohorts (80 residents total). Median number of assessments per year were as follows (n, IQR): PGY1 (16.5, 13-29); PGY-2 (10, 6-12.5); PGY-3 (6.5, 5-8). Residents surveyed (n=34, response rate 62%) reported initiating assessments frequently (53%) and most found the feedback useful (71%), applicable to their learning (62%), and resulted in a change in their practice (56%).

Discussion

Preliminary evidence suggests that implementation of an EPA-based program of assessment is feasible, sustainable and may provide useful, actionable feedback to residents. Areas for improvement include augmenting the overall number of assessments, sustaining engagement in assessment throughout residency, and enhancing resident initiation of feedback.

Reflective Critique

More work is needed to determine the impact on trainee behavior and whether such a program promotes self-regulated learning and deliberate practice.

Abstract # 55

How Preceptors in an Internal Medicine Continuity Clinic Develop Trust in Residents: A Qualitative Study

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Area(s) abstract covers: GME

Domain(s) addressed: Clinical Instruction and Performance, Primary Care, Residency

Category: Curriculum Evaluation/Educational Research

Abstract:

Purpose: To understand how faculty preceptors in internal medicine (IM) continuity clinics develop trust in residents, and how trust affects supervision.

Background: Trust is a key element that informs supervision decisions. As medical education increasingly emphasizes the need for improved continuity clinic education, it is important to understand how trust develops in this setting to provide trainees developmentally-appropriate graded autonomy.

Methods: We conducted interviews with continuity clinic preceptors in an IM residency program. Interviews address preceptors' views of trust, resident characteristics that build or limit trust, and supervisory behaviors that inform and vary with trust. Transcripts were analyzed using thematic analysis.

Results: We have interviewed eight preceptors; data collection is ongoing. Preceptors determine trust through assessing residents' knowledge of patients, clinical judgment, presentation organization, and reliability in follow-up of patient issues. Longitudinal relationships and observation of residents conducting patient encounters and handling virtual care inform trust. With greater trust, preceptors promote resident autonomy by probing less for data, providing less directive guidance on care plans, and shifting focus towards teaching. Challenges to developing trust include preceptors' lack of familiarity and limited contact with residents' patients, limited continuity across resident clinic sessions, and infrequent direct observation, especially outside of clinic sessions.

Discussion: Factors unique to the continuity clinic setting, including longitudinal interactions and the growth of virtual care, influence trust. Strategies to enable continuity in oversight of in-person encounters and virtual care, foster longitudinal relationships, and normalize direct observation and feedback can align trust and supervision.

Reflective Critique: We solicited and incorporated feedback from initial interviewees on clarity and effectiveness of the interview guide in exploring the different topics that contribute to trust development.

Abstract # 56

Development of a session to teach Geriatrics and Palliative Care fellows how to assess decision-making capacity in older adults.

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Area(s) abstract covers: GME

Domain(s) addressed: Assessment and Testing, Clinical Instruction and Performance, Curricular Innovation, Patient Care

Category: Curriculum Development

Abstract:

Purpose: Develop a didactic session on assessment of decision-making capacity in older adults for geriatrics and palliative care fellows.

Background: Assessing decision-making capacity is a core clinical skill for physicians. Lack of capacity is common, however clinicians regularly fail to recognize incapacity. Reliability of unstructured judgments of capacity has been shown to be poor.

Methods: A targeted needs assessment was conducted, including a review of the ABIM, Geriatrics and Hospice and Palliative Medicine (HPM) Boards exam blue prints and review of core curricula of both UCSF fellowships. In addition, a focus group with four current geriatrics fellows was conducted exploring practices and challenges in assessing capacity and prior learning experiences. A survey to incoming geriatrics and HPM fellows is in process and results will also help develop the didactic session.

Results: Learning capacity assessment is a priority of the ABIM, Geriatrics and HPM boards and currently there is no formal teaching session as part of the UCSF fellowship curriculum.

The focus group revealed that prior learning experience varied among participants. They all knew major criteria, but none could name an instrument. Compared to residency, unanimously they felt more emotional burden due to the possible negative outcomes of high stakes decisions such as goals of care and safe and independent living. Other challenges included having patients with cognitive impairment and having only one interaction. Participants expressed interest in formal teaching sessions but also being exposed to guided clinical experience.

Discussion: Continued education on capacity assessment is needed during fellowship to introduce new clinical and emotional challenges when taking care of the elderly patient. An educational session will be piloted with current geriatrics fellows and after evaluation this will guide the final session to incoming geriatrics and HPM fellows.

Reflective Critique: During a WIP feedback session on my survey I learned to focus my questions and make them easier for participants to answer.

Abstract # 57

Assessment of student physical therapists' professionalism

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Area(s) abstract covers: Health Professions Education

Domain(s) addressed: Competencies, Evaluation of Programs, Longitudinal Educational Activities, Professionalism

Category: Curriculum Evaluation/Educational Research

Abstract:

Background

It is challenging to teach and assess professionalism, yet it is critical to DPT student success. We created a professionalism rubric, based on a literature review of professional standards, with competencies in five domains: Professional Excellence, Accountability, Working Relationships, Compassion & Humility, and Social Responsibility. The purposes of this project were to examine information from the rubric and to examine the rubric administration process.

Methods

All faculty and students completed the rubric survey individually in the first two years of the program. The final year rubric was completed by students only. The rubrics ranked professional behaviors (0=unprofessional, 1=participating, 2= professional) and had open-ended comments. The rubric differed each year, reflecting a developmental framework for professionalism expectations. Descriptive and comparative analysis of the quantitative data, and thematic analysis of student and faculty comments/faculty feedback were performed.

Results

Of primary interest were areas revealing substandard professionalism. The areas of ranked lowest by students were: Year 1 Accountability (33%, n=46); Year 2 Compassion & Humility (29%, n=42); and Year 3 Social Responsibility (52% n=45). The areas ranked lowest by faculty were: Year 1 Working Relationships (15% n=46); and Year 2 Compassion & Humility (17%, n=42). Themes from the comments were a growth mindset, values, peer influence, and professionalism in the academic vs. clinic settings. Faculty wanted more granular rubric ratings and an electronic survey format.

Discussion

The faculty and student rubric analysis identifies specific target areas for program initiatives and process revisions. The results of this study informs future rubric formats and student support for professionalism development.

Reflective Critique

Based on this project, we have changed the rubric format, provided faculty development around the use of this tool, and targeted initiatives supporting professionalism that address urgent needs.

Abstract # 60

UCSF OBGYN Core Clerkship Medical Student Mistreatment Curriculum

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Area(s) abstract covers: Medical Student Education (UME)

Domain(s) addressed: Clinical Instruction and Performance, Evaluation of Programs, Professionalism

Category: Curriculum Development

Abstract:

Purpose

This curriculum is designed to address student perception of mistreatment during the OBGYN clerkship. We hypothesize that building student confidence, establishing expectations, and providing a safe space will improve student experiences, changing their perception of mistreatment.

Background

Per the annual AAMC Graduate Questionnaire, OBGYN has one of the highest student-reported mistreatment rates. Variation in student definitions of mistreatment range from obvious incident-based mistreatments to subtle insults that create a suboptimal learning environment—extensive down time, perceived disinterest in teaching from attendings or residents, and lack of feedback. (1)

Methods

We developed a two part curriculum involving group discussion of experiences and "trigger videos", depicting scenarios in which students feel mistreated including OBGYN-specific videos and videos adapted from a Stanford-based surgery clerkship curriculum.(2) To assess efficacy, surveys are completed by students at the start and end of the program.

Evaluation Plan

We implemented this curriculum during one rotation block thus far with 5/9 students responding to the surveys. 80% reported experiencing mistreatment and 80% rated the program 4 (0-4 scale). We will continue to adapt this curriculum based on feedback.

Dissemination

We plan to present our data at the 2019 APGO meeting, with the goal of publishing the program to aid in dissemination for use among OBGYN departments at outside institutions.

Reflective Critique

In addition to soliciting student feedback via focus group, we presented this curriculum to the UCSF OR & Labor Environment Task Force, a multidisciplinary group of providers and trainees. We plan to continue this open discussion with the Task Force.

References

1. Gan R, Snell L. When the learning environment is suboptimal: Exploring medical students' perceptions of "mistreatment". Acad Med. 2014; 89:608-617.

2. Mazer L, Liebert C, Merrell SB, et al. Establishing a positive clinical learning environment in the surgery core clerkship: A video-based mistreatment curriculum. MedEdPORTAL. 2015.

Abstract # 61

The Patient Behind the Prescription: A Clinical Learning Experience for Residents in the Management of Chronic Pain and Opioids

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Area(s) abstract covers: GME

Domain(s) addressed: Communication, Patient Care, Primary Care

Category: Curriculum Development

Abstract:

Purpose

We sought to create a structured clinical learning experience for primary care residents on a patient-centered approach to the management of chronic pain and opioids.

Background

In the era of the opioid epidemic and tightening regulations on prescribing opioid medications, resident physicians are increasingly uncomfortable with the management of chronic opioid therapy (COT). Several publications have identified knowledge gap, skills, and support gaps contributing to this uncertainty.

Methods

HOPE clinic is a multi-disciplinary, once weekly clinic based in an academic primary care clinic based at Zuckerberg San Francisco General (ZSFG). Primary care residents in their 2nd or 3rd rotate through the clinic twice per year. Each session has a dedicated curricular topic. Residents see patients alongside the physician supervisor with the focus of the visit on management of chronic pain and opioids and motivational interviewing communication skills. Residents were given a survey to assess confidence with managing pain and COT before and after each clinic session on a 5 point Likert-like scale (1 = not confident through 5 = very confident). Residents were asked about stress and enjoyment in working with patients with chronic pain and substance use (1 = completely disagree, 5 = completely agree).

Evaluation

A total of 14 residents rotated through HOPE clinic in the first 6 months. Prior to attending HOPE clinic, residents expressed feeling low confidence but reported increase in confidence after the session. The change in confidence level was:

- conducting a pain assessment (average score pre = 2.8 and post = 3.9)
- safely prescribing opioids (pre = 2.5 and post = 3.4)
- managing concerning behaviors in patients on COT (pre= 2.5 and post = 3.5)
- creating a treatment plan for chronic pain (pre = 2.8 and post = 3.2)
- identifying substance use disorder in patients on COT (pre = 2.1 and post = 3.4)
- treating substance use disorders in primary care (pre = 2.3 and post = 3.3)

Reflective Critique

In future semesters we will continue to revise the curriculum based on resident feedback.