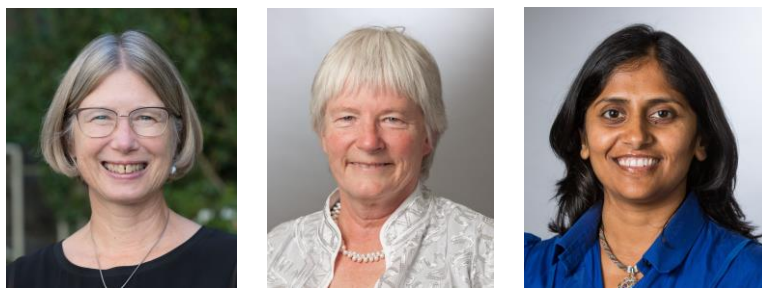## Welcome to UCSF Education Showcase Week 2022

Dear Friends,

On behalf of the Center for Faculty Educators, we are proud to present Education Showcase Week 2022 and mark the 21st anniversary of this event highlighting the scholarly work in education of UCSF faculty, learners and staff. Included in our celebration are the presenters from the School of Medicine Class of 2022 who delivered their Showcase presentations in a pre-commencement session earlier this month. Congratulations, all!

Our invited speaker is Thirusha Naidu, PhD, MClinPsych, joining us from the Nelson R. Mandela School of Medicine at the University of KwaZulu-Natal, South Africa. She is a clinical psychologist in the Department of Behavioural Medicine at the School of Nursing and Public Health. Dr. Naidu will present the keynote address, *Decolonizing Health Professions Education*. To facilitate the robust conversations this topic is likely to inspire, we've planned time for a discussion following her remarks. On May 17 Dr. Naidu will also present a workshop, "Applying A Decolonial Framework to Research in Health Professions Education", with colleagues Tasha Wyatt, Gareth Gingell, and Zareen Zaidi.

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, and 71 mini oral presentations (inclusive of the graduating students' presentations). Plenary-length presentations are featured on May 16 and May 19, and mini-orals on May 16, May 18 and May 19. Please come and support our presenters, many of whom are learners and junior faculty as well as colleagues from other institutions.

Each day will have opportunities for engagement, connection and discussion with Showcase attendees. In addition to the keynote address discussion, there is time for Q&A after every oral presentation. We also offer a Topics Tables session on May 17 from 3:30-4:30. Members of our community were invited to host conversations on topics important to them. Visit the Showcase Interactive Wiki: **http://tiny.ucsf.edu/ShowcaseLinks2022** for the list of topics and hosts. On Thursday, the Showcase concludes with a panel on Teaching Wellness, moderated by Kendra Moore, MD and featuring panelists Larissa Thomas, MD, Amber Fitzsimmons, PT, MS, DPTSc, and Erick Hung, MD. Following the panel, we invite you to continue this important conversation in person. All who are interested are welcome to join us at Kezar Triangle in Golden Gate Park for an informal discussion about well-being.

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recipients whose work represents outstanding quality and innovation in educational research and/or curriculum development. This year, two abstracts were selected to receive the award at the conclusion of Monday'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 engaged with so many passionate health professions educators sharing our creative and innovative scholarly work.
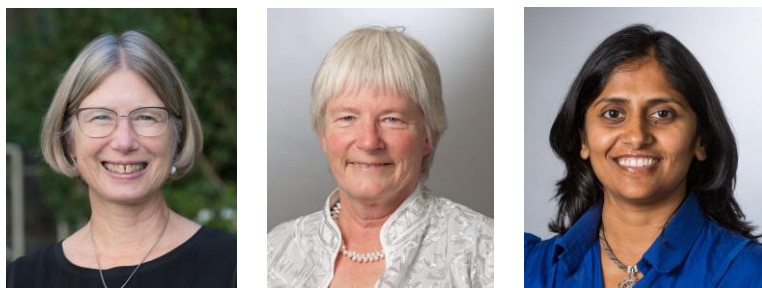
Warmly,

Ann Poncelet, MD, FAAN	Patricia O'Sullivan, EdD	Madhavi Dandu, MD, MPH
Professor of Neurology	Professor of Medicine and Surgery	Professor of Medicine
William G. Irwin Endowed Chair	Director, Research and Development	Director, Scholarship Committee
Director, Haile T. Debas	in Medical Education	Haile T. Debas Academy of Medical
Academy of Medical Educators	Endowed Chair of Surgical Education	Educators

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Haile T. Debas Academy of Medical
Educators

Education Showcase Week 2022 – Schedule
http://tiny.ucsf.edu/ShowcaseLinks2022

Register for additional sessions: **http://tiny.ucsf.edu/ShowcaseReg2022**

Monday, May 16

Time	Session
12:00-3:30pm	**Plenary Session 1** 12:00 -1:00 Keynote Address: Critically Reflective Practice for a Compassionate Healthcare System. Led by: Stella Ng, PhD 1:05-1:25 Keynote Discussion Breakout Groups 1:30-2:15 Plenary Presentations 2:15-2:30 Break 2:30-3:30 Mini Oral Presentations Zoom link is the same for all Plenary Session events: https://ucsf.zoom.us/j/94737269351?pwd=UTN5VG9IeExUdzFTUmlsVnpqa2plQT09
2:00-5:00pm	**Workshop 1:** Qualitative Research Methods and Data Collection in Health Professions Education Led by: Bridget O'Brien, PhD and Sara Sani, MD

Tuesday, May 17

Time	Session
8:00-10:00am	**Workshop 2**: A Framework for Applying Decolonial Practice in Health Professions Education Research Led by: Thirusha Naidu, PhD, Tasha R. Wyatt, PhD, Gareth Gingell, PhD and Zareen Zaidi, MD, PhD
8:00am-noon	**Workshop 3**: Steps to Effective Course and Curriculum Development Led by: Stacy Sawtelle Vohra, MD, Barbie Klein, PhD and Lily Hitchner, MD
10:00am-noon	**Workshop 4:** Fundamental Skills in the Art of Effective Feedback Led by: Angel Chen Kuo, RN, MS, CPNP, and Elizabeth Gatewood, RN, MS, FNP-C

Wednesday, May 18

Time	Session
12:30-3:20pm	**Mini Orals**: Peer-Reviewed Presentations of Scholarly Work in Health Professions Education https://ucsf.zoom.us/j/94737269351?pwd=UTN5VG9IeExUdzFTUmlsVnpqa2plQT09
3:30-4:30pm	**Topic "Tables" Discussions:** Facilitated Conversations on a variety of topics. Get to know people who have a similar interest, or come to learn and share your thoughts. https://ucsf.zoom.us/j/94737269351?pwd=UTN5VG9IeExUdzFTUmlsVnpqa2plQT09

Thursday, May 19

Time	Session
8:00-11:00am	**Workshop 5**: Equitable Assessment - Developing Assessment Practices So All Learners Can Succeed
8:00-11:00am	**Workshop 6**: From Conflict to Collaboration in the Clinical Setting Led by: Maureen Brodie, MA, CO-OP and Kate Flynn, JD
10:00-11:00am	Mini Oral Presentations https://ucsf.zoom.us/j/98460179759?pwd=MDVsdmU3YkRQT3VIZTIvVW9zSmlLZz09
11:00am-1:00p	**Plenary Session 2**: Plenary Presentations and Panel Discussion: Teaching Wellness Panelists: Larissa Thomas, MD, Amber Fitzsimmons, PT, MS, DPTSc, Erick Hung, MD. Moderated by Kendra Moore, MD. https://ucsf.zoom.us/j/98460179759?pwd=MDVsdmU3YkRQT3VIZTIvVW9zSmlLZz09
1:30-2:30	**Wellness Circle: an in-person event!** Kezar Triangle. Connect in person and continue the conversation about wellness at this informal GG Park gathering. BYOB (bring your own blanket).

UCSF Education Showcase 2022

Pre-Graduation Plenary Session
May 3, 2022

Presentations

Social Determinants of Health through a Geriatrics Lens: Evaluation of a Curriculum for Preclinical Learners ~ Janice Grandi

Medical Student Roles & Responsibilities During Obstetrics & Gynecology Core Clerkships: A Qualitative Study of Trainees' Perceptions ~ May Nguyen

SWOT Analysis of AHPBA HPB Fellowship Pathway ~ Phoebe Miller

Pre-Clerkship Medical Student Engagement with Disparities through Health Systems Improvement Projects ~ Pooja Lalchandani

Transitioning Interprofessional HIV Education from In-Person to Remote Learning ~ Amity Eliaz

Does self-reported practice change correlate with actual behavior change after CME? A literature review of published instruments ~ Sara D'Souza

UCSF Center for Faculty Educators

Abstract # 10

Social Determinants of Health through a Geriatrics Lens: Evaluation of a Curriculum for Preclinical Learners

Janice Grandi, BS, UCSF, jan.grandi@ucsf.edu; Josette Rivera, MD, UCSF, josette.rivera@ucsf.edu

Area(s) abstract covers: Health professions student education,
Category: Curriculum Evaluation/Education Research Project

Abstract:

PURPOSE: Evaluating a small group session which aimed to develop second-year medical students' (MS2) skills to recognize, explain, and address select social determinants of health (SDOH) affecting older adults.

BACKGROUND: With studies suggesting that SDOH account for 30-55% of health outcomes, identifying and addressing SDOH affecting older adults is essential to improving the health and wellbeing of this growing population. However, few published curricula exist.

METHODS: We evaluated a two-hour small group session embedded in the UCSF School of Medicine MS2 Life Stages course, which focused on select SDOH impacting older adults. To analyze impact, we administered an essay question in the parent course final exam requiring students to apply their knowledge and collected students' statements of commitment to incorporate a strategy of their choosing gained from this small group into their future practice. We also administered a session evaluation question.

RESULTS: 162 MS2s participated in 2021. 157 (97%) students 'passed' the exam question. Two themes emerged in response to the session evaluation question: students (1) gained important, new, geriatrics-focused knowledge regarding SDOH (2) desired further training and information on these topics. Three themes emerged from students' personal statements of commitment: (1) put older adults at the center of decision making and avoid making assumptions about patient goals based on age or their caregiver's preferences (2) consider the increased importance of assessing social support, social isolation, and loneliness with older adults (3) challenge their own and others' ageist assumptions and actions.

DISCUSSION: This curriculum effectively increased preclinical students' awareness of and ability to recognize, explain, and address select SDOH affecting older adults.

REFLECTIVE CRITIQUE: We received feedback through a works in progress session and UCSF's Health Professions Education Pathway course. We made modifications at all steps from needs assessment through implementation and evaluation.

Abstract # 30

Medical Student Roles & Responsibilities During Obstetrics & Gynecology Core Clerkships: A Qualitative Study of Trainees' Perceptions

May Nguyen, BS, UCSF, may.nguyen@ucsf.edu; Micah Katz, BS, UCSF, micah.katz@ucsf.edu; Jeannette Lager, MD, MPH, UCSF, jeannette.lager@ucsf.edu

Area(s) abstract covers: Health professions student education, Medicine

Category: Curriculum Evaluation/Education Research Project

Abstract:

PURPOSE: To understand the perceptions of obstetrics & gynecology (OB/GYN) residents and third-year medical students regarding roles and responsibilities of medical students during OB/GYN core clerkships. BACKGROUND: Historically, OB/GYN clerkships have been poorly rated, with higher rates of student mistreatment compared to other clerkships.1–3 Prior studies have suggested that unclear expectations may contribute to negative learning experiences.4,5 This qualitative study seeks to compare resident and student expectations during OB/GYN core clerkships. METHODS: An anonymous and voluntary survey with open-ended questions regarding expectations for medical students during OB/GYN core clerkships was distributed to 39 OB/GYN residents and 48 third-year medical students at a single institution. Two student reviewers utilized conventional content analysis to identify emergent themes within survey responses. RESULTS: 18 medical students (38%) and 8 residents (21%) responded. Residents and medical students agreed on some roles, such seeing patients independently and assisting in the operating room. However, several students stated their primary role was to learn, while others felt expectations were unclear. In contrast, residents felt students should be more proactive in performing helpful tasks. Both residents and medical students acknowledged difficulty in integrating medical students, with residents citing lack of continuity, the vulnerable nature of OB/GYN, and time constraints of a busy service as barriers. Some students also mentioned that lack of communication contributed to unclear roles and limitation of student participation. DISCUSSION: Differences in expectations and poor communication between residents and students during OB/GYN core clerkships may be a barrier to effective learning. This study highlights the need for improved onboarding and clear communication to enhance the educational experience for learners of all levels. REFLECTIVE CRITIQUE: Feedback from ESCape was incorporated into this study.

References:

1.   Van Den Einden LCG, Te Kolste MGJ, Lagro-Janssen ALM, Dukel L. Medical students' perceptions of the physician's role in not allowing them to perform gynecological examinations. Acad Med. 2014;89(1):77-83. doi:10.1097/ACM.0000000000000055 2.   Kappy MD, Holman E, Kempner S, Santen SA, Skinner B, Hammoud M. Identifying Medical Student Mistreatment in the Obstetrics and Gynecology Clerkship. J Surg Educ. 2019;76(6):1516-1525. doi:10.1016/j.jsurg.2019.04.010 3.   Pradhan A, Page-Ramsey S, Buery-Joyner SD, et al. Undergraduate obstetrics and gynecology medical education: Why are we underrated and underappreciated? Am J Obstet Gynecol. 2016;214(3):345-347. doi:10.1016/j.ajog.2015.10.915 4.   Baecher-Lind LE, Chang K, Blanco MA. The learning environment in the obstetrics and gynecology clerkship: An exploratory study of students' perceptions before and after the clerkship. Med Educ Online. 2015;20(1). doi:10.3402/meo.v20.27273 5.   Ratan BM, Greely JT, Jensen MD, Kilpatrick CC. A Conceptual Model for Residents as Teachers in Obstetrics and Gynecology. Med Sci Educ. 2020;30(3):1169-1176. doi:10.1007/s40670-020-00985-2

Abstract # 44

SWOT Analysis of AHPBA HPB Fellowship Pathway

Phoebe Miller, MS, UCSF, phoebe.miller@ucsf.edu; Fernanda Romero-Hernandez, MD, UCSF, maria.romerohernandez@ucsf.edu; Vanessa Mora, MS, UCSF, rosa.mora@ucsf.edu; Adnan Alseidi, MD, EdM, UCSF, adnan.alseidi@ucsf.edu

Area(s) abstract covers: Health professions student education, Resident/fellow education, Faculty development, Medicine,

Category: Curriculum Evaluation/Education Research Projects: Summaries of education research or curricular evaluation

Abstract:

PURPOSE: Identify strengths, weaknesses, opportunities of, and threats to (SWOT) the Americas Hepato-Pancreato-Biliary Association (AHPBA) fellowship training pathway.

BACKGROUND: Multiple AHPBA fellowship training pathways have been developed, including HPB only and ASTS/SSO combined programs. The variability of training has resulted in different knowledge and focus across programs. Due to the lack of consistency in training, we analyzed fellow and program director (PDs) experiences with AHPBA HPB fellowship programs to understand the strengths and weaknesses of each pathway.

METHODS: Founding members (FMs), current PDs (HPB only and combined programs), and fellows were interviewed and/or surveyed: Transcripts were analyzed by two separate readers, initial themes were identified using grounded theory and then reader agreed on thematic findings and a thematic network analysis was used to consolidate themes and subthemes. A descriptive analysis of survey data for PDs and fellows was performed

RESULTS: Thirty-five PDs and nine FMs were interviewed, and 61 graduated fellows were surveyed. Qualitative analysis of FMs' surveys demonstrated two themes: (1) heterogeneous and non-centralized training and (2) competition between fellowship paths. Amongst PDs and fellows, four main themes were identified. (1) Operative autonomy: most PDs and fellows agreed that graduates were prepared to do complex open and routine MIS HPB, but not advanced MIS. (2) Curricular standardization: PDs agreed that there was a lack of standardization. Suggested future directions included a 2-year program, ABS Focused Practice Designation (FPD), core curriculum, set requirements for case volume and diversity, and medical oncology training. (3) Certification: most PDs agreed that an exam could improve the status of graduating fellows. (4) Job market: Fellows had one to two job offers. The majority remain in their first job and identify AHPBA graduates as less competitive in the job market.

DISCUSSION: Strengths of AHPBA training included superior training and case volume. Areas of improvements included strengthening baseline competencies through standardizing case volume and diversity, operative autonomy, multidisciplinary teamwork, and increasing exposure to complex MIS training. A board exam and creation of a collaborative ABS FPD were areas of potential development. Job marketability can be improved by hiring their own fellows and developing pathways that meet job market needs.

REFLECTIVE CRITIQUE: Results were presented to AHPBA executive education council and future discussions will be held to modify fellowships training.

Abstract # 59

Pre-Clerkship Medical Student Engagement with Disparities through Health Systems Improvement Projects

Pooja Lalchandani, BA, UCSF, pooja.lalchandani@ucsf.edu; Anna Chang, MD, UCSF, anna.chang@ucsf.edu; Edgar Pierluissi, MD, UCSF, edgar.pierluissi@ucsf.edu; Kristin Casey Callaghan, MA, UCSF, kristin.casey@ucsf.edu; Eric D. Isaacs, MD, UCSF, eric.isaacs@ucsf.edu

Area(s) abstract covers: Health professions student education

Category: Curriculum Evaluation/Education Research Projects: Summaries of education research or curricular evaluation

Abstract:

PURPOSE:

To characterize disparities-related health systems improvement (HSI) projects conducted by pre-clerkship medical students within the UCSF Clinical Microsystems Clerkship (CMC).

BACKGROUND:

Early engagement with health disparities curriculum in UME can help define trainees' perceived professional roles within health care systems.(1) The utilization of workplace learning opportunities(2) for pre-clerkship students to engage with disparities work, such as through HSI projects, has not been well-described and may provide a unique, active learning opportunity.

METHODS:

We examined Lean A3-formatted(3) posters submitted by teams of MS2s after completing longitudinal HSI projects within the CMC curriculum between 2020-2021. Five investigators (1 medical student, 3 physicians, 1 CMC coordinator) conducted a qualitative content analysis of the A3s. The team utilized an inductive coding strategy to characterize health/healthcare disparities-related projects by 6 criteria. Two investigators (medical student + 1 additional member) coded each A3 and reconciled coding differences. Frequencies of each coding criteria were tabulated.

RESULTS:

Of all A3s (n=89), one-third (n=29) were classified as disparities projects. Of these, the majority (55%) were conducted at ZSFG, 24% at SFVAHCS, and 21% at UCSF Health. Half (52%) were conducted in ambulatory-based microsystems. Twenty-five (86%) cited addressing disparities as a goal within the A3 and 18 (72%) cited pre-existing evidence related to disparities. Eleven (38%) discovered a disparity within their microsystem during data collection. The most frequent disparities addressed were race (45%) and socioeconomic status (28%).

DISCUSSION:

Pre-clerkship students can utilize quality improvement methodology to engage with health disparities through completion of HSI projects across a variety of health systems in a value-added clinical systems learning role.

REFLECTIVE CRITIQUE:

Met with qualitative/medical education scientists and presented at a WIP session to refine coding methodology and scope.

References:

1. Press VG, Fritz CDL, Vela MB. First year medical student attitudes about advocacy in medicine across multiple fields of discipline: analysis of reflective essays. J Racial Ethn Health Disparities. 2015;2(4):556-564. doi:10.1007/s40615-015-0105-z. 2. Mertens F, de Groot E, Meijer L, et al. Workplace learning through collaboration in primary healthcare: A BEME realist review of what works, for whom and in what circumstances: BEME Guide No. 46. Med Teach. 2018;40(2):117-134. doi:10.1080/0142159X.2017.1390216. 3. Myers JS, Kin JM, Billi JE, Burke KG, Harrison RV. Development and validation of an A3 problem-solving assessment tool and self-instructional package for teachers of quality improvement in healthcare. BMJ Qual Saf. Published online March 25, 2021. doi:10.1136/bmjqs-2020-012105

Abstract # 67

Transitioning Interprofessional HIV Education From In-Person to Remote Learning

Amity Eliaz, MS, UCSF, Amity.Eliaz@ucsf.edu; Shayanne Martin, MPH, UCSF, shayanne.martin@ucsf.edu; Fatima Suleman, B Pharm, M Pharm, PhD, University of KwaZulu-Natal, sulemanf@ukzn.ac.za; Maeve Forster, MS, UCSF, maeve.forster@ucsf.edu; Evelyn Chilemba, PhD, University of Malawi, evelynchilemba@kcn.unima.mw; Clara Haruzivishe, PhD, University of Zimbabwe, claraharuzivishe@yahoo.co.uk; Nisha Nadesan-Reddy, FCPHM, University of KwaZulu-Natal, nadesanreddy@ukzn.ac.za; Michael Reid, MD, MA, MPH, UCSF, michael.reid@ucsf.edu; David Sears, MD, UCSF, david.sears@ucsf.edu

Area(s) abstract covers: Health professions student education, Resident/fellow education, Faculty development, Medicine, Nursing, Pharmacy

Category: Curriculum Development Project

Abstract:

PURPOSE: To describe the development of a remote educational program for interprofessional HIV care.

BACKGROUND: The COVID-19 pandemic exacerbated workforce constraints and limited educational opportunities across Africa, catalyzing efforts to develop internet-based formats of health professions education adherent with social distancing requirements. In response, STRIPE HIV (an interprofessional HIV educational program for learners at partner clinical institutions and training sites across Africa) adapted to an online format.

METHODS: Utilizing Kern's first four steps, we developed online case-based modules focused on interprofessional HIV and COVID-19 care in collaboration with AFREhealth. We surveyed partner institutions to assess the need for education in regard to COVID-19. Next, we modified the course objectives from the in-person educational program to incorporate topics related to COVID-19. Using the modified objectives, we developed educational modules with an asynchronous component followed by synchronous flipped classroom small groups. The asynchronous platform was built through Articulate Rise™, a storyboarding software for creating engaging educational experiences, while synchronous activities were carried out via Zoom™.

RESULTS: From March to September 2021, we developed sixteen remote case-based learning modules. We utilized the asynchronous platform to allow learners to independently interact with material, receive standardized feedback, and access additional educational resources. Asynchronous activities were selected to reflect the objectives and facilitate a dynamic learning experience with a variety of activities ranging from multiple choice to free response questions. Synchronous activities were selected to promote interprofessional discussion regarding HIV and COVID-19 service delivery challenges and patient-centered communication. For each module, learners were asked to complete pre-test and post-test questions, as well as a satisfaction survey.

DISCUSSION: The STRIPE online learning program presents an opportunity to expand access to interprofessional education in HIV and COVID-19 care through asynchronous content and synchronous activities in a safe, socially-distanced format scalable to other countries.

REFLECTIVE CRITIQUE: The modules were developed using an iterative process in response to written and verbal feedback from partner sites.

Abstract # 78

Does self-reported practice change correlate with actual behavior change after CME? A literature review of published instruments

Sara D'Souza, UCSF, Sara.Dsouza@ucsf.edu

Area(s) abstract covers: Continuing education, faculty development

Category: Curriculum Evaluation/Education Research Project

Abstract:

PURPOSE: We reviewed the literature for tools that measure self-reported physician practice change after continuing medical education (CME) to determine their validity evidence and how they correlate with behavior change.

BACKGROUND: Although a goal of CME is practice change, measuring behavior change is costly and time-consuming. Instead, self-reported change is often used in CME evaluation, but it is not well known if and how strongly this correlates to changes in behavior.

METHODS: A literature search with a medical librarian identified a key review article on effects of CME on practice change (Forsetlund et al, 2009). We reviewed articles which used tools measuring self-reported practice change to develop search terms for PubMed and Embase. We reviewed all subsequent articles to identify instruments that could be used in a variety of settings (usability), and had validity evidence other than face and content validity (validity), and then further explored if any of these instruments had been correlated to behavior change.

RESULTS: 1839 articles were identified; 117 described self-report instruments. Of those, four instruments satisfied usability and validity criteria: commitment to change statements (CTC), clinical vignettes, continuing professional development reaction questionnaire, and determinants of implementation behavior questionnaire. Many of the four tools had criterion and response process validity evidence and internal structure analysis. Only CTC and vignettes were studied in relation to behavior change, and both had a weakly positive correlation.

Abstract # 01

Resident Readiness for Senior Level Decision Making: Identifying the Domain for Assessment

Keon Min Park, MD, UCSF, keon.park@ucsf.edu; Melissa Gesbeck, PhD; Adnan Alseidi, MD; Yoon Soo Park, PhD; Maura Sullivan, MD; Edgardo Salcedo, MD; Patrice Blair, MPH; Kathy Liscum, MD; Ajit Sachdeva, MD; ACS SRRA Research Group

Area(s) abstract covers: Resident/fellow education
Category: Curric Evaluation /Research

Abstract:

Purpose: To establish expert consensus regarding which topics entering senior surgery residents (PGY-4) need to make critical decisions and demonstrate preparedness to assume senior-level responsibilities in order to develop the formative American College of Surgeons Senior Resident Readiness Assessment (ACS SRRA).

Background: The American College of Surgeons (ACS) leadership team conducted a focus group with surgical experts to identify the content for an assessment tool to evaluate senior residents' readiness for their increased levels of responsibility. After the focus group, expert panelists were recruited to develop consensus on the topics through three rounds of surveys using Delphi methodology. The panel rated topics using Likert-type scales and their comments were incorporated into subsequent rounds. Consensus was defined as ≥ 80% agreement with internal-consistency reliability (Cronbach's alpha) ≥ 0.8. In a stepwise fashion, topics that did not achieve consensus for inclusion were removed from subsequent survey rounds.

Methods: The surveys were administered via an online questionnaire, Qualtrics. Twelve program directors and assistant program directors made up the focus group. 39 Delphi panelists represented seven different surgical subspecialties and diverse practice settings. The median length of experience in general surgery resident education was 20 years (IQR 14.3 – 30.0) with 64% of the experts being either current or past general surgery residency program directors.

Results: The response rate was 100% and Cronbach's alpha was ≥ 0.9 for each round. The panelists contributed a large number of comments. Of the 201 topics that were evaluated initially, 120 topics in 25 core clinical areas were included for the final domain of the ACS SRRA.

Discussion: National consensus on the domain of the ACS SRRA has been achieved via the modified Delphi method among expert surgeon educators. ACS SRRA will identify clinical areas in which each senior resident needs improvement and empower the residency programs to develop customized learning plans to prepare their senior residents for independent practice.

Reflective Critique: Suggestions from the Delphi panel have been reflected after each round of survey.

Abstract # 02

"You want more flexibility, but you need structure": Maintaining Medical Student Motivation During Remote Clinical Learning

Leslie Charondo, BS, UCSF, leslie.charondo@ucsf.edu; Jackeline Barajas Duque, MD, NYU, jackelinebarajas19@gmail.com; Heidi Kirsch, MD, MS, UCSF, heidi.kirsch@ucsf.edu; Sam Brondfield, MD, MAEd, UCSF, sam.brondfield@ucsf.edu

Area(s) abstract covers: Health professions student education, Remote learning
Category: Curriculum Evaluation/Education Research

Abstract:

Purpose

We aimed to understand the factors affecting medical student motivation during remote clinical learning (RCL) to develop actionable strategies to optimize motivation.

Background

Remote learning became necessary for medical students during the COVID-19 pandemic. However, remote learning may result in learner disengagement, particularly during clerkships originally designed to be in-person. (1,2) Literature on remote learning has focused primarily on strategies for maximizing learner engagement, but the effect of RCL (remote learning during clinical clerkships originally intended to take place in person) on medical student motivation has not been well characterized. The pandemic provided a unique opportunity to study RCL, thus potentially shedding light on ways to optimize medical student motivation during future RCL experiences.

Methods

In December 2020, we conducted twelve semi-structured interviews with UCSF 3rd and 4th year medical students who had participated in RCL. Questions addressed the impact of RCL, resources used, learning goals, and sense of community. We conducted a thematic analysis of de-identified transcripts using self-determination theory (SDT), which describes learner autonomy, competence, and relatedness as essential for motivation, as a sensitizing framework. (3)

Results

Four themes aligned with SDT: balancing flexibility and structure (autonomy); selecting appropriate resources (competence); setting reasonable expectations (competence); and building and maintaining community (relatedness). Respondent validation supported theme trustworthiness. The authors proposed key principles and strategies to improve RCL based on the identified themes.

Discussion

Educators of remote clinical learners should draw upon the identified themes and proposed strategies in this study to promote and maintain learner motivation during the COVID-19 pandemic and beyond.

Reflective Critique

We presented this project at ESCape early in the development phase and received helpful guiding feedback around the theoretical framework and approach.

References:

Al-Balas, M., Al-Balas, H.I., Jaber, H.M. et al. Distance learning in clinical medical education amid COVID-19 pandemic in Jordan: current situation, challenges, and perspectives. BMC Med Educ 20, 341 (2020).   Coffey CS, MacDonald BV, Shahrvini B, Baxter SL, Lander L. Student Perspectives on Remote Medical Education in Clinical Core Clerkships During the COVID-19 Pandemic. Med Sci Educ. 2020 Oct 14;30(4):1-8. doi: 10.1007/s40670-020-01114-9. Epub ahead of print. PMID: 33078085; PMCID: PMC7556768.   Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. American Psychologist, 55(1), 68–78.

Abstract # 03

The Advanced Therapies for COPD Clinic: Education Within A Multidisciplinary Care Environment

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Area(s) abstract covers: Resident/fellow education, Faculty development, Medicine, Physical Therapy
Category: Curriculum Development

Abstract:

PURPOSE: To describe the development of an innovative educational opportunity for trainees and faculty within an outpatient multidisciplinary clinic for patients with COPD.

BACKGROUND: Integrated outpatient COPD care reduces social and economic burdens of the disease; thus, the provision of comprehensive COPD care is recommended by nationwide guidelines. However, trainee exposure to outpatient multidisciplinary care is rare. UCSF faculty experience in comprehensive COPD management is also limited due to lack of a dedicated clinic for this disease. Establishment of a multidisciplinary COPD clinic presents a novel learning opportunity.

METHODS:

1.   Identified need for COPD clinic at UCSF

2.   Sought support from UCSF Medical Center, Lung Transplant Program, and Interventional Pulmonary Practice for referrals (Transplant, IP) and funding (Medical Center)

3.   Recruited respiratory therapist and nutritionist and partnered with UCSF Pulmonary Rehabilitation

4.   Presented clinic to UCSF Pulmonary Practice, Pulmonary Division, Pulmonary & Critical Care Medicine fellows, and Internal Medicine residents

5.   Plan to present clinic to School of Medicine for shadowing or clinical rotations

RESULTS: Numbers correspond to above.

1.   Appointed key team members to spearhead clinic development

2.   Garnered key resources for clinic referrals and sustainability

3.   Enlisted additional care providers to provide integrated care

4.   Obtained clinic space, time, and support staff within UCSF Pulmonary Practice; disseminated knowledge about clinic as an educational and care resource

5.   Will offer unique learning environment to UCSF medical students

DISCUSSION: This novel multidisciplinary care model offers a distinct educational environment for UCSF learners of all levels.

REFLECTIVE CRITIQUE: The clinic has been presented to the UCSF Pulmonary Division and Lung Transplant Program for feedback; in response, the referral workflow has been adjusted, target population has been further defined, and educational opportunities have been expanded.

Abstract # 04

Digital Case Based IBD Curriculum Targeting Key EPAs for GI Trainees

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Area(s) abstract covers: Resident/fellow education, Medicine, Gastroenterology Trainees

Category: Curriculum Development

Abstract:

TITLE: Digital Case Based IBD Curriculum Targeting Key EPAS for GI Trainees

PURPOSE: We designed, implemented, and assessed IBDLearn.com, a case-based inflammatory bowel disease (IBD) website that teaches gastroenterology (GI) trainees the workup and management of patients with IBD.

BACKGROUND: There is heterogeneity in IBD exposure across GI fellowship training programs. This contributes to variability in fellows' competence in caring for these medically complex patients.

METHODS: We conducted a targeted needs assessment to better understand gaps in GI fellows' IBD education. Covered topics were guided by the Entrustable Professional Activities (EPAs) set forth by the American College of Gastroenterology (ACG). IBDLearn.com launched in May 2021. Cases include a clinical vignette, questions with real time feedback, endoscopic images, and post-case discussions. Accuracy of answers to pre- and post-case questions are compared to estimate effectiveness. New cases are disseminated via Twitter and an e-mail subscriber listserv. Google Analytics and Twitter Analytics track usage and engagement.

RESULTS: We published 16 cases in the site's first 6 months. There have been 9,334 page views from 1,271 unique users from 50 different countries. The Twitter account has 156 followers. Tweets received 65,694 impressions (total views) with a 1.05% engagement rate (retweets/follows/replies/favorites/click-throughs divided by total impressions). Pre-test questions received 446 correct responses out of 694 (64.27%) and post-test questions received 187 correct responses out of 215 (86.98%, $p>0.00001$).

DISCUSSION: IBDLearn.com appears to be an effective online, case-based, trainee-driven educational platform providing real time educational feedback and thorough discussion of topics based on EPAs set forth by the ACG. The data show far-reaching impact in the site's first 6 months, with statistically significant improvement in knowledge-based questions before and after utilization of the site.

REFLECTIVE CRITIQUE: Going forward, we seek to address additional EPAs not covered in the first 16 cases, to query existing users regarding gaps in knowledge, and to broaden our user base with targeted outreach.

Abstract # 05

Successful Development & Implementation of a Business Curriculum for Emergency Medicine Residents

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Area(s) abstract covers: Health professions student education, Masters student education, Resident/fellow education, Continuing education

Category: Curriculum Development

Abstract:

We describe the development and implementation of a business curriculum for Emergency Medicine (EM) residents.

A national needs assessment showed that many graduating EM residents lack exposure to critical business topics (Sarker et al., 2020). We sought to address this gap by creating a versatile, easily executable business curriculum for EM residents.

The Business of Emergency Medicine includes a series of 8 sessions covering topics from negotiations to operations. We utilized Kern's 6-step method to develop the curriculum, objectives and assessments. The sessions occur during residency didactics and vary in length from 90 minutes for panel discussions to 240 minutes for an immersive mock trial experience. The curriculum also includes session summaries, slides, and recordings for asynchronous review.

We conducted IRB-approved surveys and interviews to assess impact. Pre- and post-session Likert-based comfort questions and multiple-choice knowledge questions are evaluated using Wilcoxon Signed-Rank and McNemar's, respectively.

To date, we have hosted 7 of the 8 sessions. Paired pre- and post-session data show improved comfort level with session topics: before each session, an average of 38% of residents "Agreed" or "Strongly Agreed" that they felt comfortable with each session's topic; this rose to 92% post-session (p= 0.03-0.50, p >0.05 for 4 sessions). Composite, paired pre-post session data also show improved knowledge assessment scores, with an average pre-session score of 64% correct increasing to 85% post-session (p=0.02-0.50, p>0.05 for 2 sessions).

Our data supports that this curriculum adds critical value to EM education. After refinement, we seek to develop similar models across specialties and settings.

The feedback from initial post-session surveys informed speaker selection and curriculum topics, and led to the addition of short answer questions and interviews.

References:

Sarker, A., Jarou, Z., Cozzi, N., Tseng, P., Thomas, Y., Stark, N., Rodos, A., Messman, A., Seamon, J., Jones, J. Which Topics Should Be Included in a Business and Administrative Curriculum for Emergency Medicine Residents? Academic Emergency Medicine. May 2020. Volume 27, Issue S1.

Abstract # 06

Online Scaffolds: A Constructivist Approach to Oncology Fellow Learning

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Area(s) abstract covers: Resident/fellow education
Category: Curriculum Development

Abstract:

PURPOSE: To pilot scaffolds as an oncology fellow learning tool.

BACKGROUND: Oncology is vast and fast-paced. Up-to-date, digestible oncology learning tools are lacking. Additionally, passive lectures are common in oncology, while constructivist approaches to improve learning are rare. Therefore, we piloted updatable online modules ("scaffolds") as a learning tool for oncology fellows.

METHODS: SB, a UCSF oncologist, designed 12 scaffolds covering various solid tumors using Google Slides in 2018-2019. Scaffolds included text and figures synthesized from the American Society of Clinical Oncology self-evaluation program textbook and National Comprehensive Cancer Network (NCCN) guidelines. We emailed links to all UCSF and Stanford oncology fellows in 2019-2020, including instructions for fellows to update the scaffolds without exceeding specified word limits. SB audited to ensure no erroneous information was added. In December 2021 we reviewed tracked updates and conducted one UCSF and one Stanford focus group with four fellows each.

RESULTS: Fellows made 60 updates ranging from new trials to changes in management. SB found no erroneous updates. Some updates exceeded specified limits, requiring correction. Content analysis revealed the scaffolds to be accessible and succinct tools that 1) addressed a key gap, 2) served as effective clinical and examination preparation, 3) provided structured information for rapid review, and 4) made subsequent interactions with complex resources such as NCCN guidelines easier. Barriers to fellows updating the scaffolds included lack of ownership and low confidence in judgment regarding appropriate updates.

DISCUSSION: In this pilot, oncology fellows used and subsequently updated online scaffolds, which may fill a crucial gap in constructivist learning tools for oncology fellows and can be applied to other specialties. Assigning scaffolds to fellows with faculty mentorship may facilitate ownership and bolster fellow confidence in updating these tools.

REFLECTIVE CRITIQUE: Focus groups provided feedback which will be used to strengthen the scaffolds.

Abstract # 08

Overlapping Worlds of Art and Plastic Surgery and the Implications for Surgical Training: Preliminary Results

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Area(s) abstract covers: Resident/fellow education
Category: Curriculum Evaluation/Education Research

Abstract:

Background: Editorials speculate on the relationship between art and plastic surgery, and studies of limited art education in surgical training show intriguing benefits. Identifying the shared concepts and skills in art and plastic surgery could advance incorporating artistic skills and concepts into plastic surgery training and curriculum.

Methods: Using a constructivist grounded theory approach, we analyzed transcripts of semi-structured interviews of boarded or board-eligible plastic surgeons and formally trained or self-identified artists. During the process, we used a constant comparison approach coding along with data collection. The team developed the codebook from initial transcripts; 2 members coded each transcript along. We summarized codes into themes based on discussion among the team.

Results: 15 plastic surgeons aged 36-80 years and 16 artists aged 19-62 years. Both groups recognize that creativity played a major role. Both recognized that strong technical foundational skills are key to developing competency. They described how technical skills, manual dexterity, and three-dimensional thinking can be taught and nurtured. While creativity was seen as innate, participants can learn to be innovative through critical thinking. Both groups spoke about the "Elements of Art" and "Principles of Design". Artists and surgeons shared that hypersensitivity to one's surroundings or to human features facilitates identifying problems or ideas. They stated every action needs to have an intention and purpose.

Conclusion:

Plastic surgery training may be enhanced by centering education around creativity, hypersensitivity, and purposeful action. This study helps in developing a framework for designing a plastic surgery curriculum including developing strong technical foundational skills while also encouraging fundamental knowledge that is used in art education.

Reflective Critique:

In my Introduction to Qualitative Research Methods course as part of my MA at Berkeley, my professor has provided guidance as have my UCSF mentors on organizing and communicating my results.

Abstract # 09

Development of a curriculum in antiracism for emergency medicine and pediatric emergency medicine trainees

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Area(s) abstract covers: Resident/fellow education
Category: Curriculum Development

Abstract:

PURPOSE

Racism is pervasive in emergency medicine (EM), and trainees must not only provide equitable antiracist care at the bedside, but also transform healthcare delivery and medical education systems into actively antiracist entities. However, no formal education in antiracist healthcare yet exists.

BACKGROUND

Despite numerous calls for antiracism education in medicine (1-3), longitudinal, specifically antiracism curricula are lacking in the medical education literature. Review of published work revealed several single educational sessions, sessions for non-EM learners, and curricula addressing broader "social determinants of health" without a specific antiracism focus.

METHODS

We assembled a team of pediatric EM (PEM) and EM residents, fellows, and faculty from 3 institutions, several of whom are experts in Diversity, Equity, & Inclusion (DEI) in medical education. Following Kern's six-step approach, we first performed a global needs assessment via review of the literature. Based on the findings above and our own lived experiences as emergency physicians, we are now developing a novel, longitudinal antiracism curriculum. We are currently creating a needs assessment to be disseminated to learners and educators in several EM residencies and 2 PEM fellowships, as well as national program directors in both fields.

RESULTS

To date, we have created a 14 question needs assessment through iterative review by experts in EM and DEI and hope to have data by March 2022. We will use our findings to generate goals and objectives, and educational strategies to meet them, for a series of sessions in our curriculum.

DISCUSSION

We were surprised by the absence of previously published curricula, despite numerous calls to action. We plan to publish the findings of our needs assessment, as well as the curriculum we create.

REFLECTIVE CRITIQUE

Antiracism is a complex and broad topic, and successful curriculum development lacks clearly defined outcomes. Our team has faced challenges in focus and perspective, simultaneously paring down our scope while striving to meet diverse learner needs.

References:

1) Argueza BR, Saenz SR, McBride D. From Diversity and Inclusion to Antiracism in Medical Training Institutions. Acad Med 2021;96(6):798-801. 2) South EC, Butler PD, Merchant RM. Toward an equitable society: building a culture of antiracism in health care. J Clin Invest. 2020;130(10):5039-5041. 3) Wear D, Zarconi J, Aultman J et al. Remembering Freddie Gray: Medical Education for Social Justice. Acad. Med. 2017;92:312-317.

Abstract # 11

Destigmatizing substance use disorder curricula in undergraduate medical education

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Area(s) abstract covers: Health professions student education
Category: Curriculum Development

Abstract:

Purpose: To describe an anti-oppression-focused curricular competency review for substance use disorder undergraduate medical education (UME) at UCSF.

Background: The stigma surrounding SUD arises from race-based oppression and leads to SUD underdiagnosis and undertreatment. We propose that addressing this stigma early in medical education can have a positive impact on the care of persons with SUD. A curricular intervention focused on addressing the systems of oppression contributing to SUD inequities may ultimately transform healthcare for persons with addiction.

Methods: We first compiled an exhaustive list of competencies from several national addiction medicine educational and governing societies, the UC SUD and Pain Consortium, and one community organization. Based on redundancy and priority consensus ratings, the competency number decreased from 114 to 41. We assigned a UME developmental location for each competency and reviewed the list with local SUD faculty champions. Using curriculum mapping and key informant feedback, the refined competency list will be compared to what is currently taught in the UCSF UME curriculum to identify omissions and opportunities. We will then work with course directors, clerkship directors and community members to develop curriculum to fulfill these competencies.

Results/Evaluation: This curricular transformation will be an iterative process of revisions assessing the current state of the curriculum, learner satisfaction, and percent of included competencies.

Discussion: Through an anti-oppression-focused curricular assessment of SUD competency integration, we hope to transform the UCSF UME curriculum to one that teaches the racially stigmatizing history of SUD care. By addressing stigma directly, this curriculum will prepare students to effectively care for persons with SUD, while dismantling the systems of oppression that created the stigma.

Reflective Critique: We solicited feedback from UCSF School of Medicine, School of Nursing, and community organization SUD champions to refine our competencies and emphasize anti-oppression.

References:

Muvvala, S.B., Schwartz, M.L., et al. Stitching a solution to the addiction epidemic: A longitudinal curricular thread across four years of medical training. Substance Abuse. 2020, DOI: 10.1080/08897077.2019.1709606 O'Connor, P.G., R.J. Sokol, and G. D'Onofrio, Addiction medicine: the birth of a new discipline. JAMA Intern Med, 2014. 174(11): p. 1717-8. Soyka, M. and D.A. Gorelick, Why should addiction medicine be an attractive field for young physicians? Addiction, 2009. 104(2): p. 169-72. O'Connor, P.G., J.G. Nyquist, and A.T. McLellan, Integrating addiction medicine into graduate medical education in primary care: the time has come. Annals of Internal Medicine, 2011. 154(1): p. 56-9. Servis, M., Fishman, S.M., et al. Responding to the Opioid Epidemic: Educational Competencies for Pain and Substance Use Disorder from the Medical Schools of the University of California. Pain Medicine. 2021. 22(1), 60-66.

Abstract # 12

Maximally Affirming Gender/Sex in Clinical Communications (MAGICC) Study

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Area(s) abstract covers: Health professions student education, Resident/fellow education, Continuing education, Dentistry, Medicine, Nursing, Pharmacy, Physical Therapy

Category: Curriculum Evaluation/Education Research

Abstract:

PURPOSE: Identify best practices for communicating gender/sex information in one-liners.

BACKGROUND: The one-liner, a summary of patient features, is common in medical education and communications. However, guidance around including gender/sex information is lacking. Health barriers for transgender, non-binary, gender expansive, and intersex (TGE/I) people highlight the need to train clinicians in affirming practices (Grant et al, 2011; James et al., 2016; Rosenwohl-Mack et al., 2020).

METHODS: We developed a survey with four scenarios and one-liners varying by pronoun use, patient descriptors, and sex information. Participants rated one-liners on a five-point scale of appropriateness and optionally provided open-ended comments. We recruited participants via snowball sampling in Aug-Oct 2021 and administered the survey in Sep-Nov 2021. Eligibility required identification as TGE/I, a clinician routinely caring for these populations, or both.

RESULTS: The 137 respondents included 57 clinicians and 80 non-clinicians. We analyzed numerical data using Mann-Whitney and Friedman tests. 7 out of 87 one-liners (8%) demonstrated significant differences between clinician and non-clinician ratings. Across scenarios, participants preferred including pronouns and using descriptors that reflected patient gender identity or used non-gendered language. For scenarios in which sex information was irrelevant, participants preferred one-liners with no sex information. When sex information was relevant, preferences were less clear. Thematic analysis of comments revealed five themes: including sex only when relevant; controversy around gender; mirroring patient language; sensitivity around genitals; and potential for one-liners to harm patients.

DISCUSSION: This study generated principles to guide the composition of one-liners and development of inclusive curricula. Preparing current and future clinicians to communicate appropriately is essential to reduce discrimination and improve health outcomes for TGE/I patients.

REFLECTIVE CRITIQUE: We developed our survey with input from TGE/I health experts, cognitive interviews, and a May 2021 ESCape presentation.

References:

Grant, J. M., Mottet, L.A., Tanis, J., Harrison, J., Herman, J. L., & Keisling, M. (2011). Injustice at Every Turn: A Report of the National Transgender Discrimination Survey. National Center for Transgender Equality and National Gay and Lesbian Task Force. https://www.transequality.org/sites/default/files/docs/resources/NTDS_Report.pdf   James, S.E., Herman, J.L., Rankin, S., Keisling, M., Mottet, L., & Anafi, M. (2016). The Report of the 2015 U.S. Transgender Survey. National Center for Transgender Equality. https://transequality.org/sites/default/files/docs/usts/USTS-Full-Report-

Dec17.pdf Rosenwohl-Mack, A., Tamar-Mattis, S., Baratz, A. B., Dalke, K. B., Ittelson, A., Zieselman, K., & Flatt, J. D. (2020). A national study on the physical and mental health of intersex adults in the U.S. PLoS ONE, 15(10), e0240088.

Abstract # 13

Incorporating trainees in a multidisciplinary specialty with a peer-learning focused curriculum

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Area(s) abstract covers: Resident/fellow education, Medicine
Category: Curriculum Development

Abstract:

PURPOSE: To create a curriculum that incorporates trainees with differential prior knowledge in a multidisciplinary specialty (pain management).

BACKGROUND: Pain medicine is an advanced medical subspecialty that incorporates trainees from diverse primary disciplines such as Anesthesiology, Neurology, and Physiatry. Given the diversity of trainee background and the differential expertise developed from their primary specialties, it is challenging to incorporate trainees using a uniform curriculum and target their individual learning needs.

METHODS: Guided by Kern's six-steps, we developed a curriculum for the pain medicine fellowship utilizing case-based modules and a novel note-taking exercise. Nine case-based modules of increasing complexity were developed by mapping the learning objectives of individual board certification outlines from each primary specialty. All cases were moderated by faculty utilizing elaborative interrogation technique to facilitate peer-to-peer learning. Note-taking exercise elicited reflection on 4 categories: 1. Prior knowledge that is accurate and relevant, 2. Prior knowledge that is inaccurate, 3. New knowledge gained from peers– this opens opportunities for peer-based learning, 4. New knowledge for all learners – this is an opportunity for group learning. All participated in teach back session to their peers. Surveys using 5-point Likert-type scale were administered for curriculum feedback at multiple points of curriculum administration.

RESULTS: 100% of fellows (n=5) participated in all sessions. Fellows universally gave positive feedback during debriefing after each session.   After the implementation of this curriculum, more trainees strongly agreed that the teaching that they received was tailored to them based on their prior knowledge (100% compared to 20%). All participants strongly agreed that this curriculum allowed them to learn from their peers and appreciate the value of peer-based discussions in future practice.

DISCUSSION: We created a novel note-taking and knowledge-sharing platform, anchored by a well-established case-module educational strategy, to improve the learning environment for multidisciplinary learners with non-uniform baseline knowledge. This format allowed us to gain better understanding of each learners' prior knowledge and create a more collaborative learning environment.

REFLECTIVE CRITIQUE: This project was discussed during multiple ESCAPE sessions and modified after feedback.

References:

Kern DE, Thomas PA, Hughes MT. Curriculum Development for Medical Education: A Six-Step Approach. 2nded. Baltimore, MD: The John's Hopkins University Press; 2009.

Abstract # 14

Introducing the Bioethics of Addiction Medicine into Family Medicine Didactic Curriculum

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Area(s) abstract covers: Health professions student education

Category: Curriculum Development

Abstract:

PURPOSE: We created a small group case-based discussion session for family medicine clerkship students focused on addiction medicine and bioethics and surveyed students to evaluate its efficacy.

BACKGROUND: In US medical schools there is limited curriculum on substance use disorders (SUD) and bioethics, and rare to non-existent curriculum on the intersection. At UCSF, this material is taught separately and rarely integrated into the clinical years.

METHODS: The session for 165 students occurred in September 2021. In advance, we distributed a pre-course survey and background reading by email. Facilitators were provided a pre-written case about alcohol use disorder and discussion questions. Afterward, we distributed a post-survey.

RESULTS: We saw increases in familiarity with the field of addiction medicine (6.6%), in comfort with caring for patients with SUD (9.4%), and in their ability to apply bioethics concepts to patient care (12.8%). 85% of students were able to explain distributive justice (up from 52%), and 82% recognized SUD as a neurobiological condition (up from 73%). Comments highlighted the pre-readings as a strength, helping to frame the discussion. Students appreciated the open dialogue with their classmates and felt the information was applicable to their clinical environment.

DISCUSSION: This seminar serves as an important component of students' clinical education that will both broaden and deepen their understanding of addiction medicine, while simultaneously reinforcing knowledge and applications of bioethics that were introduced during the pre-clinical curriculum.

REFLECTIVE CRITIQUE: There was limited engagement, with 64 pre- and 33 post-surveys. We do not know if the same students completed both. Students would have liked more time for ethics discussion and inclusion of other SUDs, as well as patient perspectives, which we will add in future years. We did not collect facilitator comments, other than verbal feedback during an end-of-the-year group check-in.

References:

Ram A, Chisolm MS. The Time is Now: Improving Substance Abuse Training in Medical Schools. Acad Psychiatry. 2016 Jun;40(3):454-60. doi: 10.1007/s40596-015-0314-0. Epub 2015 Mar 7. Morreale MK, Balon R, Aggarwal R, Coverdale J, Beresin E, Guerrero APS, Louie AK, Brenner AM. Substance Use Disorders Education: Are We Heeding the Call? Acad Psychiatry. 2020 Apr;44(2):119-121. doi: 10.1007/s40596-020-01204-1. Epub 2020 Feb 27. PMID: 32109307. Singh R, Pushkin GW. How Should Medical Education Better Prepare Physicians for Opioid Prescribing? AMA J Ethics. 2019;21(8):E636-641. doi: 10.1001/amajethics.2019.636 Souza AD, Vaswani V. Diversity in approach to teaching and assessing ethics education for medical undergraduates: A scoping review. Ann Med Surg (Lond). 2020 Jun 27;56:178-185. doi: 10.1016/j.amsu.2020.06.028 Leshner AI. Addiction is a brain disease, and it matters. Science. 1997;278(5335):45-47. doi:10.1126/science.278.5335.45 van Boekel LC, Brouwers EPM, van Weeghel J, Garretsen HFL. Stigma among health professionals towards patients with

substance use disorders and its consequences for healthcare delivery: systematic review. Drug Alcohol Depend. 2013;131(1-2):23-35. doi:10.1016/j.drugalcdep.2013.02.018 Yang L, Wong LY, Grivel MM, Hasin DS. Stigma and substance use disorders: an international phenomenon. Curr Opin Psychiatry. 2017;30(5):378-388. doi:10.1097/YCO.0000000000000351 Ayu AP, van der Ven M, Suryani E, Puspadewi N, Joewana S, Rukmini E, de Jong C, Schellekens A. Improving medical students' attitude toward patients with substance use problems through addiction medicine education. Subst Abus. 2020 Feb 27:1-9. doi: 10.1080/08897077.2020.1732512 Giubilini A, Milnes S, Savulescu J. The Medical Ethics Curriculum in Medical Schools: Present and Future. J Clin Ethics. 2016 summer;27(2):129-45. PMID: 27333063.

Abstract # 15

Virtual Approach to Gynecology Project: Simulation Phase

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Area(s) abstract covers: Health professions student education, Nursing

Category: Curriculum Development

Abstract:

Purpose

The Virtual Approach to Gynecology Project is a 360-degree video and virtual reality (VR) curriculum for trainees to rehearse a gynecologic speculum exam.

Background

Pelvic exam learning is constrained by availability of gynecologic learning opportunities and patient willingness. Immersive simulation of this sensitive exam may compliment real-world experiences, fostering familiarity and comfort.

Methods

A 360-degree video and simulation consisting of guided training and unguided performance were built for VR and desktop modalities. Four medical student focus groups were shown one modality followed by the other in randomized order. Students completed written feedback and structured group interviews. Quantitative – via Wilcoxon rank sum analysis- and inductive qualitative analyses compared VR and desktop modalities and explored attitudes about VR in medical education.

Results

Thirteen students participated. While 12 (92%) reported rarely or never using VR, VR was unanimously preferred. Analysis of Likert scoring showed no statistically significant difference in ease of use between VR and desktop modalities. VR had significantly higher scores for realism (p=0.005), comfort (p>0.05) and confidence (p>0.05) for performing a pelvic exam, and recommending the module to a colleague (p=0.002). Most (10, 77%) expressed VR could prepare students for patient exams and lessen anxiety. Commonly stated strengths of VR were immersiveness/realism (8, 62%) and physicality (7, 54%). VR limitations included unfamiliarity (5, 38%), lack of tactile learning and patient feedback (3, 23%). While desktop was less favored, students noted it would be more widely available than VR.

Discussion

Despite low familiarity, VR was highly accepted and preferred over desktop, particularly in light of its realism and interactivity. As VR use increases, improved familiarity may further support the integration of VR technology into medical education.

Reflective Critique

This is an extension of a project that was reviewed by ESCape for the 2020 Education Showcase, which informed this submission.

Abstract # 16

Advocating Beyond the Individual: A Health Advocacy Curriculum for Primary Care Residents

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Area(s) abstract covers: Resident/fellow education

Category: Curriculum Evaluation/Education Research

Abstract:

Purpose: To evaluate a novel community-engaged advocacy curriculum for primary care internal medicine residents.

Background: In 2020, we partnered with a community based organization [CBO] to train residents in the health needs of the community, the strengths and services of the CBO, and how to advocate to create systemic change. We used the University of British Columbia Health Advocacy Framework to approach advocacy as shared activism: the community determines the needs and opportunities for systemic change and physicians join the community in action (Hubinette, Dobson, Scott, & Sherbino, 2017).

Methods: The curriculum was delivered over two years and included didactics, service learning, guided reflection and policy advocacy with the CBO. We partnered with GLIDE, a CBO that provides comprehensive services in the Tenderloin. We collected quantitative and qualitative data from residents and CBO staff with midpoint curriculum surveys.

Results: The response rate was 65% among residents and 40% among CBO staff. The majority of residents agreed that the program met all learning objectives including: increased their intent to engage in advocacy in their careers (73%), taught skills to be an advocate (64%), and increased their awareness of the health needs of the community (80%). They suggested opportunities to practice advocacy skills in political forums. CBO staff agreed that the partnership advanced the CBO's mission, residents' volunteering provided beneficial service, and residents had an impact on the advocacy efforts of the CBO.

Discussion: By partnering with a CBO, this novel advocacy curriculum increased the knowledge, attitudes, and skills of primary care residents in regard to advocacy for policy change, while also furthering the mission of the CBO.

Reflective Critique: Residents will have more opportunities to work with the CBO in engaging with policymakers in the second year. In response to CBO feedback, to cultivate a mutually beneficial partnership with residents and the CBO, we will determine impact on the community.

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Hubinette, M., Dobson, S., Scott, I., & Sherbino, J. (2017). Health advocacy. Medical teacher, 39(2), 128–135. doi: 10.1080/0142159X.2017.1245853

Abstract # 17

When Life Gives You Lemons: Evaluating The Impact Of Transitioning A Multi-Country Interprofessional HIV Training Program In Sub–Saharan Africa From Classroom To Online Format

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Area(s) abstract covers: Health professions student education, Masters student education, Resident/fellow education, PhD/Post Doctoral education, Continuing education, Faculty development

Category: Curriculum Evaluation/Education Research

Abstract:

Purpose

This analysis compares three modalities for delivering an interprofessional HIV training program.

Background

COVID-19 has catalyzed efforts to implement digital learning solutions in sub-Saharan Africa (SSA). Nonetheless, there is a paucity of research evaluating effectiveness. We sought to evaluate the impact of transitioning an interprofessional, multi-country HIV training program (titled STRIPE), from in-person to online during the COVID-19 pandemic.

Methods

We compared mean changes in pre-and post-quiz knowledge and confidence scores, measured using Likert scales, between learners who participated in one of three modalities: (1) in-person (IP) interprofessional workshops, (2) virtual workshops (VW) taught over Zoom, and (3) online course (OC), which included both asynchronous activities and synchronous interprofessional Zoom sessions. IP ran October 2019-March 2020, while VW and OC ran May-September 2021. Learning objectives and evaluation tools were the same regardless of type. ANOVA tests were used to assess results of each modality (IP, VW, OC).

Results

The IP, VW, and OC enrolled 5027, 3411, and 1322 learners, of which 3028 (60.2%), 2607 (76.4%), and 624 (47.2%) completed pre and post quizzes, respectively. There was an increase in knowledge scores regardless of modality, with a smaller increase for VW and OC vs. IP (6% vs. 7.5% vs. 14% pre-post knowledge increase, $p>0.05$). Increases in self-reported confidence were not statistically different between the VW and OC, and were significantly smaller than IP ($p>0.05$).

Discussion

Both VW and OC online types were successful in training learners across 14 SSA countries. Compared to IP learning, mean changes in knowledge and self-reported confidence were lower for online learners. Further research to address these differences is warranted given the unique opportunities afforded by online training to expand access and address inequities in health professions training across SSA.

Reflective Critique

These findings will be used to guide updates to STRIPE training, including improving online training strategies.

Abstract # 18

Virtual Rotation: An Innovative Approach to Away Rotations for Medical Students

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Area(s) abstract covers: Medicine
Category: Curriculum Development

Abstract:

PURPOSE: Create a virtual medical student rotation to address in-person rotation limitations while also improving access and equity for students.

BACKGROUND: With pandemic restrictions, medical schools placed limits on off-site electives. Concurrently, there are financial and social barriers ingrained in away rotations, which offer critical opportunities to showcase skills to residencies. As our program deeply values diversity and inclusion of our residents, we seek to reduce barriers to providing educational experiences for all students while also allowing prospective residents to initiate mentorship, relationships, and experience prior to the start of residency.

METHODS: During the 2021-2022 academic year, we implemented a 4-week all virtual pediatric advocacy rotation developed for fourth year medical students. This remote curriculum includes self-directed activities of themed videos, webinars, podcasts and articles along with submission of written reflections reviewed by rotation mentors and synchronous activities including faculty- and resident-led sessions conducted via Zoom. Learners completed post-surveys regarding their knowledge and skill of advocacy as well as qualitative feedback on our program.

RESULTS: After participation, medical students reported that they "enjoyed the flexibility and the lack of financial barriers with the virtual option" and they appreciated the "ability to reach a broader group of medical students that may not be able to attend in person." In addition, 100% of respondents reported increased knowledge and skills of pediatric advocacy and increased knowledge and skills of Cultural Humility.

DISCUSSION: Our first year implementing this new virtual curriculum received universally positive feedback from students and educators. We believe virtual rotations will continue to impact equity among medical students doing away rotations and allow medical students to experience programs that were once limited due to social barriers.

REFLECTIVE CRITIQUE: We recognize challenges in generalizability of our rotation content based on an already robust advocacy curriculum in place for our residents. We will incorporate learner feedback to increase robustness of the rotation for next academic year.

Abstract # 19

Medical Students' Experiences with Longitudinal Coaches throughout Medical School

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Area(s) abstract covers: Health professions student education, Continuing education, Faculty development, Medicine
Category: Curriculum Evaluation/Education Research

Abstract:

Background

A longitudinal student-coach relationship can serve as an 'educational alliance' that promotes student satisfaction, trust, and an approach to learning. This relationship can foster students' engagement in feedback-seeking and goal setting to maximize growth. Early experience with coaching in medical school fosters students' feedback mindset; how a coaching relationship changes through medical school to foster students' development is unknown.

Methods

In this qualitative study, 15 UCSF senior medical students participated in semi-structured interviews (October-November 2021). Questions addressed the evolution of their coaching relationship and discussion topics with their coach over time, including feedback and goal setting. The authors are conducting a thematic analysis.

Results

Preliminarily, three themes characterize how students gain support and learn from coaches. First, the coach role evolved from teacher and feedback-giver around clinical skills in the pre-clinical years to mentor, advisor, feedback-processer, and friend in the clinical years. Second, the longitudinal and confidential coach role positioned them to be trusted advisors, particularly around challenging clinical encounters, professional development, career planning, exams, extracurricular activities, and wellbeing. Lastly, students applied skills of soliciting and responding to feedback and creating SMART goals, originally introduced by their coach in the preclinical curricula, with other supervisors during their clerkships.

Conclusion

Coaches are integral to the medical student experience and continue to serve as one of the primary sources of support in all academic domains. The educational alliance, built on trust, evolved to meet students' changing needs as they grow into physicians.

Reflection

We plan to conduct member checking with participants by email or in a focus group to solicit their reactions to the identified themes.

Abstract # 21

Faculty Perceptions of Gaps in Current Laparoscopic Simulation Curricula in a Changing Training Landscape

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Area(s) abstract covers: Resident/fellow education

Category: Curriculum Evaluation/Education Research

Abstract:

Purpose

This study identified opportunities to improve laparoscopic surgical simulation education.

Background

Opportunities for surgical residents to develop laparoscopic skills have decreased over the last two decades with the rise in robotic operations and the development of complex, sub-specialized laparoscopic procedures.1–3

Methods

Our qualitative study obtained surgical faculty perspectives through semi-structured interviews with high-volume General Surgery, OBGYN, and Urology laparoscopic surgeons. Questions addressed their expectations for resident proficiency, observed deficits in laparoscopic surgery skills, and barriers to learning and teaching. Authors independently coded de-identified transcripts followed by a conventional content analysis sensitized by skills emphasized in the Objective Structured Assessment of Technical Skills (OSATS).

Results

The 14 interviewees identified four areas for improvement:

1) Tissue and instrument handling: Faculty perceived residents as varied in their ability in several specific skills related to suturing, retraction with instruments, camera troubleshooting, and using various tools.

2) Spatial awareness: Faculty described residents as challenged by depth perception, spatial orientation, and camera optimization.

3) Recognition of anatomy and tissue planes: Residents lacked surgical anatomy knowledge which contributed to unsafe operations and injuries, particularly in the setting of distorted, inflamed, or bloody tissue.

4) Forward planning: Faculty perceived that residents had difficulty with diverting from the standard steps of a procedure.

Conclusion

Given that faculty identified a consistent pattern of deficits in laparoscopic training, this study highlights the importance of improving simulation training to meet perceived deficits in targeted areas of laparoscopic surgical education given the decreased operative experience.

Reflective Critique

The diversity of our team allowed for rich discussion about relevant themes and practical strategies for educators and reduced bias as insider researchers.

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Abstract # 22

Social Media in Residency: A tool for wellness, recruitment and community engagement

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Area(s) abstract covers: Resident/fellow education, Medicine,

Category: Curriculum Development

Abstract:

Purpose: Develop a Social Medial Team and strategy for our residency program to maintain internal camaraderie, 2) facilitate intern recruitment, and 3) expand community engagement.

Background: Without the ability to gather in person, residents lost critical outlets to build and maintain interpersonal connections within the hospital. Without in-person interviews, social events, and away rotations, programs found it difficult to represent their learning environments and cultural values.

Methods: We developed a social media team with intentional representation from each residency class, a chief resident, and a program director. We created a social media strategy to define our audience, create content goals and maximize our impact.

Results: We surveyed our 2021 intern class and found that 95% followed our instagram account. One third identified the Instagram account as giving them the best sense of our program, roughly the same percentage as our interview day.

Discussion: Our organized social media presence provided a cost-effective means to help residents form connections with each other, applicants, and our community. We found that formalizing our use of social media created an effective channel for informal communication, allowing applicants to interact with residents and ask questions that may have been limited during formal events. We created "resident spotlight" posts that allowed us to learn more about each other. Our platform enabled us to communicate our values and solidarity with the larger hospital community.

Critical Reflection: Our survey included a question regarding perceived residency priorities. We noted low scores in medical education and alumni engagement. We also reflected on the rose-colored lens through which many social media accounts share information. Using this information, we formalized goals for the following academic year to include more emphasis on academic pursuits of residents and mentor engagement. We added "day in the life" features to show overnight intern calls on difficult rotations.

Abstract # 23

Integrating immigrant health into the undergraduate medical school curriculum

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Area(s) abstract covers: Health professions student education
Category: Curriculum Development

Abstract:

Purpose: Discuss the importance and best practices for integrating immigrant health into the medical school curriculum.

Background:

There are currently an estimate of 48 million immigrants residing in the US. In order to provide culturally competent and trauma-informed medical care, it is crucial for medical students to have exposure to immigrant health and a baseline understanding of immigration as a social determinant of health.

Methods:

Medicine4Migration (M4M) is an interprofessional student group committed to advancing immigrant justice and health equity. We were interested in incorporating immigrant health into the medical school curriculum after noticing the dearth of information about the experiences of immigrants in our healthcare system. Implementing the immigrant health curriculum into the UCSF School of Medicine required input from faculty and administrative leadership. M4M was granted approval to incorporate immigrant health utilizing UCSF's small group format, where students will work on case-based scenarios in groups of 10-12.

Results

The immigrant health small group session explores unique challenges that immigrant populations face and are important to consider as we work towards building medical education that serves our diverse US population. It utilizes a case-based format to discuss social and emotional health in immigrant and refugee youth. Learning objectives include: recognize the potential for psychological trauma in immigrant and refugee children, apply models of trauma-informed care and cultural humility to the clinical setting, analyze merits of various screening tools for immigrant and refugee youth to identify depression, anxiety, and trauma symptoms, and describe an initial approach to management.

Discussion & Conclusion

In November 2022, UCSF will pilot a small group session for all first-year medical students focused on improving their understanding of immigration status and immigrant health as social determinants of health. This team-based session explores challenges that immigrant populations face and are important to consider as we work towards building medical education that serves our diverse US population.

Reflective Critique

This curriculum was presented to the UCSF School of Medicine deans and the FS H&I leadership for review and their feedback was incorporated. The content and structure will continue to evolve based on student feedback.

Abstract # 24

An Integrated Longitudinal Health Equity Curriculum for Pharmacy Students

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Area(s) abstract covers: Health professions student education, Dentistry, Medicine, Nursing, Pharmacy, Physical Therapy

Category: Curriculum Development

Abstract:

Purpose

To describe the development and implementation of an integrated Health Equity Curriculum (HEC) in the 2nd-year curriculum in UCSF School of Pharmacy (SOP).

Background

In 2020 we piloted a 10-week HEC, and in 2021 we threaded HEC longitudinally across the didactic 2nd year. In creating the longitudinal HEC, we drew from critical pedagogy, transformative learning theory and structural competency, and from evaluations of our pilot.

Methods

We utilized Kern's 6-step curriculum development model, starting with a needs assessment and evaluation, followed by revising and developing goals and objectives. In designing educational strategies, we focused on methods aligned with critical pedagogy and transformative learning theory. As HEC was threaded into an impacted curriculum, we aimed to reduce the burden on existing course blueprints. To implement HEC, we worked with course directors, leadership, student interns and subject-matter experts.

Results

The HEC learning objectives were to identify structural determinants of health and explain how structures contribute to health disparities, to design interventions to reduce structural causes of health disparities, and to engage in compassionate, equitable, and civil discussions. From our needs assessment and pilot evaluation, we learned that HEC should be spread out and better integrated, and synchronous activities prioritized. We designed discussion-based, peer-driven, and reflective educational activities, and placed students in longitudinal small groups with 1-2 HEC discussions per course. Discussions were student-facilitated with pre-work, a 60-90-minute synchronous discussion and asynchronous written reflections. We also integrated HEC with an existing health advocacy project. We will evaluate HEC through a questionnaire, student interviews, and qualitative analysis of student reflections.

Discussion

We successfully designed and integrated a mandatory HEC through the 2nd-year didactic curriculum in UCSF SOP.

Reflective Critique

We are obtaining feedback from students and faculty and will use this to improve the next iteration.

Abstract # 25

Coaching the Struggling Learner: A Transformational Opportunity for Coaches' Critical Reflection?

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Category: Curriculum Evaluation/Education Research

Abstract:

Coaching the Struggling Learner: A Transformational Opportunity for Coaches' Critical Reflection?

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Purpose: To explore how medical student coaches experience and respond to working with struggling learners.

Background: Medical student coaching is a valuable strategy to support learners that is satisfying for coaches as well.1 However, coaches reported burnout at higher rates than other educators and cited the emotional lift required working with struggling learners as a source of distress.2 Because coaches form close learner relationships and are committed to learner success, supporting a struggling learner can be disorienting and taxing.3,4 Transformative learning theory suggests that educators who critically reflect upon and grow from such disorienting experiences can strengthen resilience and their professional identities.5,6 We conducted this study to explore coaches' experience with struggling learners and how they may change and grow from these relationships.

Methods: This qualitative study used semi-structured interviews of experienced medical student coaches (>1yr of coaching) at the University of California, San Francisco, and the University of Virginia. Interviews explored coaches' experiences, learning, and challenges while coaching struggling learners. We performed thematic analysis and conducted interviews concurrently with data collection until we reached sufficient conceptual depth.

Results: Preliminary results suggest coaches feel overwhelmed when discovering a learner struggle and a profound sense of personal responsibility for the learner's challenge and their success. Coaches build upon their strong relationships with the learner to navigate the obstacles. Barriers for coaches include time, knowledge of resources, and emotional exhaustion.

Discussion: These findings about the coach experience with struggling learners, and their need for additional support, can inform future faculty development and ensure sustainability of the coach role over time.

Reflective Critique: After presenting at the Pediatrics Education WIP and ESCape, we utilized feedback to strengthen our problem/gap/hook and clarify our results.

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Dark triad clients, their effect on coaches, and how coaches deal with them. Coach Int J Theory Res Pract. Published online August 15, 2020:1-17. doi:10.1080/17521882.2020.1784973 4. Chou CL, Kalet A, Costa MJ, Cleland J, Winston K. Guidelines: The dos, don'ts and don't knows of remediation in medical education. Perspect Med Educ. 2019;8(6):322-338. doi:10.1007/s40037-019-00544-5 5.   Mezirow J. Transformative Learning: Theory to Practice. New Dir Adult Contin Educ. 1997;1997(74):5-12. doi:10.1002/ace.7401 6.   Carter, Teresa J., Boden, Carrie J., Peno, Kathy. Transformative Learning in Healthcare and Helping Professions Education. Information Age Publishing; 2019.

Abstract # 26

Processing Systemic Racism: Building a reflection curriculum for third year students rotating in a state prison

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Area(s) abstract covers: Health professions student education
Category: Curriculum Development

Abstract:

Purpose: Working in a correctional health setting can be highly emotional as learners come face-to-face with systemic racism and economic injustice in the correctional setting, compounded by trauma that patients experience before, during and after incarceration. To address this, we are conducting a needs assessment of students who have previously rotated in this correctional facility and will use this data to develop and implement a pilot reflection curriculum for the 2022 cohort.

Background: In the United States, 7 million individuals are currently incarcerated, on probation or parole [1] – a medically underserved population that suffers a greater burden of illness than the general population. Clinical rotations in correctional health facilities may help students better understand this population, learn about the social determinants of health associated with incarceration, and serve as a potential pipeline to serving this population [2]. As part of the School of Medicine's longitudinal third-year family medicine clerkship, four students per year are chosen to rotate at San Quentin prison. Opportunities for student reflection are not currently built into this rotation. Without guided reflection, medical learners' experiences in this context may lead to compassion fatigue or reinforce stereotypes and further health inequities [3,4].

Methods: Our targeted needs assessment was two-pronged. We surveyed the knowledge and attitudes of the entire third year class before and after a large group presentation on correctional health. We also conducted targeted focus groups with the students who rotated at San Quentin in 2020 and 2021. This qualitative data was analyzed using grounded theory and key themes were identified.

Results: After 2.5 years of medical school, 54% of respondents did not have any exposure to correctional health (didactics or clinical experiences). Of the 165 students enrolled in the family medicine clerkship, 145 students attended the large group session, 48 completed the pre-survey and 10 completed the post-survey. On a Likert scale of 1-5, all of the knowledge fields improved after the large group session (ranging from 0.5 to 1.4 point increases). All of the attitude fields improved as well (0.1 to 0.8 increases). Of the 4 students who rotated at San Quentin, all participated in the focus groups. Key themes included having a new understanding of correctional health, impact on their future careers, the need for orientation/ preparation, the need for structured debrief and reflection, and opportunity to interact with incarcerated people outside of the clinical setting.

Discussion: Using the Kern framework for curriculum development, we will use the results from this needs assessment, as well as our review of the primary literature to begin to construct a reflective curriculum. Our results were limited by the small sample size of students who completed our survey, as well as the limited number of students who rotate at San Quentin every year. One clear theme that came from the focus groups was the need for more formal preparation and reflection during this rotation. There was also a clear desire to hear patient voices outside the clinical setting to better understand the whole person.

Reflective critique: Although there is significant literature on reflection exercises being used to debrief simulation activities [5] or as a way to discuss structural violence and injustice such as systemic racism and privilege [6], these exercises are often not grounded in specific clinical experiences with real patients and their lived experiences. Conversely, many clinical experiences in which students work directly with patients impacted by structural violence, injustice and trauma, and in which students witness the structural challenges these patients navigate, are not accompanied by reflection exercises. As we strive toward anti-oppression in medical school curriculum, it will be increasingly important to have robust reflective exercises available for students who encounter injustice or racism in clinical practice—to be able to process these emotions and channel them into empowerment to change systems. We hope that this curriculum will serve as an example of how such a reflective curriculum could be developed, implemented and evaluated.

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Abstract # 27

Strengthening Community-Based Relationships: Creating a Community Engagement Rotation Utilizing a Community-Engaged Curriculum Development Process

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Area(s) abstract covers: Health professions student education, Medicine

Category: Curriculum Development

Abstract:

PURPOSE: Describe community-engaged development of a medical student community engagement rotation.

BACKGROUND: The LCME requires US medical schools to support "service-learning and/or community service activities."[i] Few schools require community engagement curricula. UCSF School of Medicine's (SOM) Bridges curriculum envisioned a 4th year required community engagement rotation.

METHODS: We used Kern's curricular design framework,[ii] beginning with a review of relevant best practices. We conducted targeted needs assessment with medical students and community partners. We formed a working group, with 4 stipended community partners and 2 students, to determine goals and objectives, choose educational strategies, and guide implementation. Students and community hosts provided quantitative and qualitative evaluation.

RESULTS: Learning objectives relate to community engagement and partnership, cultural humility, policy advocacy, and public health. The 4-week rotation includes 1 day/week of group engaged learning and 4 days/week for student involvement at community sites. We piloted the rotation 4 times since 2020, with 17 student participants and 12 community hosts. Students rated rotation quality at 4.86 on a 5-point Likert scale (82% response). Qualitative feedback from students and hosts speaks to the impact on students' career aspirations and community health.

DISCUSSION: Students and community partners valued the rotation. Community partner engagement in all aspects of this process has been critical to its success. During the pandemic, it was difficult to recruit large numbers of students for the pilots and to identify stable funding to compensate community partners. The rotation remains an elective, as SOM shifts focus to the Anti-Oppression Curriculum initiative.

REFLECTIVE CRITIQUE: Students and community partners suggest longitudinal community engagement starting earlier in medical school. We proposed a longitudinal community engagement curriculum that SOM curricular leaders may incorporate as part of the Anti-Oppression Curriculum.

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Abstract # 28

Creating Safe Spaces for Medical Student Vulnerability through Peer-led Support Groups

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Area(s) abstract covers: Health professions student education, Medicine

Category: Curriculum Development

Abstract:

PURPOSE: To describe the development of an unstructured, participant-directed, near-peer facilitated support group (SG) for medical students.

BACKGROUND: As data show that student mental health declines throughout medical school, the LCME requires medical schools to provide "programs to promote well-being and to facilitate adjustment to…emotional demands of medical education"[1,2]. Moreover, the ACP Policy Paper on Physician Suicide recommends developing programming to promote belonging and community through opportunities to connect with peers [3]; actualizing this would require a culture shift in medicine from perfectionism to vulnerability and from hiding to sharing [4]. A preventive approach which creates space for vulnerability and connection is a near-peer SG.

METHODS: Student facilitators were recruited by mass email, received focused training from a psychotherapist, and met with a faculty advisor. An adaptable facilitation guide was created through literature review, informant discussion, and consensus. Voluntary SGs were offered during preclinical ARCH weeks since fall 2020. Facilitators and a faculty advisor met to debrief, discuss participant response, and refine SGs.

RESULTS: During the debrief, facilitators reported being in awe of, and nourished by, SGs. Most facilitators chose to lead future sessions. Participants informally shared feelings of benefit and an interest in returning. No participants completed a voluntary structured evaluation.

DISCUSSION: Facilitators and participants expressed appreciation of connecting honestly and vulnerably with peers and having their experiences normalized. The pandemic amplified the need for these opportunities as remote learning has intensified isolation from peers and mental health challenges.

REFLECTIVE CRITIQUE: ESCape feedback was incorporated. Participants reported a desire to meet longitudinally. Enrolling interested incoming students in SGs with consistent meetings across ARCH weeks would provide a space for community building and shared vulnerability and reinforce the goal of offering a preventive wellness program.

References:

1.Association of American Medical Colleges and American Medical Association. (2021). Functions and structure of a medical school: Standards for accreditation of medical education programs leading to the MD degree. 2.Dyrbye, L., & Shanafelt, T. (2016). A narrative review on burnout experienced by medical students and residents. Medical Education, 50(1), 132–149. https://doi.org/10.1111/medu.12927 3. DeCamp, M., Levine, M., for the ACP Ethics, Professionalism and Human Rights Committee. (2021). Physician Suicide Prevention and the Ethics and Role of a Healing Community: An American College of Physicians Policy Paper. Journal of General Internal Medicine, 36(9), 2829–2835. https://doi.org/10.1007/s11606-021-06852-z 4. Bynum WE, Sukhera J. (2021) Perfectionism, Power, and Process: What We Must Address to Dismantle Mental Health Stigma in Medical Education. Academic Medicine, 96(5), 621-623. doi:10.1097/ACM.0000000000004008

Abstract # 29

High-Value Care in Pre-Clinical Medical Education: A Pilot of an Integrated Longitudinal Curriculum

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Area(s) abstract covers: Health professions student education, Medicine
Category: Curriculum Development

Abstract:

PURPOSE: We aimed to create and pilot a longitudinal, integrated High Value Care (HVC) curriculum into a pre-clinical block at the UCSF School of Medicine.

BACKGROUND: Health care affordability is a growing area of concern in the US and there is increasing emphasis on the role of physicians in practicing HVC; however, principles of HVC are not historically taught in medical education, with no existing published curricula for preclinical learners.

METHODS: Given the time constraints of the preclinical schedule, we created a curriculum designed to maximize learning while minimizing time. The curriculum was included in the first-year Airways, Breathing and Circulation (ABC) course so that students were exposed to material early in their learning. The curriculum included three components: a foundational introduction to HVC video module developed with HVC faculty experts, HVC clinical learning objectives (LOs) integrated into existing clinical lectures, developed in collaboration with lecturers, and quiz questions to reinforce learning. We evaluated student reception of the course using a post-course survey.

RESULTS: Our curriculum was delivered to 161 students during the ABC course in Fall 2020. The total time of our longitudinal curriculum was 40 minutes (20 minute introductory module, 20 minutes of lecture material delivered over four lectures), in addition to four multiple choice questions. Prior to the course, 26% of students felt that HVC should be incorporated into the preclinical curriculum, which increased to 76% after the course. 76% felt the foundational module was helpful for learning HVC.

DISCUSSION: The HVC pilot course demonstrated that students desire more HVC education and that curriculum can be delivered longitudinally with clinical context, without impacting the pre-existing curriculum.

REFLECTIVE CRITIQUE: We used our post-course survey which includes quantitative and qualitative feedback, as well as interviews with teaching faculty, to obtain feedback that will be used to improve the implementation of HVC in the Renal, Endocrine, and GI block.

Abstract # 31

Expanding Access to Specialty Care for Underserved Communities: The Development of the RA ECHO for Navajo Nation

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Area(s) abstract covers: Continuing education, Faculty development, Medicine, Nursing, Pharmacy,

Category: Curriculum Development

Abstract:

PURPOSE:

We developed and implemented the RA ECHO, a novel and interdisciplinary 12-week curriculum to train Navajo Nation primary care providers (PCPs) in the diagnosis and treatment of rheumatoid arthritis (RA).

BACKGROUND:

Many communities have limited access to sub-specialists, leaving patients and PCPs without adequate support. Project ECHO (Extension for Community Healthcare Outcomes) is a validated educational model in which a team of specialists facilitates weekly interactive webinars to mentor PCPs in underserved communities in the management of a specific disease [1-2]. We chose to create a rheumatoid arthritis ECHO curriculum for Navajo Nation, given the high prevalence of RA in the Navajo community [3] and the limited access to rheumatologists.

METHODS:

A multidisciplinary team including rheumatologists from UCSF and the Navajo area, a pharmacist, and Navajo cultural interpreters created the content and structure of the course. We conducted a needs assessment survey and one-on-one Zoom interviews with PCPs. We designed a series of 12 one-hour sessions, held weekly on Zoom, each consisting of a 30-minute high-yield didactic followed by an interactive de-identified patient case discussion presented by a PCP. We used detailed pre/post surveys and focus groups to assess the RA ECHO curriculum .

RESULTS:

An interprofessional group of 16 PCPs participated in the first cohort of the Navajo Nation RA ECHO. Participants ranked the usefulness of each didactic on a 5-point scale (from "not at all useful" to "extremely useful") with an average ranking of 4.57 out of 5. All participants rated the case discussions as either "moderately useful" (40%) or "extremely useful" (60%).

DISCUSSION:

We successfully designed and implemented a RA ECHO curriculum for Navajo Nation PCPs and survey data showed that participants improved their RA medical knowledge and confidence in the diagnosis and management of RA.

REFLECTIVE CRITIQUE:

Assessment data from our first cohort of PCPs informed changes to improve the curriculum for the second cohort launched in February 2022.

References:

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Abstract # 32

Are Virtual Standardized Patients Well Accepted by Health Professional Students? A Pilot of Cases During COVID-19 Pandemic

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Area(s) abstract covers: Health professions student education, Masters student education, Resident/fellow education, Faculty development, Medicine, Nursing

Category: Curriculum Evaluation/Education Research

Abstract:

PURPOSE: We sought to evaluate health professional students' reactions and insights after a series of contacts with artificial intelligence (AI) clinical simulation scenarios at one US health professional university.

BACKGROUND: Even though AI clinical scenarios in healthcare education have been available for a decade[1], the possibility of remote learning was never a crucial imperative. Fortunately, the COVID-19 pandemic forced universities worldwide to seek alternative methods to teach their students.

METHODS: Between 2019 and 2021, 136 health professional students at Samuel Merritt University (SMU) were exposed to virtual standardized patient (VSP) scenarios with the chief-complaints of either "headache" or "fatigue." Students included 24 Family Nurse Practitioner (FNP), 48 Physician Assistant (PA) and 64 Bachelors of Science in Nursing (BSN) learners. All students conducted at least a single 5-15 min scenario independently as required by their course faculty. Post scenario, students completed an SMU IRB-approved questionnaire.

RESULTS: Response rates varied, from 58% of PA to 92% of FNP students. Most believed that the AI was helpful in improving history taking skills and developing differential diagnoses (77% FNP, 57% PA, and 85% BSN). Student perception of how realistic the scenarios were also varied (64% FNP, 46% PA and 56% BSN). However, all student groups wanted more exposure to new VSP scenarios in the future (90% FNP, 89% PA and 93% BSN).

DISCUSSION: Technology is increasingly penetrant in health professions education. Even though VSPs still lack realistic interaction, the students in this study are willing to have new experiences with AI after a single scenario/encounter. This demonstrates great potential for implementation of AI in health professions education.

REFLECTIVE CRITIQUE: Despite the small sample at a single university, this pilot study shows that health professional students consider AI useful and want to continue being exposed to virtual scenarios.

References:

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Abstract # 33

Investigating how the Plastic and Reconstructive Surgery Core Surgical Curriculum supplements gaps in current residency training

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Area(s) abstract covers: Resident/fellow education
Category: Curriculum Evaluation/Education Research

Abstract:

Purpose: This study evaluates how the Plastic and Reconstructive Surgery Core Surgical Curriculum (PRSCSC) impacts residents' perceptions of their skill levels, supplements gaps in current PRS residency education, and effectively augments residency training.

Background: Surgical skill workshops and cadaver labs have been shown to be valuable adjuncts to surgical residency education. The Plastic and Reconstructive Surgery Core Surgical Curriculum (PRSCSC) was developed and implemented into our plastic surgery residency education curriculum.

Methods: The PRSCSC is a repeating two-year surgical skills lab curriculum that consists of one-hour instructional didactics followed by 3 hours of hands-on skill-building of non-invasive aesthetic procedures, microsurgery, and cadaver dissections. Residents are provided pre-session resources and didactics before each session. Plastic surgery residents are grouped in small groups of 2 to 6. Junior residents include PGY 1-4. Senior residents include PGY 5-7.

This is a mixed-methods survey study. PRS residents were surveyed before and after five PRSCSC sessions from August 2021 to December 201 regarding their confidence in performing specific procedures, effectiveness of the PRSCSC, and feedback.

Results: 71% of residents completed all anonymous PRSCSC session surveys stratified by PGY level. Before the session, all residents had significantly more confidence in performing reconstructive surgery than non-invasive aesthetic procedures (p>0.001) (Table 1). On average, junior residents felt less confident on all procedures compared to senior residents before each session. Junior residents felt the least confident in microsurgery (p>0.00001), whereas senior residents felt the most confident in microsurgery (p=0.049).

All residents significantly increased their confidence by the end of aesthetic and reconstructive sessions (p=>0.01). When responses are analyzed by junior and senior resident levels, all sessions showed significant increases in confidence scores (p>0.01), except for the microsurgery session for senior residents (p=0.6) (Table 2).

Most residents (96%) were satisfied with all sessions. 90% learned a large or extreme amount from each session. All residents believed the PRSCSC should continue in their education and is important to their education. All residents agreed that the sessions had exceeded their expectations. Residents significantly enjoyed the hands-on practice, faculty guidance, and pre-session preparation materials (p=0.04).

Discussion: PRSCSC sessions are effective in increasing residents' confidence in performing surgical tasks and supplementing gaps in residency training by increasing exposure to complex and less common procedures earlier in residency. Given that aesthetic procedures are often less commonly encountered in most PRS residencies, this program allows trainees to improve their aesthetic skills in a low-stakes, well-guided environment. Similarly, junior residents are provided more opportunities to practice complex operations. When

asked for session feedback, junior residents requested for more junior-resident level tasks, prompting us to consider designing future labs at appropriate skill level that address resident needs by PGY level.

Reflective critique: Resident survey responses are collected after each PRSCSC session each month. Survey responses are sent over to the principal investigator and fellow on the research team. The principal investigator and fellow provide monthly feedback on the survey questions for ongoing improvement and data analysis of the survey responses.

Abstract # 34

Trauma-Informed Education: The UCSF Racial and Sociopolitical Trauma Protocol

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Area(s) abstract covers: Health professions student education, Medicine

Category: Curriculum Evaluation/Education Research

Abstract:

Purpose: Study aims: (1) evaluate students' use of the racial trauma and sociopolitical trauma protocol (RSTP), (2) explore students' perceptions of the Protocol's impact on learning and wellbeing and (3) explore faculty educators' and staff experience with the Protocol.

Background: Relying on individuals to manage the traumatic effects of racism is insufficient; the systemic nature of racism calls for systemic responses. At UCSF School of Medicine, educators partnering with students identified national racial trauma events as important traumatic disruptions to learning and wellbeing for medical students. The school designed and implemented an innovative RSTP protocol to afford students time, space, and agency in response to traumatic events. It introduces short-term flexibility in curricular expectations (e.g., defer attendance, assignments, exams) to empower students to rest, gather, or engage in community advocacy work.

Methods: This study employs retrospective analysis of quantitative data on RSTP use. We used descriptive statistics to summarize students' protocol use on adjustment to attendance, submission of required low- and high-stake assignments, exams, as well as formative and summative assessments.

Results: Between 06/2020-04/2021, the RSTP was activated 7 times: 296 of 653 medical students (45%) used the RSTP for 789 academic activities (attendance, assignments, assessments). 125 (42%) of students who used the RSTP identify as underrepresented in medicine. Activities delayed were attendance (30%), low-stakes assessments (56%), and high-stakes assessments (12%).

Discussion: High RSTP utilization demonstrates its value. Ongoing focus groups will further explore its utility and implementation. This system-level intervention designed to support minoritized students is highly utilized in the context of racial and sociopolitical traumatic stressors. Also, this is something we could explore in our focus groups.

Reflective Critique: Based on feedback, we have added staff focus groups given their role in Protocol implementation.

Abstract # 36

Targeted and Tailored: a Workplace-based Approach to Faculty Development for Busy Clinicians

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Area(s) abstract covers: Health professions student education, Resident/fellow education, Faculty development, Medicine
Category: Curriculum Development

Abstract:

Purpose: To pilot workplace-based faculty development to engage clinical faculty in education

Background: To support UCSF's shift from an assessment of learning to an assessment for learning approach, we aimed to equip clinical supervisors with skills in discussing actionable feedback and promoting growth mindset in learners. Because busy clinicians are less likely to participate in in-depth, time consuming education faculty development, we took a targeted approach to workplace-based faculty development aimed at microskills.

Design: We created core materials for brief, focused faculty development activities, to be delivered in, and adapted to the faculty's workplace. Materials included infographics, on-demand modules and short workshops. We then engaged educational leadership (education chairs, residency and clerkship directors) in eight clinical departments, in identifying clinical educators to champion the project. The champions developed strategies to maximize faculty participation at various clinical sites.

Outcomes: In all departments, educational leadership enthusiastically supported this work and helped guide the champions. In line with our intent, each team came up with their own strategies to engage faculty, adapting the core materials to meet their faculty needs. To-date, two departments have completed the project whereas the other six are in the implementation phase. Across these two departments, over 300 faculty have participated in microskill development activities. Preliminary outcome data suggest high satisfaction among faculty and a positive impact on learners' ratings of faculty feedback.

Reflective Critique: This proof-of-concept project demonstrates that a workplace-based approach can reach large numbers of faculty across clinical sites, with measurable impact on faculty skill. The "microskill" approach does not, however, ensure in-depth skill development and we refer participants to the Center for Faculty Educators for additional faculty development offerings. Evaluation of downstream effects on learners' perceptions of feedback quality is ongoing.

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Abstract # 37

Development, Implementation, and Evaluation of a Longitudinal Teamwork Communication Skills Curriculum for Medical Students

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Area(s) abstract covers: Health professions student education, Medicine

Category: Curriculum Evaluation/Education Research

Abstract:

PURPOSE: To describe the development and evaluation of a teamwork communication skills curriculum for medical students.

BACKGROUND: Teamwork and effective communication skills are vital to providing high-quality patient care. To strengthen medical students' teamwork abilities, we developed a longitudinal, teamwork communication skills curriculum at UCSF.

METHODS: Using Kern's 6-step framework, we designed a small-group based curriculum to foster team communication, group learning, and feedback skills. The Student Optimized Learning Environment (SOLE) included 9 sessions in which students learned communication frameworks, participated in structured reflections, and engaged in case-based scenarios. The first class of SOLE students (2023) were invited to complete a program evaluation with multiple-choice/free-response questions.

RESULTS: 174 students participated in SOLE and 138 (79%) completed the evaluation. Students agreed that SOLE helped them to reflect on and understand team dynamics (mean=3.74, SD=0.9; 1=strongly disagree, 5=strongly agree), practice relationship-centered communication skills (3.72, 0.9), and learn (3.74, 0.9) and practice (3.69, 0.9) strategies for giving and receiving feedback. Qualitatively, students described applying skills to real-life situations, working with peers, and debriefing challenging team experiences as curricular strengths. Suggested next steps included streamlining content and allowing more time for group reflection.

DISCUSSION: SOLE is a longitudinal teamwork communication skills curriculum that teaches communication strategies and fosters the development on sustainable learning practices. Based on our pilot data, SOLE facilitated engagement in content around team dynamics, giving and receiving feedback, and cultivating a practice of ongoing learning. Next steps include creating additional spaces for students to reflect on challenging team experiences.

REFLECTIVE CRITIQUE: We received feedback at ESCape and plan to both refine our learning objectives and clarify the conceptual frameworks underpinning our curricular sessions.

Abstract # 38

Thriving in Emergency Medicine Residency

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Area(s) abstract covers: Health professions student education, Resident/fellow education
Category: Curriculum Evaluation/Education Research

Abstract:

BACKGROUND

It has been shown that the burnout rate for emergency medicine providers is among the highest seen in healthcare. While resilience and grit have been studied as protective attributes against burnout, the ability to thrive, a concept well-studied in business settings, has yet to be researched for emergency medicine providers. Thriving has previously been defined as a combination of vitality—having energy available and feeling "alive"— and learning—the feeling of acquiring and being able to apply valuable knowledge or skills.

Thriving has been found to be dependent on many factors grouped into categories such as personality traits, individual agentic work behaviors, resources produced at work, and unit contextual features, among others. Unit contextual features consists of factors such as challenge or hindrance stressors, autonomy, and trust. Little is known about thriving in residents in healthcare training programs.

METHODS

We plan to administer a survey with quantitative and qualitative components developed based off of previously validated surveys regarding the unit contextual features and overall thriving to emergency medicine residents at the UCSF/SFGH emergency medicine residency program.

RESULTS

While the survey has been developed, it has not yet been administered or analyzed. These data will be analyzed for overall thriving and to see which unit contextual features are contributing to the presence or absence of thriving in the residency. We will also parse the qualitative data for overall themes and to help make sense of the data received from the quantitative components.

DISCUSSION

With the data obtained, we plan to find possible areas for targeted intervention to improve the residency experience.

REFLECTIVE CRITIQUE

We plan to discuss these results with the residents and the residency leadership to discuss future goals and make changes to the survey so it can be administered in other settings.

Abstract # 39

Development of Digital Educational Hub in Acute Care Setting

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Area(s) abstract covers: Resident/fellow education
Category: Curriculum Development

Abstract:

Purpose:

This abstract describes the development of a digital on-demand education tool that provides high yield, on-shift training resources for medical students and residents in the emergency department (ED).

Background:

Our ED regularly develops educational resources for learners, including learning points from case review meetings to residency conferences. Previously, these resources were communicated to trainees via a wide array of methods including emails and posted manuals that were infrequently accessed. Our team developed an online platform to increase access to these critical education resources on-shift.

Methods:

We assembled a team of designers, ED clinicians, and medical students to develop an approach to increase information access. After 80+ hours of interviews and prototyping, we ultimately developed an open access, mobile-friendly information hub, E*Drive (https://edrive.ucsf.edu/). Within this hub, we recently created an "Education" section to serve as an on-demand training resource for ED-based learners.

Results:

Since the project's inception in mid-January 2022, we have created 6 new educational resources for topics ranging from documentation to signout best practices to procedural learning videos. Within 2 weeks, the Education section has been viewed 96 times by 53 users. We plan to grow this hub of educational resources by utilizing end-user feedback, and track utilization by monitoring web traffic.

Discussion:

An open access platform like E*Drive can serve as an "on-demand" curriculum, improving access to educational resources and aiding in efficient information access and retention. Similar systems can be applied to other specialities to improve access to educational resources.

Reflective Critique:

We are actively seeking feedback from users through surveys and spot interviews. We will utilize this targeted feedback to improve upon our platform and adapt guidelines and resources in line with the needs of the ED and learners.

Abstract # 40

Sign-Out: A Chance to Learn from New Perspectives

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Area(s) abstract covers: Health professions student education, Resident/fellow education
Category: Curriculum Evaluation/Education Research

Abstract:

PURPOSE: We created an electronic medical record (EMR) tool that provides a structure for professional and detailed feedback regarding signed-out patients. The purpose of this study is to evaluate if this tool increases peer feedback surrounding sign-out between Emergency Medicine Residents at UCSF Fresno.

BACKGROUND: Feedback around sign-out is vital and must be encouraged. Sign-out is a high risk time in patient care10. Feedback on sign-out practices can improve and maintain patient safety. Sign-out is also a time for an ongoing patient evaluation to be reviewed from a new provider's unbiased perspective3, 4, 5, 6. Retrospective feedback regarding the first provider's diagnostic approach and the patient's ultimate course can also improve diagnostic evaluations and medical management. Given the fact that peer feedback, especially around medical decompensations, is not always readily given7, we do not provide these valuable types of feedback often enough.

METHODS: After tool implementation, we will be both tracking the absolute number of times the tool is utilized via an Epic query and evaluating changes in the resident's perception of feedback frequency via pre- and post-surveys.

RESULTS: We are still currently in the IRB submission process and hope to implement the project July 2022.

DISCUSSION: We anticipate our results will indicate that the tool improves the frequency of feedback.

REFLECTIVE CRITIQUE: The creation of the EMR tool was assisted by faculty with an informatics background at UCSF Fresno. I have presented my project at multiple HPE sessions with instruction by educational research experts on both project design and survey construction. The surveys were also guided by UCSF Fresno focus groups and are still to be altered after conducting cognitive interviews and pilot testing.

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Abstract # 41

Teaching Community Engagement for Health Professions Students in Underserved Areas

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Area(s) abstract covers: Health professions student education
Category: Curriculum Development

Abstract:

PURPOSE: Community projects promote community engagement and can provide a powerful hands-on model of engagement for health professions (HP) students that can influence their career choices or reenforce existing interests.

BACKGROUND: Service learning that connects community service to academic coursework can augment students' cognitive skills and connect them with mentors who may influence their career choices. The service-learning model used in health educational curricula leads to improvements in writing skills, critical thinking skills, values about social justice, self-efficacy, leadership and interpersonal skills, and particularly career choices involving service.

METHODS: In 2017, Health Resources Services Administration (HRSA) created the Area Health Education Center (AHEC) Scholars Program in Community Health. The California AHEC, in collaboration with its 13 centers, created a unique and innovative two-year program to train and certify HP students as AHEC Scholars in Community Health. The program includes didactic, experiential, and clinical training designed to supplement students' existing health professional school curricula, and a community project.

RESULTS: From 2018-2020, 79 HP students conducted a total of 42 projects through 10 centers. Projects were diverse and covered a broad spectrum of topics and delivery to the community served, including COVID-19 education and social media campaigns. Students provided feedback in their project summaries and reported the experience as impactful and having implications on their future careers in the health professions.

DISCUSSION: The projects increased students' awareness and attention to a broad array of community health needs and how to work collaboratively with their training sites, mentors, and fellow students to address them.

REFLECTIVE CRITIQUE: The feedback from scholars was not anonymous, so future assessments will provide the opportunity for the scholars to provide feedback in that manner. The goal of the program is to expand the number of scholars, diversity of projects, and sites.

Abstract # 42

Changes in Conversation: a Qualitative Study of a Mock Code Curriculum after Implementation of a Debriefing Tool

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Area(s) abstract covers: Health professions student education, Resident/fellow education, Medicine, Nursing, Pharmacy

Category: Curriculum Evaluation/Education Research

Abstract:

PURPOSE: Evaluation of a standardized debriefing tool aimed at changing discussion content among nurse and physician facilitators in a mock code curriculum

BACKGROUND: An interprofessional pediatric mock code curriculum at UCSF has historically been physician-dominated (1,2), with an emphasize on medical management. To shift discussion towards a nursing-led conversation on the influence of power dynamics and hierarchy on participant communication, we implemented a standardized debriefing tool.

METHODS: We performed a content analysis of 14 hours of video-recorded mock code debriefings pre- and post- implementation of a standardized debriefing tool. Debriefings were led by two nurse and two physician facilitators. Two investigators transcribed the recorded debriefs and independently coded facilitator conversations by topic.   A quantitative comparison of their discussion points was made pre- and post-implementation of the tool.

RESULTS: We reviewed the coded transcriptions by profession and four conversation topics: mock code logistics, medical management, communication, and power dynamics. Pre-intervention, nurse facilitators spoke only 17% of the time compared to physicians speaking 83%, but nurses' participation increased to 41% with the tool. Content of debriefings changed, with a decrease in discussions around medical management by physician facilitators (50% to 35%) and a subsequent increase in discussions around hierarchy and power dynamics for both physician (2% to 9%) and nurse (0% to 7%) facilitators.

DISCUSSION: After implementation of the debriefing tool, nurse facilitators directed more discussions in mock codes. Nurses had a larger role in conversations around hierarchy, power dynamics, and subsequent communication breakdowns. We anticipate a stronger nursing presence in mock code facilitation may help minimize interprofessional barriers to honest reflection.

REFLECTIVE CRITIQUE: I had monthly meetings with my advisors to obtain feedback on data collection and interpretation, statistical analysis and next steps in qualitative data collection.

References:

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Abstract # 43

Student perceptions and academic performance in a remote flipped classroom

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Area(s) abstract covers: Health professions student education, Dentistry, Medicine, Nursing, Pharmacy, Physical Therapy

Category: Curriculum Evaluation/Education Research

Abstract:

Purpose

To identify components of a flipped classroom that may need to be adjusted for remote learning, to evaluate students' perceptions of a remote flipped classroom, and to compare academic performance between remote and in-person flipped classrooms.

Background

The COVID-19 pandemic forced didactic education to be remote learning using Zoom. It is unknown what components of a flipped classroom need to be adjusted in a remote learning setting and what impact a remote flipped classroom has on students' academic performance.

Methods

We implemented a remote flipped classroom in therapeutics classes in an integrated organ system block in 2020. Upon block completion, we surveyed students on their perceptions of the remote flipped classroom. In addition, we compared the median percent score of therapeutics questions on two summative assessments between students who took the block in person in 2019 and remotely in 2020.

Results

Of 123 students enrolled, 113 responded (Response rate: 92%). More than 60% of respondents preferred a remote flipped classroom over live lecture. Reducing the amount and length of pre-class videos was the most frequent feedback. In addition, less than half felt that breakout room sessions enhanced their learning. Cohort 2020 had significantly lower median percent scores on therapeutics questions on both summative assessments than Cohort 2019 (85.7% vs. 71.4% on summative 1; 89.3% vs. 82.1% on summative 2; both $p>0.0001$).

Discussion

Although a remote flipped classroom was generally preferred over a remote live lecture by students, delivery of pre-class materials and arrangements of student interactions in-class were identified as components for adjustments in a remote flipped classroom. Given the lower academic performance in a remote flipped classroom, additional support should be provided for students' academic success.

Reflective critiques

We sought other faculty feedback on breakout room setups before starting the course. We incorporated their feedback when we implemented a remote flipped classroom.

Abstract # 45

Acknowledging & Addressing Microaggressions, An Experiential Learning Approach

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Area(s) abstract covers: Faculty development
Category: Curriculum Development

Abstract:

PURPOSE: Design and implement a simulation-based faculty development curriculum for skill development in addressing microaggressions.

BACKGROUND: Health profession education organizations are increasingly promoting diversity, equity, and inclusion (DEI). Many have faculty development programs aimed at recognizing bias and microaggressions, but few offer opportunities to practice skills to address bias and interrupt microaggressions.

METHODS: Using Kern's six-step approach to curricular development, we conducted a needs assessment through surveys and informal focused groups to formulate goals and objectives for a longitudinal series of workshops. Each workshop includes a self-reflection exercise, discussion of best practices, interactive simulated activities with actors and role play, and debriefing. Skills being taught include recognizing and labeling bias, formulating and practicing apologies when learners experience harm, creating expectations for learners surrounding microaggressions, and responding to microaggressions in the workplace. Through pre/post workshop surveys we evaluated the impact on faculty's confidence and comfort in applying these skills.

RESULTS:

Three of six planned virtual workshops have taken place thus far with a total of 36 participants from 12 different departments. Participants of these three sessions rated their confidence and comfort in applying the skills higher in the post survey than in the pre-survey, with mean ratings of 3.06±0.85 versus 4.13±0.83 for confidence and 3.0±0.95 versus 4.6±0.51 for comfort.

DISCUSSION:

Experiential learning can increase confidence and comfort level with critical skills needed to promote DEI. We hope that this translates into faculty's actual ability to apply these skills in the learning environment when bias and microaggressions occur.

REFLECTIVE CRITIQUE:

Every session has an opportunity for feedback. In survey comments participants expressed appreciation for the opportunity to practice skills. We also learned that participants are more likely to attend virtual workshops; thus the curriculum is entirely virtual this year.

Abstract # 46

Building a quality improvement and patient safety curriculum in low- and middle-income countries

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Area(s) abstract covers: Continuing education, Medicine
Category: Curriculum Development

Abstract:

PURPOSE: To design an accessible curriculum in quality improvement (QI) for healthcare providers in low- and middle-income countries (LMICs)

BACKGROUND: In addition to access, the quality and safety of healthcare is an important part of improving outcomes in LMICs. Most QI training programs are geared toward health systems in high-income countries, but few programs reflect the unique needs of LMICs.

METHODS: We used Kern's six steps for our curriculum design (1). Needs assessments including literature reviews, program surveys, and focus groups highlighted the need for LMIC-specific QI curricula. Using expert and stakeholder input, we designed goals and objectives designed to teach fundamental QI principles and tools within a framework of equity, value, and patient-centered care. The educational strategy is an asynchronous 8-module case-based curriculum with opportunities for learners' interactive participation.

RESULTS: Each module teaches a different set of principles and tools of QI through a case study in LMIC contexts. We developed unique case studies for global surgery, pediatrics, and internal medicine. The learner will complete exercises that in aggregate will build the foundation for their own QI project. We will pilot the curriculum with members of global health fellowships based in LMICs and evaluate the curriculum with pre- and post-surveys.

DISCUSSION: Clinical settings in LMICs are heterogeneous, with variability in location, level of acuity and resources, and sociocultural characteristics. Our curriculum concentrates on providing foundational QI knowledge that learners of all contexts and professions can apply to address their specific challenge.

REFLECTIVE CRITIQUE: We anonymously surveyed 16 international partners and experts on modules introducing basic QI tools. Respondents commented on the high relevance of the modules to LMICs and recommended offering diverse case studies to capture differences in setting (eg. rural/urban), clinical practice (e.g. nurse, doctor, midwife), and specialties (e.g. infectious disease, maternal health, etc.).

References:

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Abstract # 47

Using Automated Survey-Generation to Understand Trainee Interest in Feedback on Clinical Encounters

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Area(s) abstract covers: Health professions student education,Resident/fellow education,Medicine

Category: Curriculum Evaluation/Education Research

Abstract:

PURPOSE

To characterize:

1)Prevalence of trainee interest in practice outcome feedback based on electronic health records (EHR)

2)Reasons for interest in feedback and types of feedback desired

BACKGROUND

Accrediting bodies have called for improved use of 'big data' from EHR for trainees to track clinical outcomes and quality benchmarks and recommend that trainees receive individualized data for their own patients. Yet, educators rarely utilize EHR for this purpose. One barrier is inaccurate EHR-based attribution of patients to trainees which may be due to an incomplete understanding of trainee interest in feedback, specifically what kind of feedback and why. Exploring this may refine EHR-based patient attribution for trainee feedback.

METHODS

We developed a survey tool that uses EHR access logs to create patient lists based on a user opening their chart in the past day. Surveys included questions for each patient on trainee interest in feedback (why and what type). Pediatric (P) and internal medicine (IM) residents and pediatric (PICU) and adult critical care (ICU) fellows who participated received surveys every 2 days for 2 weeks.

RESULTS

From 2020 to 2021, 42 trainees (14 P, 23 IM, 4 PICU, 1 ICU) completed 1525 patient-provider surveys. Based on analysis of surveys linked to an initial patient encounter (n=958), trainees indicated interest in feedback for 33% of encounters. Trainees were more interested "if something unexpected occurred" and less on general clinical management or quality metrics. They most often cited wanting feedback if they made significant decisions or felt responsibility and least often because of personal attachment or concern about patient vulnerability.

DISCUSSION

Trainees were interested in feedback a third of the time, much lower than expected. This may be a barometer of current learning environments. Future studies examining trainee reasons for not wanting feedback may shed light on this surprising finding.

REFLECTIVE CRITIQUE

The study design was discussed at ESCAPE, and modifications were made to improve rigor of the study.

Abstract # 48

Developing Novel Tools for Clinicians to Discuss Immigration for Resource Referral

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Area(s) abstract covers: Resident/fellow education, Faculty development
Category: Curriculum Development

Abstract:

PURPOSE: To address knowledge gaps about immigrant patient rights and legal resources, we are developing clinician education tools within the Emergency Department (ED).

BACKGROUND: Many of the 2 million undocumented people in California depend on the ED for care due to health care barriers. As such, ED clinicians have a key role in providing support to this population. Given the sensitivity and lack of training on immigration, physicians need educational materials to better meet the needs of this underserved group.

METHODS: We approached this problem by conducting a targeted needs assessment through 30-minute interviews with stakeholders. Interviews are ongoing; we have reached out to 44 stakeholders and interviewed 8 people thus far, including social workers, attorneys, physicians, and SFDPH employees.

RESULTS: Having initially intended to only educate clinicians on legal resources, interview themes expanded our objectives. First, interviewees noted a knowledge gap on types of immigration status, immigrant rights within the hospital, who has access to citizenship status in the medical record, and the relationship clinicians have to law enforcement. Our stakeholders also stressed a lack of training on navigating immigration conversations effectively without inducing patient stress and developing mistrust. Lastly, interviews continued to highlight the need for clinician training on how to effectively refer patients to legal resources.

DISCUSSION: Following these interviews, we plan to design pilot tools addressing these needs and objectives. Potential tools include a resource referral tool, a one-pager on immigrant patient rights, and a short video on navigating immigration conversations. We plan to receive stakeholder feedback on pilot tools to continue our iterative tool design prior to dissemination within the ED.

REFLECTIVE CRITIQUE: Continuous feedback and stakeholder interviews expanded and enhanced our initial endeavor. Furthermore, Scholarship Committee and ESCape feedback helped root our process within a pedagogical framework of Kern's 6-Steps Approach.

Abstract # 49

Robotic Training for Medical Students: Feasibility of a Pilot Simulation Curriculum

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Area(s) abstract covers: Health professions student education, Medicine

Category: Curriculum Development

Abstract:

PURPOSE

To examine the feasibility of adapting an Intuitive Surgical (IS) robotic training for medical students.

BACKGROUND

Robotic surgery is growing. Currently medical students have a limited role in robotic surgeries. There is a need to develop curricula to enhance engagement.

METHODS

As a pilot, 18 senior students accepted an invitation to take a simulation course with a da Vinci robot trainer. Course objectives were introducing robotic features, functionalities, and roles. A 1-hour online module from the IS learning platform and a 4-hour in-person session comprised the course. The in-person session included an overview of the robot by an IS trainer (1.5 hours), skills practice at console (1.5 hours), and a simulation exercise focused on the bedside assist role (1 hour). Feasibility was determined by assessing implementation and acceptability using a post-session survey and focus group (FG). Survey responses were compiled. FG transcripts were analyzed using inductive thematic analysis techniques.

RESULTS

Fourteen students planning to enter surgical specialties participated. Implementation was successful as interested students signed up and completed each of the course components. Regarding acceptability, post-session surveys revealed that students found the training valuable and recommended it as preparation for robotic cases during core clerkships and sub-internships. In addition, FGs revealed 4 themes: 1) perceived expectations of students in the OR; 2) OR vs. outside-OR learning; 3) simulation of stress; and 4) opportunities to improve the simulation component.

DISCUSSION

To increase preparation for the robotic OR and shift robotic training earlier in the surgical education continuum, educators should consider hands-on simulation for medical students. We demonstrate feasibility although logistics may limit scalability for large numbers of students.

REFLECTIVE TECHNIQUE

Feedback was obtained from surgical educators and robotic surgeons. While the results have the potential to advance medical student education, feedback from other members of the robotic OR is needed.

Abstract # 50

"You're Going to Need a Longer Stethoscope." A Dedicated Telehealth Rotation at the San Francisco VA (SFVA) for UCSF Internal Medicine (IM) Residents

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Area(s) abstract covers: Resident/fellow education, Medicine

Category: Curriculum Development

Abstract:

PURPOSE: To develop a new educational curriculum and longitudinal rotation in telehealth at the SFVA for UCSF IM residents.

BACKGROUND: The COVID-19 pandemic shifted delivery of ambulatory care from in-person to virtual visits. Providers must evaluate medical concerns over telephone/video and coordinate care for patients living in remote areas. We developed a year-long rotation and curriculum in telehealth, drawing content from existing literature.

METHODS: Our rotation enables senior IM residents to evaluate patients in a tele-urgent care clinic, which serves rural California communities, one half-day per week for a full academic year. To support this effort, we created a series of pre-clinic case conferences. Conferences are designed for learners to gain practical skills in virtual communication, telehealth physical examination techniques, and the mobilization of local resources to provide safe and coordinated care. Rural healthcare disparities and social determinants of health are woven throughout weekly case discussions. Residents complete a pre-rotation survey assessing prior telehealth experience and their confidence evaluating specific chief complaints over video and phone.

RESULTS: Seven residents are participating in the rotation's first year. Four completed the pre-rotation survey. Prior to the rotation, two had completed 5-9 telehealth visits, and two had completed >10. All rated confidence levels as "Not at all confident" to "Neutral" in assessing 10 chief complaints over telehealth. We are awaiting results from a mid-year survey.

DISCUSSION: There is currently an unprecedented need for telehealth, but residents report limited training and confidence in its delivery. This program provides a guided opportunity to build telehealth skills.

REFLECTIVE CRITIQUE: We are early in the development and evaluation of our curriculum and rotation. We presented at a Works in Progress session and continue to seek expertise from the medical education community to evaluate and improve our program. We will use feedback from the inaugural cohort to guide future iterations.

Abstract # 51

Immigrant Health: A Pediatric Residency Curriculum

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Area(s) abstract covers: Resident/fellow education
Category: Curriculum Development

Abstract:

Purpose:

An inter-professional team from UCSF Benioff Children's Hospital Oakland and San Francisco (SF) Pediatric Residency programs are developing a comprehensive curriculum to better prepare pediatric residents to care for new immigrant patients.

Background:

While residents at both SF and Oakland receive immigrant health content during their residency, feedback from current and past residents indicates that the content is insufficient and disjointed.

Methods:

A large inter-professional team including but not limited to pediatric residents, attending physicians, social workers, interpreters, and support staff met regularly over the last two years to create an outline of an optimal vision for an immigrant health curriculum, modeled after Kern's six step approach for curriculum development. To measure progress towards these goals and objectives, the team designed a web-based survey for pediatric residents to self identify their ability in each objective based on a 5 point scale, with initial data collection in September, 2021 from 24 Oakland pediatric residents. Survey data is planned to be collected annually to study progress made and continually reassess objectives that residents may need further training in.

Results:

Our 6 goals involve increasing pediatric residents' ability in the following topics as they relate to new immigrants: (1) initial visits; (2) communicable and non-communicable disease processes; (3) social determinants of health; (4) mental health and development; (5) community resources; and (6) advocacy.

24 out of 83 residents (29%) responded to the survey. While there were several objectives in which most residents choose "strongly agree" and many in which they choose "agree" in their self perceived ability, many were marked as neutral and several as "disagree" or "strongly disagree."

Discussion

With a comprehensive and multi-disciplinary approach to resident curriculum around immigrant health, our pediatric residents will be more equipped to partner with their immigrant patients, other interprofessionals, and

community to achieve better health outcomes/reduce health care disparities for immigrant children and families. This resident-led immigrant health curriculum will help ensure that future practicing pediatricians have the appropriate skills and knowledge to care for this large group of US children.

References:

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Abstract # 52

Training a Cadre of Local Public Health in Proper Outbreak Management related to SARS-COv-2

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Area(s) abstract covers: Health professions student education, Continuing education
Category: Curriculum Evaluation/Education Research

Abstract:

PURPOSE: The purpose of this abstract is to evaluate the reach and outcomes of the Virtual Training Academy (VTA) Outbreak Management course, created to meet California's need for a new cadre of local outbreak managers for COVID-19.

BACKGROUND: The UCSF VTA developed a foundational course for local health jurisdiction (LHJ) staff, leveraging subject matter experts (SMEs) at the California Department of Public Health and the San Francisco Department of Public Health. Course design utilized a backward design framework, which consists of (1) identifying desired learning outcomes, (2) determining appropriate evaluation methods, and (3) developing course activities.

METHODS: An 11-hour virtual training of 9 didactic modules, 8 skill development activities and a panel with SMEs was created in August 2020. Modules reflected a framework created to guide the trainees: Prevent, Identify, Define the Scope, Control, and Monitor (PrISCM). Learners self-rated their confidence in six outbreak management skill domains from 1 (not at all confident) to 5 (very confident). The final score was the calculated average of the six domains. Data through January 25th, 2022 were included.

RESULTS:

The training was conducted 23 times; 582 learners from 75% of California's LHJs (45/61) participated. Compared to average pre-training scores, average self-assessment score improved by 48% post-training (from 2.84 to 4.21)

DISCUSSION: The VTA COVID-19 Outbreak Management training has proven to be a valuable resource to increase capacity among California LHJs. By providing a comprehensive foundation, learners were empowered to confidently apply the PrISCM framework to control COVID-19 outbreaks in high-risk settings.

REFLECTIVE CRITIQUE:

The team stays informed of guidance updates and gathers feedback from each cohort of trainees to continually improve content and outcomes.

Abstract # 53

Perceived Benefits and Drawbacks of Constructed Response Short Answer Questions (CR-SAQs) in Undergraduate Medical Education Pre-clerkship Assessment

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Area(s) abstract covers: Health professions student education

Category: Curriculum Evaluation/Education Research

Abstract:

Purpose: The purpose of this multi-institutional study was to understand learner and educator perspectives regarding constructed response short answer questions (CR-SAQ) in pre-clerkship summative assessment.

Background: Studies examining learner and educator perspectives on this topic in medical education are limited,[1,2] yet are critical to aid in quality improvement.

Methods: This was a mixed methods study at three US medical schools utilizing CR-SAQ exams. Students in three cohorts (260, 19%) and faculty (57, 48%) were surveyed. Responses to nine 5-point Likert items and two open-ended questions were analyzed based on Norcini's criteria for good assessment[3] to provide descriptive statistics and qualitative themes.

Results: Students (89.2%) and faculty (94.7%) agreed or strongly agreed that CR-SAQs were authentic, prompting learners to use thinking skills they will need in the future. More students (58.1%) than faculty (31.6%) agreed or strongly agreed that scoring of CR-SAQs is subjective ($X2(1)=13.19$, $p=0.0003$). Students and faculty cited preparation for future professional work as well and enhanced learning as benefits. Faculty focused on feasibility of scoring as a drawback; students focused on the time required. There were benefits (i.e. demonstrating thought process) and drawbacks (i.e. inadequately preparing students for multiple-choice examinations) related to acceptability.

Discussion: This is the first multi-institutional study of perceived benefits and drawbacks of CR-SAQs in US medical schools. The perception that CR-SAQs better represent professional encounters extends the value of CR-SAQs as a form of undergraduate medical education (UME) assessment. Perceived subjectivity is an area in need of attention.

Reflective Critique: This study has received feedback and acceptance for presentation at WGEA and CGEA 2022 (poster), and at NEGEA 2022 (oral presentation). We have been encouraged to build on these findings, especially the negative perceptions, which we will do here.

References:

1. Bird JB, Olvet DM, Willey JM, Brenner J. Patients don't come with multiple choice options: essay-based assessment in UME. Med Educ Online. 2019;24(1):1649959. 2. Hift RJ. Should essays and other "open-ended"-type questions retain a place in written summative assessment in clinical medicine? BMC Med Educ. 2014;14:249. 3. Norcini J, Anderson B, Bollela V, et al Criteria for good assessment: consensus statement and recommendations from the Ottawa 2010 Conference. Med Teach. 2011;33(3):206–214.

Abstract # 54

Developing an asynchronous training on the collection of sexual orientation and gender identity for California COVID-19 case investigators and contact tracers

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Area(s) abstract covers: Health professions student education, Masters student education, Resident/fellow education, PhD/Post Doctoral education, Continuing education, Faculty development, Dentistry, Medicine, Nursing, Pharmacy, Anyone who collects data on sexual orientation or gender identity

Category: Curriculum Development

Abstract:

PURPOSE: This session will describe the development of an asynchronous training to collect sexual orientation and gender identity (SOGI) data by COVID-19 case investigators and contact tracers (CICTs) in California.

BACKGROUND: Senate Bill 932 mandates collection and reporting of SOGI data for cases of communicable diseases, including COVID-19. Our previous research found that CICTs struggled to understand the rationale behind and were uncomfortable with asking SOGI questions. In response, our team created an asynchronous SOGI data training.

METHODS:

We reviewed session recordings, archived chats, and evaluation data from Virtual Training Academy CICT trainings to develop the following learning objectives: 1) increasing understanding of the rationale for asking SOGI questions and, 2) increasing comfort in asking the questions. We developed modules and a storyboard detailing training components (e.g., videos and quizzes). We collaborated with instructional designers to build the training in an e-learning platform.

RESULTS:

The 10 training modules include a review of terminology, health disparities and COVID-19 risk factors among lesbian, gay, bisexual, transgender, and queer (LGBTQ) populations, demonstrations and activities that explain the rationale for asking SOGI questions, and recommendations for navigating difficult situations. The evaluation includes a pre/post-test and a 6-week post-training survey.

DISCUSSION:

The impact of COVID-19 among LGBTQ populations is masked because of inadequate data collection. This training aims to help learners a) understand why we ask SOGI questions and b) improve their comfort-level asking SOGI questions, leading to better data collection and an increased understanding of how COVID-19 is impacting LGBTQ Californians.

REFLEXIVE CRITIQUE:

The development team included queer, trans and non-binary staff with topical expertise who reviewed evaluation feedback from the live training to create this asynchronous training. The content was reviewed by queer, trans and non-binary staff from the California Department of Public Health.

Abstract # 55

The Resident Experience with Psychological Safety During Interprofessional Critical Event Debriefings

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Area(s) abstract covers: Resident/fellow education, Faculty development, Medicine

Category: Curriculum Evaluation/Education Research

Abstract:

PURPOSE: This is a qualitative study of emergency medicine (EM) resident's experiences of interprofessional (IP) feedback during critical event debriefings to characterize factors that contribute to psychological safety. We highlight aspects that are unique to the clinical environment.

BACKGROUND: Resident physicians can benefit from IP feedback and shared learning during critical event debriefings. These encounters differ from more often studied simulated scenarios; they are complex, high-stakes, and may not have the advantage of an established teacher-learner relationship.

METHODS: Debriefings usually occur immediately after a critical event (i.e. cardiac arrest, unexpected patient decline, etc.) and are led by the EM resident. They are optional and can include nurses, techs, RTs, pharmacists, attendings, other residents, students, and EMS. The team reviews group performance and provides specific feedback to the resident leader using a standardized form.

The authors conducted semi-structured interviews with residents who led a debriefing in the prior three months to explore factors that contributed to their psychological safety. The interviews were transcribed, and the authors coded and generated themes inductively.

RESULTS: Eight out of fifteen residents who qualified participated. In contrast to debriefing after simulated encounters, competing clinical demands, a lack of dedicated space and time, and the perception of lack of team buy-in were significant barriers to debriefing after critical events. A resident's personal need for emotional processing also impeded their ability to engage in some cases.

DISCUSSION: Clinical debriefings pose unique challenges to the psychological safety of the learner. Educators should be aware of these differences to best capitalize on these IP learning conversations.

REFLECTIVE CRITIQUE: The abstract was edited to highlight differences between simulated and clinical debriefings. It also now includes a description of what the debriefings look like. These changes were made from feedback provided during the 2/8 ESCape session.

Abstract # 57

Lessons for Training and Supporting a Pandemic Response Workforce from a San Francisco Disaster Service Worker Exit Survey

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Area(s) abstract covers: Health professions student education, Masters student education, PhD/Post Doctoral education, Continuing education, Public Health departments and programs, emergency response programs

Category: Curriculum Evaluation/Education Research

Abstract:

PURPOSE

This purpose of this abstract is to understand the perspectives of San Francisco Department of Public Health (SFDPH) COVID-19 disaster service workers (DSWs) in order to inform pre-service, in-service, and post-service training and support needs of future cadres of pandemic response workers.

BACKGROUND

Since February 2020, SFDPH has activated diverse employees as DSWs to support COVID-19 response efforts. Based on growing evidence of the impact of the pandemic on frontline workers1, San Francisco DSWs were surveyed to better understand their experiences during and after their service.

METHODS

Current/former DSWs were invited to participate in an online survey from July 14–August 2, 2021. They were asked multiple choice and open-ended questions exploring professional and emotional impacts. Quantitative results were analyzed in SPSS.

RESULTS

Out of 1,112 invited DSWs, 302 responded. Respondents reported that they felt they made a difference (91%), improved job skills (82%) and developed new skills (68%). DSWs deemed skills in communication, project management, and drafting policy most important and noted a need for additional training in job skills/career development following service. Respondents reported mixed emotions and coping mechanisms throughout and after their service. DSWs that served for at least 6 months reported higher interest (65%) in changing careers/roles following service compared to peers that served shorter terms (26%).

DISCUSSION

Results reflect the huge personal and professional impact of the pandemic on the emergency workforce. As programs shift throughout stages of the pandemic, it is critical to provide tailored training and wellness opportunities that match the current and future needs of workers. This support will strengthen and retain the workforce and ensure a robust response for future emergencies.

REFLECTIVE CRITIQUE

The survey was not designed to detect differences in demographic variables, such as race, gender, and sexual orientation, but such disaggregation could be informative for the development of future training/wellness spaces.

References:

1. Kirzinger A, Kearney A, Hamel L, Brodie M. KFF/Washington Post Frontline Health Care Workers. 2021.

Abstract # 58

Developing a Blended Learning Structure to support the growing remote and multifaceted COVID-19 workforce in the state of California

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Area(s) abstract covers: Health professions student education, Continuing education, Faculty development
Category: Curriculum Development

Abstract:

PURPOSE

The following will discuss the transition of the Virtual Training Academy (VTA) Case Investigation and Contact Tracing (CICT) course from a synchronous format to an asynchronous and synchronous blended learning format.

BACKGROUND

Reports from California Department of Public Health (CDPH) indicated that VTA learners expressed interest in a flexible learning style, where the pace of the training could be tailored to each individual's schedule as many are balancing several roles.

METHODS

In May 2021, the VTA training team launched the plan to transition the courses to a blended learning structure. The team worked with instructional designers to build dynamic self-study modules that incorporated videos, knowledge checks, and interactive blocks. The team conducted three rounds of review that included stakeholders and finished with a high-level review for continuity and alignment with other VTA courses. We conducted a three month pilot of the CICT course from November to January. Trainee feedback was collected through surveys, which were administered following the Self-Study modules and after the conclusion of the course.

RESULTS

Following completion of the self-study modules, 92% of trainees agreed that the self-study modules were an effective way to learn the material, while 91% and 76% agreed that the modules were a convenient and enjoyable way to learn the material, respectively (n = 128). Following the live training, 95% of trainees indicated that the self-study modules adequately prepared them for the live sessions (n = 112).

DISCUSSION

The blended learning format gives trainees the flexibility to do the necessary preparation for those sessions at their own pace. Pilot survey feedback indicates that trainees found the self-study modules to be an effective and convenient way to learn.

Abstract # 60

Illuminating the Hidden Curriculum: Developing Near-Peer Curriculum To Help Students Prepare for OBGYN Clerkship

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Area(s) abstract covers: Health professions student education, Medicine
Category: Curriculum Development

Abstract:

PURPOSE: To assess student need for and implementation of a near-peer lecture during Obstetrics and Gynecology (OBGYN) clerkship orientation, aimed at helping students feel less nervous and more prepared for the rotation.

BACKGROUND: Medical students struggle with many aspects of the transition to clerkships, including adjusting to new norms, responsibilities, and expectations, and logistics.[1] The OBGYN clerkship presents unique clinical challenges and stressors for students.[2] Near-peer curricular programming is an effective tool to increase student self-efficacy, improve confidence, and increase preparedness for clinical rotations.[3–5]

METHODS: With input from former clerkship students, we created a pilot lecture to help students prepare for their rotation. In a pre-clerkship survey, we asked students what they were nervous about. After the lecture, we assessed student nervousness and self-efficacy. We performed a thematic analysis of the surveys to identify common themes. Students completed a reflective survey during the final week of the rotation, and we updated the lecture based on feedback.

RESULTS: Three blocks of students have participated in the lecture during OBGYN rotation orientation. Elements of the rotation for which students felt nervous included: participating in sensitive clinical encounters; uncertainty about their role during high stakes clinical scenarios; navigating the rotation as a male-presenting student; logistics and time pressures. About two thirds of the 29 students surveyed reported feeling less nervous about the rotation after the lecture. All 11 students who completed the post-rotation survey agreed the lecture should remain part of orientation curriculum.

DISCUSSION: OBGYN clerkship is a fast paced and sensitive clinical learning environment where students have identified some trepidation. A near-peer lecture may decrease students' nervousness and increase preparedness for the rotation.

REFLECTIVE CRITIQUE: We will continue to obtain student feedback and will modify content accordingly. We will work on increasing survey engagement.

References:

1.   O'Brien B, Cooke M, Irby DM. Perceptions and attributions of third-year student struggles in clerkships: do students and clerkship directors agree? Acad Med J Assoc Am Med Coll. 2007;82(10):970-978. doi:10.1097/ACM.0b013e31814a4fd5

2.   Johnson NR, Pelletier A, Chen X, Manning-Geist BL. Learning in a High-Stress Clinical Environment: Stressors Associated with Medical Students' Clerkship Training on Labor and Delivery. Teach Learn Med. 2019;31(4):385-392. doi:10.1080/10401334.2019.1575742

3.   Nelson CA, Frosch Z, Lapin J, Kogan JR. Facilitating the clerkship transition through near-peer-led "student reports." Med Educ. 2014;48(5):532-533. doi:10.1111/medu.12459

4.   Burrows A, Davies E, Atley J. A single near-peer lecture improves confidence when transitioning into clinical clerkships. Med Educ. 2020;54(5):453-454. doi:10.1111/medu.14121

Abstract # 61

Developing and Evaluating Virtual Town Halls to Support COVID-19 Case Investigation and Contact Tracing Program Managers in California

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Area(s) abstract covers: Health professions student education, Masters student education, PhD/Post Doctoral education, Continuing education, Public Health departments and programs, Health education

Category: Curriculum Evaluation/Education Research

Abstract:

PURPOSE

This session will describe the development and evaluation of virtual Town Halls for California's Case Investigation and Contact Tracing (CICT) program managers (PMs).

BACKGROUND

In response to the COVID-19 pandemic, local health jurisdictions (LHJs) across California rapidly mobilized to launch CICT programs. To provide workforce support and peer learning, Virtual Training Academy (VTA+), a UCSF/UCLA collaborative created to train California's COVID-19 workforce, partnered with California Department of Public Health (CDPH) to launch virtual town halls for CICT PMs.

METHODS

Town Halls were modeled after existing CDPH statewide webinars and are delivered at least once a month. Primary objectives are to rapidly share timely and proactive updates via subject matter experts (SMEs) and spotlight LHJs to share local best practices for peer learning.

To ensure that Town Halls respond to LHJ needs, topics are chosen via CICT PM polls and CDPH/VTA+ leadership priorities. Questions from PMs prior to/during each event inform SME presentations in real-time. Evaluation polls measure usefulness and impact on participant knowledge.

RESULTS

Since December 2020, 20 Town Halls have been held, with an average of 222 participants. Approximately 80% of poll respondents reported major or moderate improvement in knowledge as a result of the Town Halls, and the majority found the sessions very useful.

DISCUSSION

Throughout the shifting landscape of the pandemic, we have held relevant sessions that align with the needs of the moment. In periods of surge, we focused on prioritization strategies, while in declines, we highlighted opportunities for shifting CICT focus to quality improvement. Sessions have been proactive and drawn from local expertise. Overall, our evaluation indicates that participants have found these sessions to be very useful opportunities to increase their knowledge.

REFLECTIVE CRITIQUE

Participant feedback is used to inform all stages of town hall development-from topic selection to presentation content.

Abstract # 63

A Student and Faculty Collaborative Approach: Guidelines for Integrating Gender and Sex Inclusion into Medical Education Curriculum

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Area(s) abstract covers: Health professions student education, Resident/fellow education, Continuing education, Faculty development, Medicine

Category: Curriculum Development

Abstract:

PURPOSE: This innovation report describes the development of a gender-inclusive teaching framework for biomedical sciences within medical education. We share strategies to increase transgender, nonbinary, gender-expansive, and intersex (TGEI) patient representation, ensure scientific accuracy, and reduce microaggressions toward TGEI communities within medical education curricula.

BACKGROUND: Practical, detailed guidelines for medical educators regarding how to frame biomedical science information in a way that is scientifically accurate and inclusive to TGEI populations do not yet exist. Without such guidance, medical educators continue propagating an incomplete understanding of patient physiology and identity, and committing microaggressions against TGEI students.(1,2,3)

METHODS: UCSF SOM students collaborated with faculty directors of a first year medical education course to develop guidelines for TGEI patient representation and inclusion in the curriculum. Student feedback on the impact of the changes was measured using multiple choice and free-response questions to assess the impact of curricular changes on student learning.

RESULTS: Curricular changes were viewed positively by 64% of students. Faculty engagement was positive, with most faculty making changes to their curricular material. TGEI and LGBTQ students in the course found the curriculum in REGN to be more inclusive and to contain fewer microaggressions than previous courses.

DISCUSSION: We found that the faculty/student partnership iterative approach was effective in increasing student preparedness to care for TGEI patients, and in reducing microaggressions against TGEI students. We recommend that medical education institutions modify their curricula to improve gender affirming teaching across disciplines, and reduce microaggressions toward TGEI patients and students.

REFLECTIVE CRITIQUE: Authors participated in an ESCape session in October 2021 to gain feedback from UCSF faculty and made changes around clarity of language used in the paper, the format of the paper, and figures.

References:

1. de Vries E, Kathard H, Müller A. Debate: Why should gender-affirming health care be included in health science curricula? BMC Med Educ. 2020;20(1):51. doi:10.1186/s12909-020-1963-6   2. Butler K, Yak A, Veltman A. "Progress in Medicine Is Slower to Happen": Qualitative Insights Into How Trans and Gender Nonconforming Medical Students Navigate Cisnormative Medical Cultures at Canadian Training Programs. Acad Med J Assoc Am Med Coll. 2019;94(11):1757-1765. doi:10.1097/ACM.0000000000002933   3. Dimant OE, Cook TE, Greene RE, Radix AE. Experiences of Transgender and Gender Nonbinary Medical Students and Physicians. Transgender Health. 2019;4(1):209-216. doi:10.1089/trgh.2019.0021

Abstract # 64

Training California's Spanish-speaking public health workforce: Lessons learned from the COVID-19 Virtual Training Academy

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Area(s) abstract covers: Health professions student education, Masters student education, Resident/fellow education, Continuing education, Faculty development, Patient education

Category: Curriculum Development

Abstract:

PURPOSE: This session describes barriers and lessons learned translating live case investigation and contact tracing (CICT) skills-based remote trainings from English to Spanish

BACKGROUND: A contact tracing (CT) and case investigation (CI) workforce that is representative of the population served is key to containing and mitigating the impacts of the coronavirus (COVID-19) pandemic. In March 2020, the California Department of Public Health partnered with UCSF and UCLA to launch the Virtual Training Academy (VTA+). Initially, the trainings were available only in English, however, Spanish language sessions were developed and implemented in June 2020.

METHODS: Qualitative and Quantitative findings from pre-and post-surveys were collected and compared to determine the demographic data from a total of 7,458 learners who participated in the CI/CT sessions from June 2020 to June 2021. Of these, 1392 were Spanish speaking learners who had the option to participate in live practice sessions in Spanish. All materials used in the Spanish live practice sessions were translated, culturally tailored, and piloted.

RESULTS: Qualitative results showed that direct translation from English to Spanish was insufficient in training on health coaching techniques and COVID-19 information. Qualitative data also demonstrated that there was a positive impact on the confidence level of Spanish speakers that were going to conduct phone interviews after attending the practice sessions in Spanish.

DISCUSSION: Culturally tailoring content for Spanish speakers is challenging due to the many cultural backgrounds that comprise this population. Tailoring this content is critical to meeting the needs of a diverse public health workforce

REFLECTIVE CRITIQUE: The team leading the Spanish practice sessions collected feedback from learners during the group discussions and breakout rooms, which led to revisions and updates of course content over time. Feedback was also obtained from presenters and facilitators at the end of each training.

Abstract # 66

Lessons learned facilitating remote trainings for the California COVID-19 Case Investigator and Contact Tracer (CICT) workforce

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Area(s) abstract covers: Health professions student education, Masters student education, Resident/fellow education, Continuing education, Faculty development, Patient education

Category: Curriculum Development

Abstract:

PURPOSE: To describe the impact of facilitator development and approach on remote learning for the California COVID-19 Case Investigator and Contact Tracer (CICT) workforce.

BACKGROUND: The California Virtual Training Academy (VTA) is a collaboration between the California Department of Public Health (CDPH) and the Universities of California, San Francisco (UCSF), and Los Angeles (UCLA) formed to rapidly train, scale, and sustain California's COVID-19 CICT workforce. A key component of the VTA training model is skill development labs led by trained facilitators.

METHODS: Over 160 facilitators have been trained since the VTA launch to support the five core VTA+ courses. The skill development labs are key for participants to first learn a skill, view it in action, and then practice it in facilitated small groups. The facilitator: learner ratio ranges from one facilitator per 4-10 learners. Lessons learned were derived from a review of facilitator training activities, archived training session Zoom chats, and training evaluation data.

RESULTS: VTA facilitators engage in ongoing meetings as well as continuing education to build and maintain content knowledge and skills with the ever-shifting landscape of COVID-19. Facilitators heavily employ cultural humility, meet our learners where they're at, sandwich constructive feedback with praise, and use empathy to connect with learners. Evaluation data from our classic CICT course indicates that 99% of learners strongly agree/agree that trainers offered constructive feedback and that 96% of learners felt comfortable participating in activities.

DISCUSSION: Facilitation is both an art and a science, with challenges that arise in the training of a remote, largely redirected, emergency response workforce. Our facilitation teams expanded and contracted with the pandemic response, and we engaged in continuous quality improvement to learn how to best support our learners.

REFLECTIVE CRITIQUE: Learner and peer feedback are continually incorporated into facilitator training.

Abstract # 68

Evaluating a Pilot for a Left-handed Surgical Skills Curriculum Incorporating Near-Peers

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Area(s) abstract covers: Resident/fellow education, Faculty development

Category: Curriculum Evaluation/Education Research

Abstract:

PURPOSE: Evaluate a pilot curriculum for left-handed surgical trainees.

BACKGROUND:L-handed trainees must independently find a L-handed mentor[1] for advice on navigating challenges like using R-handed instruments and resolving intraoperative spatial conflicts with R-handed attendings[2]. To provide structured support for L-handed trainees, we added near-peer learning to our surgical skills curriculum.

METHODS: Four of five L-handed surgical interns watched a video on L-handed needle holder palming and participated in a L-handed table coached by a L-handed near-peer during four skills sessions. We evaluated curricular modifications using third-party written observations at the L-handed table; surgical skills assessment scores; survey feedback; and semi-structured interviews with four R-handed instructors (two faculty, two near-peer). Two coders identified themes from the qualitative data.

RESULTS: Observations: The L-handed near-peer provided strategies for technical skills and communication, including palming L-handed, optimizing intraoperative suturing direction, and announcing their L-handedness. Assessment: L-handers scored similarly to the intern cohort average. Feedback: Two L-handed interns completed the survey, rating L-handed near-peer instruction as slightly or very useful; both recommended L-handed table continuation. Interviews: R-handed instructors noted teaching challenges like instrument manipulation, spatial conflicts between opposite-handed surgeons; and limited interactions with L-handed trainees. Proposed solutions included a reference guide with techniques for L-handed instrument manipulation and intraoperative spatial modifications; resident self-advocacy; and increased awareness in the surgical community.

DISCUSSION: Using near-peer learning and study insights, we can develop a curriculum for both faculty and residents that will increase support for L-handed trainees and improve the learning environment.

REFLECTIVE CRITIQUE: L-handed interns' survey responses and faculty suggestions will guide future iterations of the L-handed surgical curriculum.

References:

[1] Prasad NK, Kvasnovsky C, Wise ES, Kavic SM. The Right Way to Teach Left-Handed Residents: Strategies for Training by Right Handers. J Surg Educ. 2018;75(2):271-277. doi:10.1016/j.jsurg.2017.07.004 [2] Anderson M, Carballo E, Hughes D, Behrer C, Reddy RM. Challenges training left-handed surgeons. Am J Surg. 2017;214(3):554-557. doi:10.1016/j.amjsurg.2016.12.011

Abstract # 69

Implementing a Pediatric Resident Curriculum on ACEs, Toxic Stress, and Resilience

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Area(s) abstract covers: Resident/fellow education
Category: Curriculum Development

Abstract:

PURPOSE:

This project aims to 1) assess barriers to implementing the PEARLS screen in our pediatric resident continuity clinic, 2) assess potential resident knowledge gaps, and 3) develop curriculum tailored to pediatric residents to build competencies in counseling on adverse childhood experiences (ACEs), toxic stress, and resilience.

BACKGROUND:

Together with the Center for Youth Wellness in San Francisco, clinicians at UCSF Benioff Children's Hospital Oakland developed the PEARLS screen (Pediatric ACEs and Related Life Events Screener). Beginning in 2020, PEARLS became a billable tool for MediCal physicians in California to screen for adverse childhood experiences (ACEs).

METHODS:

We collected qualitative data by conducting focus groups with residents. Questions discussed included knowledge of ACEs science, comfort with screening for ACEs, and desired education to support screening initiatives. We used this feedback to design a 2.5-hour resident led interactive seminar. The seminar was piloted in Spring and Fall of 2021 with residents of all training levels. Residents completed a survey before and after participating in the seminar.

RESULTS:

Themes from focus groups included desire for "scripts" to use in anticipatory guidance, role-play opportunities to discuss results, and education on available resources for positive screens. To date, 18 residents participated in the resulting seminar. Following the seminar, 18/18 (100%) of participants reported feeling somewhat, very, or extremely comfortable with anticipatory guidance on toxic stress, versus 7/18 (39%) before. 17/18 (94%) reported feeling somewhat, very, or extremely comfortable with anticipatory guidance on resilience, versus 8/18 (44%) before.

DISCUSSION:

As ACEs screening becomes a routine part of pediatrics, pediatric residents represent an essential workforce to train in identifying and treating ACEs and associated health conditions. Work on our curriculum is ongoing, however preliminary survey data suggests that a resident led educational seminar may be an effective means of increasing resident comfort in screening for ACEs.

REFLECTIVE CRITIQUE:

We modified the curriculum in an iterative manner based on each session's survey responses.

Abstract # 72

URM Mentorship Service

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Area(s) abstract covers: Medicine
Category: Curriculum Development

Abstract:

PURPOSE: Develop a novel online mentorship program for URM students.

BACKGROUND: Latinx and Black students have been historically underrepresented among medical school applicants and matriculants relative to US population. Leveraging collaboration between two prominent national organizations dedicated to matriculation of these students into medical school, Latino Medical Student Association (LMSA) and the Student National Medical Association (SNMA), we developed a novel online mentorship program providing individual virtual appointments with diverse medical student mentors. Mentorship programs are effective imperatives; yet, labor intensive and inaccessible for some. This model can be a tool to help equitably reach students.

METHODS: Mentors were recruited from 10 medical schools. Mentorship topics included: general pre-medical advice, AMCAS assistance, practice interviews, or written narrative review. A 5-point Likert scale assessed student confidence, comfort, satisfaction, and sense of preparedness. A qualitative component queried thematic areas to be included in future sessions. We plan to identify qualitative response themes to elicit deeper understanding of specific concepts that led to success.

RESULTS: In one month, 734 appointments were completed out of 846 booked (89%) nationwide. 498 unique participants were reached; 20% scheduled more than one appointment. Appointments booked were 55% general pre-medical advice, 22% AMCAS assistance and 20% practice interviews. 90% of respondents (n=80) strongly agreed to feeling more prepared and confident in applying and would recommend to other URM students.

DISCUSSION: The virtual nature of the program allowed connection to a high volume of often under-resourced mentees across different time zones.

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Abstract # 73

Evaluation of aTrauma-Informed Care Curriculum for Pediatric Residents

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Area(s) abstract covers: Resident/fellow education, Faculty development, Medicine,

Category: Curriculum Evaluation/Education Research

Abstract:

PURPOSE: The purpose of our project is to develop and evaluate a curriculum to teach Pediatrics Residents principles and practices of Trauma-Informed Care (TIC).

BACKGROUND: Trauma, particularly Adverse Childhood Experiences (ACEs), are prevalent in the US population (1). Undergraduate and graduate medical training programs are increasingly recognized the need to incorporate principles of Trauma-Informed Care (TIC) into medical education (2-8).

METHODS: We created a four-part TIC curriculum for UCSF Pediatric residents taught in a cross-disciplinary manner by physicians, psychologists, and social workers. Trainees complete a pre and post survey on self-reported knowledge, skills, and attitudes regarding trauma informed care utilizing a previously validated scale (9). Residents also rate satisfaction with the sessions and list ways in which they envision implementing the teaching.

RESULTS: Six months following implementation, preliminary results of pre and post assessment surveys (n=12) show average gain in self-reported TIC knowledge and attitudes of +0.13 on a 5 point scale, and average self-reported TIC skill gain of +1.39 on a 5 point scale.   Overall resident satisfaction with the sessions was high: average scores on a 5 point scale ranged from 4.3 to 4.8. Residents highlighted multiple themes in qualitative descriptions of intended changes including building trust, considering a history of trauma, and being more mindful of where to chart sensitive information.

DISCUSSION: We created a four-part TIC training aimed at Pediatric residents that includes multi-disciplinary teachers. Preliminary data demonstrates modest improvement in self-assessed knowledge and attitudes with more substantial changes around self-reported skillfulness in providing trauma-informed care. Residents report high satisfaction with the quality of the didactics and accompanying materials.

REFLECTIVE CRITIQUE: This TIC curriculum development process led to the creation of a practical, multi-faceted training. Future studies would aim to capture the impact of such training on observed behaviors in trainees and ideally patient satisfaction and outcomes.

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Abstract # 75

Improv-Ing Teaching: An Online Improvisational Theater Pilot Program to Teach Child and Adolescent Psychiatry Clinical Skills

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Area(s) abstract covers: Resident/fellow education, Medicine
Category: Curriculum Development

Abstract:

Purpose

Development of a program.

Background

Access to youth mental healthcare is scarce nationwide. Teaching medical trainees psychiatry clinical skills can address this shortage. Such skills are traditionally taught through direct observation, which is limited by the shortage of clinical educational opportunities. Medical improv overcomes this limitation by coaching trainees to manage challenging clinical scenarios in a low-stake environment. Online improv can supplement traditional teaching in a clinical setting to impart mental health assessment and treatment skills.

Methods

We created an online improv program and evaluated its utility over a one-year period. Each improv session is 45 minutes long with preset prompts and scenarios that allows residents to spontaneously and collaboratively generate dialogues in real-time. 27 pediatric residents and 7 psychiatry residents each participated in one improv session, and completed pre- and post-session surveys encompassing self-evaluation of mental health competencies and efficacy of the session to improve their clinical acumen and confidence.

Results

After one session, pediatric residents reported significant improvements in confidence with interviewing skills by 25.3% with family, 20.3% with children, 21.4% with both, and 12.7% on difficult topics. They also reported 27% improvement in confidence with assessment and treatment planning. Psychiatry residents perceived no significant benefit, likely reflecting higher pre-test scores and low participant numbers.

Discussion

We implemented an online improv program and demonstrated its efficacy as a teaching modality to impart child psychiatric interview techniques. Further improvements include expanding trainee recruitment, initiating sequential sessions to consolidate skills, and integrating objective measurements of clinical skills.

Reflective Critique

Feedback was collected via surveys, direct resident interviews and UCSF ESCape Conference. We revised the title, clarified the improv model in methods, and are applying for an IRB to expand the current project.

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Abstract # 76

Development and Implementation of a Pulmonary-Focused Active Learning Curriculum

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Area(s) abstract covers: Health professions student education, Resident/fellow education,
Category: Curriculum Evaluation/Education Research

Abstract:

Purpose: Development and implementation of online case-based learning modules in Pediatric Pulmonary Medicine to standardize and enhance formal education and pulmonary knowledge of trainees during their elective.

Background: During the pediatric pulmonary rotation, the most common feedback received from trainees was that the clinical experience met their needs, however they wanted more formal education. Given that didactic teaching is limited by clinical demands and varies per educator, online modules offered an opportunity to overcome barriers to educational delivery and can be used as formal teaching tools1. Studies have shown the benefits of e-learning in medical education2,3, including being asynchronous, which is preferred by learners and is also found to be more effective4.

Methods: Four interactive case-based learning modules on asthma, chronic cough, tracheostomy and obstructive sleep apnea were created. The modules incorporate videos with experts, images, and multiple-choice questions to enhance learning. The trainee's progress is evaluated using pre- and post-course questions designed to assess their knowledge and decision making skills. The modules were implemented from Dec 2021 – March 2022.

Results: Based on preliminary data, there is an overall improvement seen in the post-test scores across all four modules. For the OSA and tracheostomy module, 3 trainees completed it with an average improvement of 13% and 26% respectively. For the Asthma module, 7 trainees completed it with an average improvement of 15%. For the chronic cough module, 6 trainees completed it with an average improvement of 10%. Trainees reported that the modules supplemented and increased their knowledge base.

Discussion: Knowledge about managing common pulmonary conditions is critical for general pediatricians. These modules are desired by trainees and effective in improving knowledge and confidence.

Reflective critique: We will continue to elicit feedback regarding these modules through informal comments and assessing pre- and post-test responses from trainees rotating through the elective.

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Abstract # 77

Advancing Medical Spanish Education: A Multifaceted Approach to Addressing Gaps in Curricula at UCSF

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Area(s) abstract covers: Health professions student education, Dentistry, Medicine, Nursing, Pharmacy, Physical Therapy

Category: Curriculum Development

Abstract:

PURPOSE: Two Medical Spanish (MS) initiatives were developed to address gaps in health science education and improve proficiency.

BACKGROUND: Spanish-speaking physicians continue to be under-represented in medicine, while the interest in MS opportunities at UCSF remains high. In 2018, approx 32% preclinical UCSF medical students were interested in MS. We implemented and evaluated two interventions to bridge the need for formalized MS instruction and longitudinal practice, a faculty-led immersive course (FIC) and a longitudinal MS Lunch Talk (LT) .

METHODS: With input from multiple stakeholders we adapted MS FIC and LT interventions. The FIC consisted of a 2 week course focused on diagnosis, prognosis, and treatment targeted to clinical medical students who reported at least fair levels of fluency. The LT consisted of peer-led sessions every 2 weeks offered to students regardless of profession or proficiency. All learners completed a baseline survey measuring fluency and goals, and afterward, a feedback survey. Data collection is ongoing. R

ESULTS:84 learners participated in the MS initiatives; 28 and 56 learners in the FIC and the LT sessions, respectively. Majority of FIC learners identified as White (39%) or multiracial (21%). Majority of LT learners identified as Latinx (34%) or Asian (27%). At baseline, MS proficiency ranged from none to native. Feedback for both initiatives has been positive, with 80% strongly agreeing that the FIC course improved their MS knowledge and 95% strongly agreeing that the LT sessions taught them new MS vocabulary.

DISCUSSION: Across the years, interest in MS initiatives has remained high. We speculate that a single course may not meet the needs of UCSF students with varying proficiencies. The success of both initiatives highlights the need to support MS opportunities for the betterment of students and, ultimately, their patients.

REFLECTIVE CRITIQUE: Curriculum is developed interprofessionally with students and faculty. Feedback is collected after each session, with learner feedback continuously informing the course structure.

Abstract # 07

Building faculty educator skills in equity and anti-racism: A realist program evaluation

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Area(s) abstract covers: Faculty development
Category: Curriculum Evaluation/Education Research

Abstract:

Purpose: To evaluate the UCSF Teach for Equity and Inclusion certificate.

Background: Academic medical institutions must reduce inequities in the learning environment and build a culture that centers all learners. A key step is increasing faculty awareness of structural inequities and capacity to advance equity in medical education. The UCSF Center for Faculty Educators offers a faculty development certificate in Teaching for Equity and Inclusion (TEI)[1]. Based in critical consciousness theory[2], the TEI is open to all UCSF educators and consists of 1 pre-requisite, 7 required and 1 selective workshop. Using a realist evaluation framework[3], we sought to understand the contexts where faculty implement TEI skills and the mechanisms underlying its impact.

Methods: We conducted open-ended 1:1 interviews with faculty who have completed at least 5 TEI workshops. We used a general inductive approach to extract themes. One team member conducted all interviews, and both independently coded transcripts and jointly reconciled discrepancies.

Results: We have interviewed 8 faculty and plan to interview at least 4 more. Preliminarily, we identified 3 key mechanisms underlying the TEI's impact: creating a community of practice; providing concrete and practical skills educators can adapt and implement; and increasing educators' understanding of learners and their environments. Other relevant mechanisms include: providing opportunities for self-reflection; validating existing teaching practices; and explicitly naming equity as a goal in educational activities.

Discussion: The UCSF TEI has positively impacted faculty educators, empowering them with tools to advance equity. The mechanisms identified can be applied to future faculty development efforts to increase equity in medical education.

Reflective Critique: Based on feedback from the Equity and Justice in Education works in progress, we will increase our focus on who enrolls in the TEI and the contexts where faculty implement equity skills.

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Abstract # 20

A Digital Education Tool for Social Resources in the Emergency Department

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Area(s) abstract covers: Resident/fellow education, Continuing education, Medicine

Category: Curriculum Evaluation/Education Research

Abstract:

PURPOSE: We aimed to develop and evaluate a digital educational tool for increasing emergency physician knowledge of social resources. BACKGROUND: Recognizing and addressing a patient's social needs is an important component of emergency medicine (EM)[1]. Medical curricula increasingly include frameworks for structural and social determinants of health, yet opportunity remains for educational interventions that help translate these principles into action[2-4]. METHODS: We iteratively designed and built an educational tool called "Discharge Navigator" (https://edrive.ucsf.edu/dcnav). Integrating patient demographic and clinical inputs, the tool recommends customized patient resources and provides the user with action items, pandemic restrictions, and patient handouts for each. In a ten-week period after launch in 2021, we surveyed EM clinicians at San Francisco General Hospital to assess the tool's impact on their domain knowledge. RESULTS: Up to 40% of on-site clinicians used the tool weekly. 53 clinicians completed the survey (rate of 46.1%). The tool significantly increased: self-rated knowledge of homelessness resources (32% pre to 74% post, $p<0.0001$) and substance use resources (17% to 65%, $p<0.0001$); confidence in accessing resources (22% to 74%, $p<0.0001$); knowledge of eligibility criteria (14% to 80%, $p<0.0001$); and ability to refer patients always or most of the time (12% to 45%, $p<0.0001$). 55% of respondents stated they used the tool one or more times per week, and 87% plan on using it more frequently. The mean likelihood to recommend the tool to other clinicians was 7.8 out of 10. DISCUSSION: Our educational tool significantly increased clinician knowledge and confidence in referring patients to relevant community resources. Our open-source design process and tool can be replicated in other educational settings. REFLECTIVE CRITIQUE: As part of our ongoing iterative design process, we continue to incorporate feedback from our end-users to make the tool more intuitive and directly address their perceived knowledge gaps with new content modules.

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Abstract # 35

Motivational theory in action: Impact of an asynchronous FCM faculty development course to volunteer clinical faculty at UCSF and UCD

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Area(s) abstract covers: Faculty development

Category: Curriculum Evaluation/Education Research

Abstract:

Purpose: We used the motivational theory of Expectancy-Value to examine if a module-based, asynchronous faculty development course improved motivation to teach among volunteer clinical faculty in family medicine clerkships at UCSF and UC Davis.

Background: Family medicine clerkships rely heavily on community-based preceptors, but their recruitment and retention can be challenging [1,3,4]. The expectancy-value theory identifies 2 key motivators of behavior—the expectancy of success and the task value [2]. We aimed to increase both expectancy of success and task value through improved knowledge, skills and confidence after completion of a faculty development course.

Methods: We based the content of our course on a needs assessment including prior student feedback, school of medicine requirements and preceptor-identified gaps. The course included four modules: feedback basics, feedback in the clinical environment, general DEI principles and microaggressions. We used a pre- and post-survey to evaluate knowledge and skills attainment, as well as motivational factors such as confidence and social inclusion.

Results: At UCSF, there was improvement in knowledge and skill attainment (increases ranging from 15-52%, n=46). Preceptors felt that the course increased their confidence (78%), made them feel more included as an educator (82%), and increased overall motivation to teach (72%). UC Davis is still in the process of collecting their post-survey data.

Discussion: In line with Expectancy-Value Theory, our study found that increasing a preceptor's confidence and inclusion in an educator community through participation in faculty development increased motivation. We also plan to evaluate clerkship-specific outcomes, including number of observations, preceptor evaluation scores, as well as preceptor attrition.

Reflective Critique: We will illicit feedback from our participants on the course and use this for iterative improvements.

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Abstract # 62

Longitudinal 3-year evaluation of the impact of the UC San Francisco Women in Leadership Development (WILD) program

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Area(s) abstract covers: Resident/fellow education, Medicine
Category: Curriculum Evaluation/Education Research

Abstract:

Background: Despite women comprising the majority of medical students, gender disparities remain at the highest levels of leadership in academic medicine. No leadership development courses focused on women graduate medical education (GME) trainees existed. Accordingly, a yearlong curriculum consisting of monthly seminars was created, with learning objectives guided by the literature and internal needs assessment, including public speaking, mentorship, work-life integration, and more. Now in its fourth year, WILD helps trainees develop leadership skills and empowerment in leadership practices.

Methods: Program evaluation following 3 years of WILD programming was performed using a mixed-methods approach. Quantitative survey data assessing participant satisfaction and fulfillment of learning objectives were collected at each event. Qualitative focus groups were conducted using structured interviews and analyzed using a summative content analysis approach.

Results: 291 trainees from 41 specialty and subspecialty departments attended at least one of seventeen sessions from 2018-2021. Surveys demonstrated acceptability and satisfaction of all WILD sessions, and session-specific learning objectives were met at 100% of sessions. Analysis of focus groups highlighted positive impact in the domains of community-building, leadership skills, mentorship, and empowerment.

Discussion: The COVID-19 pandemic has exacerbated barriers to successful career advancement for women in medicine. Despite challenging trainee schedules, WILD sessions were well-attended, highlighting the desire to engage in leadership development content. This work has demonstrated WILD's longevity, sustainability, acceptability, effectiveness, and impact for women trainees at UCSF during this challenging period. The curriculum's modular format allows for responsiveness to evolving needs, and make it easily transferrable such that this work may serve as a blueprint to build support for women trainees at other institutions.

Reflective Critique: Our methodology allowed for rapid assessment and evolution of the curriculum in response to trainee feedback, which informed transition to virtual format and provision of content specific to current events.

Abstract # 65

A national study of the impact of the elimination of Step 2 CS on clinical skills examinations at medical schools

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Area(s) abstract covers: Health professions student education, Medicine

Category: Curriculum Evaluation/Education Research

Abstract:

PURPOSE: This study explores future directions of medical school comprehensive clinical skills (CCS) exams after the discontinuation of the USMLE Step 2 Clinical Skills licensing exam (Step 2 CS).

BACKGROUND: CCS exams using standardized patients are a widely used tool to assess multiple physician competencies (1–4). However, these exams are resource-intensive (5-6). With the discontinuation of Step 2 CS in 2021, it is not known how medical schools will change their approaches to clinical skills assessment. We explored school responses to this change using the program sustainability framework (7).

METHODS: We conducted a cross-sectional descriptive survey study of medical school curriculum deans at 150 LCME-accredited U.S. medical schools in Fall, 2021. The 30-question survey included respondent demographics, questions mapped to the sustainability framework, and two open-ended items on challenges and future directions (8). We used descriptive statistics to characterize responses, and Fisher exact test or Wilcoxon/two-sample t test procedures, as appropriate. We conducted content analysis to identify themes in the open-ended responses (9).

RESULTS: Educators at 75 of 150 institutions (50%) responded. The majority (n=63, 84%) reported conducting a CCS exam. Factors facilitating sustainability include a strong sense of purpose (84% endorsed the exam assesses readiness for graduation); sufficient funding to continue the exam (87% of respondents); and the belief that clinical skills assessment in medical school is now more important after Step 2 CS discontinuation (87% of respondents). Challenges to sustainability include organizational capacity and limited inter-institutional collaboration.

DISCUSSION: Educators remain committed to the purpose of CCS exams. Adapting to changed licensing requirements while sustaining clinical skills exams enables innovation and improvement in assessment of clinical competence.

REFLECTIVE CRITIQUE: We sought feedback from education leaders on the survey instrument, piloted the survey at three schools, and revised survey items accordingly.

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Abstract # 70

Constructed response short answer questions on medical student exams: are they feasible and reliable?

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Abstract:

Purpose: The objective of this study was to examine the feasibility of utilizing constructed response short-answer questions (CR-SAQs) from the perspectives of faculty and students across three institutions and to establish the inter-rater reliability of scoring CR-SAQs.

Background: CR-SAQs on summative exams carry benefits for medical students and educators[1,2]. However, the perceived burden of grading CR-SAQs may impede their use in medical education[3].

Methods: Question writers (N=5) from three US medical schools met virtually to create a set of CR-SAQs to be used at each school on a summative exam in the first year of medical school. After the exams were administered, the study questions were scored by faculty content experts (N=7), faculty non-content experts (N=6), and fourth-year medical students (N=7). Cohen's weighted kappa (κw) was used to evaluate inter-rater reliability between the content expert and other scorers. Structured interviews were performed with question writers. An open-ended question survey was administered to scorers. Content analysis was performed on the qualitative data.

Results: Inter-rater reliability between content expert and student scorers was fair/moderate (κw=0.34-0.53 holistic rubrics) or substantial (κw=0.67-0.76 analytic rubric), but lower between content and non-content experts (κw=0.18-0.29 holistic rubrics; κw=0.59-0.66 analytic rubric). All question writers participated in the interviews and twelve faculty and student scorers (N=12/20, 60%) completed the survey. Working with a team, getting feedback from others, and carefully wording question were recommended for writing CR-SAQs. For scoring CR-SAQs, reading a sample of responses first, adjusting the rubric, creating notes, and setting aside sufficient time were recommended.

Discussion: CR-SAQs can be reliably scored using an analytic rubric by faculty or senior medical students who do not have content expertise, which may relieve the faculty burden associated with grading CR-SAQs. Our findings also show that it is feasible to include CR-SAQs in summative exams.

Reflective Critique: This study is in review with Teaching and Learning in Medicine; we are responding to extensive feedback to improve the framing of the study and to address the robustness of the findings.

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