



AAMC

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2020 WGEA Regional Meeting

Abstract Compendium

Association of
American Medical Colleges

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Message from WGEA Chair

On behalf of the Western Group on Educational Affairs (WGEA) Steering Committee, I welcome you to the WGEA 2020 Annual Spring Meeting, *Finding Common Ground*.

We will highlight the following themes in medical education that contribute to success along the full spectrum of the student and educator experience.

- Finding Common Ground:
 - Saying "yes and!" to diverse perspectives and equitable practices
- Attune:
 - Being mindful of others, yourself and the situation
- Affirm:
 - Validating others and yourself
- Advance:
 - Creating a collective story that enriches others and yourself through the exchange of ideas



We are honored and excited to welcome three illustrious keynote speakers: **Belinda Fu, MD:** “*Attune, Affirm, Advance! A new framework for cultivating creativity and connections in medicine*”, **Clarence H. Braddock III, MD, MPH, MACP:** “*Attune, Affirm, Advance - and Advocate! - Physicians and civil engagement*”, and **Suzanne M. Allen, MD, MPH:** “*Finding Common Ground: Five States, Six Campuses, One School*”.

We are very appreciative to the University of Washington, School of Medicine and WWAMI for generously supporting and hosting the 2020 WGEA Annual Spring meeting, and specifically to conference co-Chairs, Drs. Lynne Robins & Joshua Jauregui for their tireless work to make this meeting happen! We also want to recognize those who reviewed abstracts and the wonderful Program Planning Committee, which supported all the work in making this meeting a reality.

-Paul Gordon

Message from WGEA Conference/ Host Chairs

We are excited to share this WGEA 2020 Conference Compendium. We want to thank you for all the good work you have done, and continue to do, for medical education during this challenging time during the COVID-19 pandemic. As Conference Co-Chairs, we were looking forward to seeing all of you at Asilomar in March to engage in rich discussion and learning about topics related to our theme: Finding Common Ground: Attune, Affirm, Advance (AAA). The theme borrows language and principles from improv theater to provide a means for discussing the attitudes and skills that allow collaborative exchange and advancement. Dr. Belinda Fu, MD, (Faculty, Swedish Family Medicine Residency-First Hill; Assistant Professor, Department of Family Medicine, University of Washington) our opening plenary speaker, used this AAA framework to describe a new model for cultivating creativity and connections in medicine. Dr. Clarence Braddock, III, MD, MPH, MACP Vice Dean for Education, David Geffen School of Medicine, UCLA Chief Medical



Education Office, UCLA Health Professor of Medicine, David Geffen School of Medicine, UCLA was scheduled to present a plenary introducing a fourth “A” – *advocacy* by exploring physician advocacy and civil engagement; and Dr. Suzanne M. Allen, MD, MPH, Vice Dean for Academic, Rural and Regional Affairs, University of Washington School of Medicine was going to share her views on finding common ground across UWSOM’s five- states, six campus medical school.

We invited you to build on the improv theme, saying “yes and” to sharing experiences and programs that reflected your commitment to attunement, affirmation and advancement within and among social, cultural, and ideological communities and along the continuum of medical education. This compendium celebrates the many ways that you responded – by submitting abstracts and posters describing how WGEA schools are working toward “Finding Common Ground” within and across communities.

Sincerely,
Lynne Robins PhD and Joshua Jauregui MD

Special Thanks and Acknowledgments

We would like to extend a special thank you to Tim Baker, MD and his Reno team for responding to all our requests for help and guidance in preparing for WGEA 2020. They set a high bar for conference implementation (from website set-up to staffing on site) – and were generous with materials and advice to help us meet the challenge of meeting that bar. Thanks also to Jorie Colbert-Getz, PhD who guided us through the process of session selection, and to Christopher McKnight and Stephen McKenzie, our AAMC contacts who were always ready to answer our questions

WGEA Awards

We were not able to have the in-person meeting and were unable to make our usual rewards for presentations and posters.

The WGEA Steering Committee chose the winner from the Western Region for the Brownie Anderson Award.

In the spirit of M. Brownell "Brownie" Anderson, the GEA wishes to recognize early-career medical educators who have demonstrated enthusiasm, commitment, and creativity in the field of medical education across the continuum. This award identifies and supports emerging educators on their career trajectory in medical education and serves as an opportunity to celebrate their potential and talent.

The winner from the Western Region is Dr. Leslie Chung-Lei Sheu, Assistant Clinical Professor, University of California, San Francisco, School of Medicine. Her nomination letter concluded:

“Dr. Sheu is a is a spectacular educator and scholar, a rising star in medical education and there is no doubt as to her commitment to educating the next generation of physicians and mentoring the next generation of leaders in medical education. Despite being relatively early in her career, she has already made important contributions to advance the field of medical education. We believe that she embodies the spirit of M. Brownell “Brownie” Anderson and is most deserving of this award.”



Innovation Abstracts

Teaching Digital Health Across the Continuum: Opportunities and Challenges of Designing an Online Course for Medical Students, Residents and Physicians in Practice

Submission Type: Innovation Abstract

Accepted as: Poster

Authors:

Ronan Hallowell, Keck School of Medicine, University of Southern California

Daniel Novak, Keck School of Medicine of the University of Southern California

Abstract Body:

Objective or purpose of innovation:

There is a dearth of materials to educate students, residents and physicians in practice about how to incorporate the affordances of digital health into how they approach patient care.

Background and/or theoretical framework and importance to the field:

Patients are looking to play an active role in managing their health, and consumer digital technologies are putting health information into the palms of their hands. However, many patients do not have the digital health literacy to make sense of this information on their own. It is more important than ever for physicians to work with patients to help them understand and interpret their digital health information.

Design: Instructional methods and materials used:

Using a constructivist, adult learning, and activity theory^{1,2,3} approach we developed three, one-hour online modules that provided an introduction to key issues such as digital health literacy and patient centered digital health discourse. With the support of an AMA grant, the investigators have developed a self-paced online course with the purpose of being able to serve learners across the UME-GME-CME continuum.

Outcomes:

We conducted three separate focus groups (students, residents, and physicians) on the first module of the online course in the fall of 2019, as well as a post-intervention satisfaction survey. Although each group found elements of the course useful, each group had content, modality, and pedagogical preferences that were mediated by their career stage. Students requested more interactive components, residents requested more practical summaries of the content, and physicians requested more case studies to help them apply the content.

Feasibility and transferability for adoption:

Participants indicated that the project delivers an excellent introduction to the topic in an accessible format. The main limitation is the difficulty of providing learners level-specific content when designing a single experience across the continuum.

References:

1. Kaptelinin V & Nardi, BA. Acting with technology: Activity theory and interaction design. Cambridge, MA: MIT Press; 2009.
2. Jonassen DH, Rohrer-Murphy L. Activity theory as a framework for designing constructivist learning environments. Educational technology research and development. 1999;47(1):61-79.
3. Merriam SB. Andragogy and self-directed learning: Pillars of adult learning theory. New directions for adult and continuing education. 2001;(89):3-14

For more information about this abstract please contact: [\[hallowel@usc.edu\]](mailto:hallowel@usc.edu)

“Is anyone learning?”: Applying a continuous quality improvement framework to collaboratively improve the clinical learning environment from UME, GME, and CME perspectives

Submission Type: Innovation Abstract

Accepted as: Oral Presentation

Authors:

Zoe Lyon, University of California, San Francisco, School of Medicine
Rebecca Berman, University of California, San Francisco, School of Medicine
Sirisha Narayana, University of California, San Francisco, School of Medicine
Patricia Cornett, University of California, San Francisco, School of Medicine
Bridget O'Brien, University of California, San Francisco, School of Medicine
Cindy Lai, University of California, San Francisco

Abstract Body:

Objective or purpose of innovation:

We describe the initial phases of a continuous quality improvement (CQI) process to collaboratively improve the learning environment (LE) on rounds in internal medicine.

Background and/or theoretical framework and importance to the field:

Inpatient “work” rounds are intentionally designed to blend clinical care and learning. However, multiple data sources identify rounds as a stressful LE in which learners express high dissatisfaction with rounds’ educational value. When such problems arise, UME/GME/CME stakeholders tend to work in silos to improve education rather than considering how they might address the problem holistically, as one educational community. A more holistic and collaborative approach can ensure the needs of all stakeholders are considered when designing solutions.

Design: Instructional methods and materials used:

In response to feedback about learning on rounds, we conducted a multi-phased effort to improve the LE by applying a CQI process (“A3”) traditionally used for healthcare delivery. This included: 1) creation of a departmental UME-GME-CME leaders’ group to improve the LE, including clerkship leadership to ensure student representation; 2) observation of rounds, and 3) stakeholder meetings to conduct gap analyses and prioritized solutions using Lean Six Sigma tools.

Outcomes:

We focused on gaps and solutions under the educational community’s purview. Gaps included variability of team rounding/teaching practices, lack of standardized oral presentations, students’ perceptions of having outdated patient information and feeling “redundant” on the team, and perception of insufficient learning and pressure with presentations. We identified solutions of varying payoff-effort levels (e.g., restructuring presentations, providing one-line contextual summaries, copying students on pages). The next phase will be selection of solutions and pilot implementation.

Feasibility and transferability for adoption:

Strengths include alignment of UME/GME/CME goals in improving the LE, and application of a

healthcare CQI method to an educational problem. Limitations include the difficulty of identifying feasible solutions relevant to all stakeholders.

References:

- Gruppen LD, Irby DM, Durning SJ, Maggio LA. Conceptualizing learning environments in the health professions. *Acad Med.* 2019 Jul;94(7):969-74.
- Jaffe RC, Bergin CR, Loo LK, Singh S, Uthlaut B, Glod SA, et al. Nested domains: a global conceptual model for optimizing the clinical learning environment. *Am J Med.* 2019 Jul;132(7):886-91.
- O'Brien BC, Reed DA. Exploring the intersections of education and healthcare delivery using a clinical learning environment framework. *J Gen Intern Med.* 2019 May;34(5):654-6.
- Stratton TD. Legitimizing continuous quality improvement (CQI): navigating rationality in undergraduate medical education. *J Gen Intern Med.* 2019 May;34(5):758-61.
- Van Schaik, SM, Reeves SA, Headrick LA. Exemplary learning environments for the health professions: a vision. *Acad Med.* 2019 Jul;94(7):975-82.

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“Ready or Not . . . Here We Come”: Development of a Simulation-Based, Specialty Cohorted Transition to Residency Course

Submission Type: Innovation Abstract

Accepted as: Oral Presentation

Authors:

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Amanda Phares, University of California, Davis, School of Medicine

Zachary Chaffin, University of California, Davis, School of Medicine

Jennifer Plant, University of California, Davis, School of Medicine

Abstract Body:

Objective or purpose of innovation:

To provide practical, hands-on learning of the knowledge, skills, and attitudes students need in the first six months of internship

Background and/or theoretical framework and importance to the field:

Medical students report feeling unprepared to succeed as residents¹, and program directors note that new interns lack core clinical skills². Many medical schools offer transition to residency courses to address these issues.

Design: Instructional methods and materials used:

We designed and implemented a two-week Transition to Residency course for all graduating medical students at UC Davis. Following Kern’s model for curriculum development, we determined our learners’ needs, developed objectives, and chose educational strategies³. We grounded objectives in the Association of American Medical College’s Core Entrustable Professional Activities for Entering Residency⁴. In order to allow students to apply knowledge and practice skills, we developed a longitudinal, small-group, simulated-based experience as the core of the course. Students worked in specialty-based cohorts to care for a panel of virtual patients. They were introduced to and managed their patients in high fidelity simulation scenarios, wrote orders in the electronic health record, practiced patient hand-offs, and answered mock pages about their patients’ clinical status changes.

Outcomes:

Ninety-two students participated in this mandatory course in Spring of 2019. Students rated the course highly on most measures. With regard to the use of simulation, students felt the course format was an effective means of meeting the learning objectives (5.87/7). A major theme in their comments about “the most useful aspects of the course” was the “hands-on” approach offered in this core simulation-based experience.

Feasibility and transferability for adoption:

The authenticity of the experience enticed residents and faculty to readily volunteer to facilitate and led to a rewarding experience with highly engaged students. Challenges related to organizing and facilitating multiple simultaneous small groups.

References:

1. Chen CA, Kotliar D, Drolet BC. Medical education in the United States: Do residents feel prepared? *Perspect Med Educ*. 2015;4:181–185.

2. Lyss-Lerman P, Teherani A, Aagaard E, Loeser H, Cooke M, Harper GM. What training is needed in the fourth year of medical school? Views of residency program directors. *Acad Med.* 2009;84:823–829.
3. Thomas PA, Kern DE, Hughes MT, Chen BY. *Curriculum Development for Medical Education: A Six-Step Approach: Third Edition.* Baltimore, MD: Johns Hopkins University Press, 2016
4. Association of American Medical Colleges. The Core Entrustable Professional Activities (EPAs) for Entering Residency. <https://www.aamc.org/what-we-do/mission-areas/medical-education/cbme/core-epas> Accessed October 27, 2019.

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“Tell me your story.” Increasing knowledge and reducing stigma towards transgender and gender diverse children through narrative online education.

Submission Type: Innovation Abstract

Accepted as: Poster

Authors:

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Abstract Body:

Objective or purpose of innovation:

To assess health professionals' knowledge and reduce stigma towards transgender and gender diverse (TGD) children.

Background and/or theoretical framework and importance to the field:

Children who identify as TGD are increasingly seeking guidance and support from healthcare professionals who feel ill-equipped to address their needs.¹ Widespread knowledge gaps underpin stigmatizing attitudes and behaviors, leading to adverse outcomes in this highly-vulnerable population.²⁻⁴ Exposure to the personal narratives of stigmatized groups may dramatically reduce stigma,⁵ and online courses can support knowledge gains at scale.^{6,7} Educating the adults vested in each child's success (physicians, teachers and parents) with a scalable, narrative approach, may effectively foster a gender-affirming environment for optimal care of TGD children.

Design: Instructional methods and materials used:

We developed a narrative, animated, 18-module online course, delivered in parallel to a) physicians through Stanford Online Continuing Medical Education and b) the general public as a massive open online course (MOOC). Stories of TGD children and their families were interwoven with didactic videos emphasizing 8 knowledge domains.

Outcomes:

185 participants completed the CME course and 3,247 completed the MOOC. Participants (171 CME and 301 MOOC) completed voluntary pre- and post-course surveys. We compared pre and post responses through paired t-tests. Among CME participants, course completion was associated with statistically significant gains in all knowledge domains and provider confidence, as well as reductions in reported stigma. Among MOOC participants, completion was associated with significant reductions in reported stigma. (Knowledge was not assessed among MOOC participants).

Feasibility and transferability for adoption:

Online courses, offered in parallel to health professionals and the families they serve, provide a potentially powerful, cost-effective and efficient avenue to scale educational interventions. The lack of universal access to technology as well as potential selection bias are limitations.

References:

1. Rafferty J, Child CoPAo, Health F. Ensuring comprehensive care and support for transgender and gender-diverse children and adolescents. *Pediatrics*. 2018;142(4):e20182162.
2. Hidalgo MA, Ehrensaft D, Tishelman AC, et al. The gender affirmative model: What we know and what we aim to learn. *Human Development*. 2013;56(5):285-290.
3. Hughto JMW, Reisner SL, Pachankis JE. Transgender stigma and health: A critical review of stigma determinants, mechanisms, and interventions. *Social science & medicine*. 2015;147:222-231.
4. Olson KR, Durwood L, DeMeules M, McLaughlin KA. Mental health of transgender children who are supported in their identities. *Pediatrics*. 2016;137(3):e20153223.
5. Chung AH, Slater MD. Reducing stigma and out-group distinctions through perspective-taking in narratives. *Journal of Communication*. 2013;63(5):894-911.
6. Vance Jr SR, Deutsch MB, Rosenthal SM, Buckelew SM. Enhancing pediatric trainees' and students' knowledge in providing care to transgender youth. *Journal of Adolescent Health*. 2017;60(4):425-430.
7. Vance Jr SR, Lasofsky B, Ozer E, Buckelew SM. Teaching paediatric transgender care. *The clinical teacher*. 2018;15(3):214-220.

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A Healthier Nevada: Youth Education Modules

Submission Type: Innovation Abstract

Accepted as: Poster

Authors:

Justine Resnik, University of Nevada, Reno School of Medicine
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Kendal Warner, University of Nevada, Reno School of Medicine

Abstract Body:

Objective or purpose of innovation:

A Healthier Nevada: Youth Education Modules aims to spread clinical health information to Nevada high school students in the Washoe County School District (WCSD) through multiple hour-long modules presented by medical students.

Background and/or theoretical framework and importance to the field:

The benefits of medical students presenting clinical health information to the community is twofold. First, it provides medical students the opportunity to research preventative medicine which is usually not a focus of medical education. Second, the high school students receive tailored information specific to the public health problems seen in their area. One example is that 36.6% of high school students in the WCSD have met the clinical definition of depression with 18.6% of students having seriously considered suicide. This is over double the national average for suicidal tendencies and necessitates a modern approach to public health education. Our approach is that we provide the tools for suicide prevention such as teaching students how to manage stress and build a social support system.

Design: Instructional methods and materials used:

Each module is designed and presented by medical students who focus on preventive health topics such as addiction, exercise, nutrition, stress, and relationships. These modules illustrate the link between student behaviors and their health outcomes by using age specific content and interactive learning techniques. To assess the growth in the students, we use standardized surveys with a Likert scale.

Outcomes:

The results of the standardized surveys indicate that students are responding positively to the content. Medical students are also gaining teaching experience that increases their ability to talk about preventive health with patients.

Feasibility and transferability for adoption:

Each module fosters discourse and engagement, so students are able to gain the autonomy to make informed decisions about their health. However, this study only impacts a narrow age range, and we would like to expand our reach.

References:

Economic Research Service (ERS), U.S. Department of Agriculture (USDA). Food Access Research Atlas, <https://www.ers.usda.gov/data-products/food-access-research-atlas/>
Gay, C., Gao, P., Lensch, T., Zhang, F., Baxa, A., Larson, S., Clements-Nolle, K., Yang, W. State of Nevada, Division of Public and Behavioral Health and the University of Nevada, Reno. 2015 Nevada High School Youth Risk Behavior Survey (YRBS): Adverse Childhood Experiences (ACEs) Analysis.

Lensch, T., Martin, H., Zhang, F., Parrish, B., Clements-Nolle, K., Yang, W. State of Nevada, Division of Public and Behavioral Health and the University of Nevada, Reno. 2017 Nevada High School Youth Risk Behavior Survey (YRBS) Report. Washoe County Health District, Renown Health. 2017 Washoe County Community Health Needs Assessment. Retrieved from https://www.renown.org/wp-content/uploads/CHNA_Final-1.pdf.

For more information about this abstract please contact: [justineresnik@med.unr.edu]

A Narrative Medicine Approach to Mental Health, Identity, and Trauma-Informed Care

Submission Type: Innovation Abstract

Accepted as: Poster

Authors:

Sarah Watanaskul, University of California, San Francisco, School of Medicine
Hannah Beaman, University of California, San Francisco, School of Medicine

Abstract Body:

Objective or purpose of innovation:

Pilot a narrative medicine approach to address perceived emotional gaps of a small group about disparities in mental health and healthcare.

Background and/or theoretical framework and importance to the field:

Narrative medicine is a field that aims to use skills like close reading, creative reflection, and group discussion as a learning modality in medicine¹. Student evaluations at UCSF show that traditional case-based small groups are inadequate when discussing the intersection of patient and clinician identities with health and healthcare. Students identified emotional gaps and expressed a desire for the integration of personal experience in the course. Considering the effectiveness of storytelling in conveying emotion and experience^{2,3}, we redesigned one small group using a narrative medicine approach as a pilot for addressing low learner satisfaction and enhancing learning about identity and disparities.

Design: Instructional methods and materials used:

We analyzed course evaluations, conducted student interviews, and reviewed the literature on narrative medicine before selecting a year-one small group on race, gender, and mental health that received unsatisfactory reviews and redesigning it to build discussion around literary first-person narratives in poetry and prose. Discussion questions were generated via iterative readings and discussions of each piece.

Outcomes:

Deliverables include a small group workbook with excerpts from contemporary writings accompanied by tailored questions plus a reader chapter on disparities in mental health and healthcare. The small group was piloted in late October and student pre/post evaluation results will be available in November 2019.

Feasibility and transferability for adoption:

Strengths include packaging didactic information in an emotionally engaging format and creating space for students to share personal experiences. Limitations include difficulty in standardizing discussions across individual groups and measuring whether learning is enhanced since we changed multiple small group components from last year(format, learning objectives, reader chapter).

References:

1. Milota MM, Thiel GJM van, Delden JJM van. Narrative medicine as a medical education tool: A systematic review. *Med Teach*. 2019;0(0):1-9. doi:10.1080/0142159X.2019.1584274
2. Aronson L. Story as Evidence, Evidence as Story. *JAMA*. 2015;314(2):125-126. doi:10.1001/jama.2015.3930

3. Boudreau JD, Fuks A. The Humanities in Medical Education: Ways of Knowing, Doing and Being. *J Med Humanities*. 2015;36(4):321-336. doi:10.1007/s10912-014-9285-5

For more information about this abstract please contact: [sarah.watanaskul@ucsf.edu]

A Spoonful of Sugar: Finding the Right Balance Between Challenge and Support in a Medical School Curriculum

Submission Type: Innovation Abstract

Accepted as: Poster

Authors:

Kerri Shaffer, University of Utah

Sara Lamb, University of Utah School of Medicine

Janet Lindsley, University of Utah School of Medicine

Abstract Body:

Objective or purpose of innovation:

As part of larger program-wide culture change initiatives, the University of Utah School of Medicine Curriculum Office has been working to improve student relations. Our Graduation Questionnaire (GQ) numbers in the areas of Accessibility, Awareness, and Responsiveness indicated that students didn't feel heard or supported by the curriculum leadership.

Background and/or theoretical framework and importance to the field:

A recent informal survey to the DR-ED listserv asking how other schools balance challenge and support of students yielded no answers, but did yield several private responses asking for the results. This suggests that this is a problem for many schools.

Design: Instructional methods and materials used:

In 2016, we held an all-day retreat with faculty, students, and administrators to discuss the culture of our program. As a result, we implemented several specific and strategic changes in the curriculum to make the shift from being perceived as paternalistic to supportive and trusting.

Outcomes:

The GQ data from the last 5 years show an upward trend in the three areas described above. While we were previously above the national mean in dissatisfaction and below the national mean in satisfaction, we've inverted that. In 2019, the percentage of students who were very satisfied in the three identified areas exceeded the national mean by an average of 15.7 points.

Feasibility and transferability for adoption:

While the data show an upward trend, it's still incomplete. Students who graduated in 2019 had already been in the program for 2 years when we began to implement changes. The data will be more complete when we have the GQ for students who started the program in 2017. We would also like to add a qualitative component.

References:

AAMC. Medical School Graduation Questionnaire. 2019 Individual School Report. University of Utah School of Medicine. July 2019.

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A Systematic Approach to Unveiling the Hidden Curriculum in Medical Education: Using Computer Science to Detect and Reduce Bias

Submission Type: Innovation Abstract

Accepted as: Poster

Authors:

Richard Chung, University of Pennsylvania

Kali Hobson, Seattle Children's Hospital

Roberto Montenegro, University of Washington School of Medicine/Seattle Children's Hospital

Abstract Body:

Objective or purpose of innovation:

To develop and utilize a systematic, computer-based, Bias Reduction in Curricula Content (BRICC) process software to more efficiently and accurately identify and subsequently decrease bias in medical curricula content.

Background and/or theoretical framework and importance to the field:

Identifying and reducing bias in medical curricula is critical in the education of future physicians. Physicians continue to be biased¹⁻³. The impact of these numerous blind-spots within medical education may impact the care that students ultimately provide as well as their learning environment and wellbeing alike⁴.

Design: Instructional methods and materials used:

We will develop, implement, and evaluate a computer-based program that will systematically identify bias in medical curricula using information extraction and natural language processing. The results will undergo a concurrent analysis by trained evaluators to assess whether bias is accurately being detected by BRICC software.

Outcomes:

Software that accurately and efficiently analyzes bias in large-scale medical curricula content in order to reduce implicit bias, establish equitable and inclusive education, and ultimately improve outcomes for patients and future physicians. Preliminary data show that our BRICC process has identified numerous instances of ongoing bias in curricula content, including racism, gender bias, as well as the absence of pertinent social and structural determinants of health content.

Feasibility and transferability for adoption:

Our BRICC software program allows for a more efficient and systematic way to identify bias in medical curricula across many institutions. This program reduces the perpetuation of biases in medicine and will in turn help improve patient care. However, one limitation is that language and social identifiers are constantly evolving; BRICC will, therefore, require ongoing updates. Content creators will also need to be open to altering their content in order to reduce bias.

References:

1. Tsai, J., Ucik, L., Baldwin, N., Hasslinger, C. & George, P. Race Matters? Examining and Rethinking Race Portrayal in Preclinical Medical Education. *Acad. Med.* 91, 916–920 (2016).
2. Chapman, E. N., Kaatz, A. & Carnes, M. Physicians and implicit bias: how doctors may unwittingly perpetuate health care disparities. *J. Gen. Intern. Med.* 28, 1504–1510 (2013).
3. Fallin-Bennett, K. Implicit Bias Against Sexual Minorities in Medicine. *Acad. Med.* 90, 549–552 (2015).
4. Braun, L. & Saunders, B. Avoiding Racial Essentialism in Medical Science Curricula. *AMA J Ethics* 19, 518–527 (2017).

Affiliated Institutions:

- University of Washington School of Medicine
- University of Washington eScience Institute
- Seattle Children's Hospital
- University of Pennsylvania

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Addressing Physician Shortages in Marginalized Urban Communities through the New UW Community-focused Urban Scholars Program (CUSP)

Submission Type: Innovation Abstract

Accepted as: Poster

Authors:

Toby Keys, University of Washington School of Medicine

Edwin Lindo, University of Washington School of Medicine

Amanda Kost, University of Washington School of Medicine

Abstract Body:

Objective or purpose of innovation:

Participants will learn UW SOM's approach to training and encouraging students for urban underserved practice through the longitudinal Community-focused Urban Scholars Program (CUSP).

Background and/or theoretical framework and importance to the field:

There remains a shortage of physicians in marginalized urban communities. Further, urban underserved providers frequently do not reflect the cultural backgrounds of their patients. Both contribute to health disparities in our urban communities. CUSP is a four-year, integrated curriculum that offers in-depth public health training and clinical experiences in underserved settings. CUSP Scholars also grow personally and professionally through mentorship, reflection, and service learning.

Design: Instructional methods and materials used:

This session will offer an overview of CUSP and how we attune to the diverse student and community interests and perspectives. We will also share a description of our community collaborations and current CUSP student-led efforts to create pathways for undergraduates from disadvantaged backgrounds into medicine. Lastly, we will discuss our recent dedicated admissions process.

Outcomes:

Over the first three years of the CUSP program the number of applicants has significantly increased from five in 2017 to over 50 for the entering class of 2020. Preliminary program evaluation data shows high satisfaction among participants.

Feasibility and transferability for adoption:

CUSP offers a focused approach to addressing both physician shortages and physician diversity in historically marginalized urban communities. Finding availability for CUSP clinical experiences remain a challenge and has been a limiting factor in the program's expansion.

References:

DeAngelis CD. Commitment to care for the community. JAMA 2009;301(18):1929-30

Smedley BD, Stith AY, Nelson AR, editors. Unequal treatment: confronting racial and ethnic disparities in health care. Washington, DC: National Academic Press; 2002

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Ask me about my BSJQAE: Two school's experiences developing cases to support cognitive integration

Submission Type: Innovation Abstract

Accepted as: Oral Presentation

Authors:

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Tracy Fulton, University of California, San Francisco, School of Medicine

Heidi Kirsch, University of California, San Francisco, School of Medicine

Jennifer Plant, University of California, Davis, School of Medicine

Colleen Sweeney, University of California, Davis, School of Medicine

Abstract Body:

Objective or purpose of innovation:

The purpose of this innovation is to use a nationally vetted public curriculum database¹ to create tools that support cognitive integration².

Background and/or theoretical framework and importance to the field:

Attempts to revisit basic science during clerkships have been met with challenges³ highlighting a need for tools to provide clerkship-level students with deliberate practice in recalling, applying, and transferring basic science knowledge to clinical decision-making^{4,5}.

Design: Instructional methods and materials used:

Six medical schools have developed concept-based virtual patient cases, each operationalizing a single Integrated Learning Objective linked to an underlying core basic science concept. Two of those schools will report on their experiences. Each school actualized their team assembly and work in unique ways, drawing different benefits and challenges from the experience. Key approaches to success were the inclusion of students on teams, cycles of iterative review, and cloud-based platforms to allow for asynchronous work.

Outcomes:

About 40 concept-based virtual patient cases across a breadth of disciplines are in development. Each of our schools contributed a total of six each. The cases are intentionally modular, and can be grouped in a serial set of patient care decisions or can be used to address 'transfer' - i.e., to support using knowledge of a single concept to make decisions in the context of unrelated clinical conditions. Clinicians and basic science participants at both schools valued the opportunity to collaborate on these tools.

Feasibility and transferability for adoption:

Strengths: model for curriculum collaboration at our institutions, structures for co-creation of learning materials, cases are short. Limitations: review and feedback process took longer than anticipated, small number of cases that 'scattershot' across key conditions.

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Assessing Implicit Gender Bias Among Faculty Search Committees

Submission Type: Innovation Abstract

Accepted as: Poster

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Abstract Body:

Objective or purpose of innovation:

To bring empirical observation and measurement to bear on matters of diversity and inclusion in medical education, specifically through assessment of implicit biases among faculty search committee members, as related to underrepresented groups in medicine.

Background and/or theoretical framework and importance to the field:

Efforts to increase diversity in medical education are driven in part through hiring decisions by faculty search committees. Assessing implicit biases related to underrepresented groups in medicine can augment cultural awareness training and influence hiring decisions of faculty search committees.

Design: Instructional methods and materials used:

Each time a search committee was formed, members of the committee completed implicit bias assessments pertaining to underrepresented groups and participated together in a diversity and implicit bias training. Data of implicit gender bias were aggregated across many search committees and analyzed in terms of traditional gender stereotypes of both genders collectively, and as stereotypes pertaining to each gender separately, as a function of the gender of the committee members themselves.

Outcomes:

Male and female search committee members implicitly endorsed traditional gender stereotypes to the same extent (no differences between male and female members). However, when implicit bias was analyzed in terms of overall bias toward men as separate from women, differences emerged whereby male members exhibited a stronger bias pertaining to male stereotypes than did female members, yet both male and female members exhibited similar biases toward female gender stereotypes.

Feasibility and transferability for adoption:

The Implicit Relational Assessment Procedure (IRAP) allows assessment of gender bias toward men and women separately, instead of only relative to one another, which provides more information and data than traditional implicit bias assessments (e.g., IAT). The additional layers of data can facilitate investigation into the effects of implicit gender bias on hiring outcomes, which we are currently conducting.

References:

Easterly, D. M., & Ricard, C. S. (2011). Conscious efforts to end unconscious bias: Why women leave academic research. *Journal of Research Administration*, 42(1), 61-73,5,7.

Hoover, A.E., Hack, T., Garcia, A.L., Goodfriend, W., & Habashi, M.M. (2019). Powerless men and agentic women: Gender bias in hiring decisions. *Sex Roles*, 80, 667-680. DOI: 10.1007/s11199-018-0964-y

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Balancing pre-clerkship inpatient, outpatient, and classroom clinical skills training at the University of Washington

Submission Type: Innovation Abstract

Accepted as: Poster

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Abstract Body:

Objective or purpose of innovation:

To optimize student preparedness for outpatient and inpatient clerkships.

Background and/or theoretical framework and importance to the field:

As clinicians lose teaching time to clinical demands, more is expected of medical students entering clerkships. Solid foundational clinical-skills preparation for both inpatient and outpatient rotations is vital. Before 2015, pre-clerkship clinical skills training at UWSOM occurred primarily through lectures and weekly hospital-based tutorials. While students learned inpatient skills from faculty mentors with real patients, they received minimal preparation for outpatient rotations and lacked consistent training in skills not easily taught with hospitalized patients.

Design: Instructional methods and materials used:

A new clinical-skills course reduced classroom time and replaced most lectures with simulations and small groups. While hospital tutorials continue, pre-clerkship students now also spend 30 half-days in a longitudinal primary care setting, practicing outpatient skills first introduced in the classroom, such as agenda-setting, focused exams, behavior change counseling, and chronic disease management.

Outcomes:

Students report high satisfaction with multi-pronged preparation, noting the approaches are complementary and additive. In autumn 2018, we surveyed clerkship site directors about the first cohort of new-curriculum students and compared results to a similar 2008 survey. New-curriculum students were rated more highly in focused history, focused physical exam, differential diagnosis, clinical reasoning, and working in teams, and lower for comprehensive physical exam. All other domains were unchanged.

Feasibility and transferability for adoption:

Combined classroom, community- based, and hospital training optimizes preparation for both inpatient and outpatient rotations despite decreased classroom and hospital time. However, the amount of time dedicated to clinical skills has increased, even as the total pre-clerkship curriculum has been shortened. Recruitment and retention of primary care preceptors has also been a challenge.

References:

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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 2007;82(10):970-8
Tolsgaard MG, Bjorck S, Rasmussen MB, Gustafsson A, Ringsted C. Improving Efficiency of Clinical Skills Training: a Randomized Controlled Trial. 2013;Aug 28(8):1072-7.
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Case-based Communication and Team Learning Curriculum as a Window to the SOLE (Student Optimized Learning Environment)

Submission Type: Innovation Abstract

Accepted as: Poster

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Abstract Body:

Objective or purpose of innovation:

The SOLE (Student Optimized Learning Environment) curriculum at the University of California, San Francisco (UCSF) aims for students to practice the teamwork and communication skills necessary to become effective 21st century physicians through engagement with the topics like Master Adaptive Learner and growth mindset, integral to the psycho-social dimension of an optimized learning environment.¹

Background and/or theoretical framework and importance to the field:

Effective communication, use of feedback, and learning in teams are expected competencies for graduating medical students, and are shown in the literature to improve physician empathy,² increase patient adherence to medications,³ and contribute to successful learning in the eyes of students.⁴ Previous curricula at UCSF related to these topics were noted by the students to be dys-synchronous, redundant with other courses, and inefficient use of curricular time.

Design: Instructional methods and materials used:

Following Kern's 6 steps for curriculum design⁵, we reviewed our existing curriculum and conducted focus groups with student and faculty stakeholders which guided development of a longitudinal curriculum on small group dynamics, team assessment, and feedback. Sessions build on each other and include real-life cases as role plays for application of the core behaviors and features of an optimal learning environment: growth mindset, critical reflection, effective feedback, and learning preferences.

Outcomes:

Outcome achievement is assessed via student evaluations, informal student comments, and feedback from faculty facilitators. Initial student evaluations show high ratings for the instructors (average 4.6 out of 5, 5=highly effective) and comments such as, "innovative content," "at first I didn't buy into the framework, but the facilitator was engaging in explaining how it applies to our everyday learning."

Feasibility and transferability for adoption:

The SOLE curriculum is a novel, student-responsive, case based approach to engage students in team learning and communication skills practice.

References:

1. Gruppen LD, Irby DM, Durning SJ, Maggio LA. Conceptualizing Learning Environments in the Health Professions. *Acad Med.* 2019 Jul;94(7):969-974. doi: 10.1097/ACM.0000000000002702

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Comprehensive Approach to Technology Integration in Undergraduate Medical Education

Submission Type: Innovation Abstract

Accepted as: Poster

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Nora Doyle, UNLV School of Medicine

Abstract Body:

Objective or purpose of innovation:

Descriptive case file of University of Nevada, Las Vegas School of Medicine's (UNLV SoM) unique incorporation of technology into undergraduate medical education (UME), and its effect on educational experience.

Background and/or theoretical framework and importance to the field:

While UME adapts curriculum to technology for new generations of learners, most incorporation efforts are implemented through a top-down approach (from administration to students). There has been little academic discussion on how technology influences UME from a bottom-up approach (from students to administration). UNLV SoM utilizes both a top-down and bottom-up approach.

Design: Instructional methods and materials used:

We aimed to categorically describe the technology specifically utilized to enhance education at UNLV SoM. Those in the top-down category were administration established implementations. Those in the bottom-up category were student body established implementations. We then noted which technology enhancements resulted in improved communication or bidirectional information sharing, versus those that only provided new ways to learn information.

Outcomes:

The top-down approach had 4 sources of technology utilization: Virtual anatomy, LCMS, "Live" clerkship schedules, and an online library providing clinical point-of-care tools. The bottom-up approach had 3 sources of technology utilization: Slack, Google team drives, and Whatsapp. In the top-down approach category, zero of 4 sources of technology utilization facilitated open communication or bilateral information sharing, while in the bottom-up category, all 3 did. Distinction between technology utilizations showed the versatility of their application to UME. UME future advancements should rely on both administration and student body implementations.

Feasibility and transferability for adoption:

This study's strength is the example set for how technology incorporation from top-down and bottom-up approaches enhances UME. Limitations are this is a case study, descriptive in nature.

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Hopkins, Hampton, Abbott, Buery-Joyner, Craig, Dalrymple, . . . Page-Ramsey. (2018). To the point: Medical education, technology, and the millennial learner. *American Journal of Obstetrics and Gynecology*, 218(2), 188-192.

Shelton, P., Corral, I., & Kyle, B. (2017). Advancements in Undergraduate Medical Education: Meeting the Challenges of an Evolving World of Education, Healthcare, and Technology. *Psychiatric Quarterly*, 88(2), 225-234.

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Doing it Right: A Lecture Free Curriculum

Submission Type: Innovation Abstract

Accepted as: Poster

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Abstract Body:

Objective or purpose of innovation:

We set out to build a medical school curriculum utilizing evidence from the science of learning that develops habits for life-long learning.

Background and/or theoretical framework and importance to the field:

We designed an innovative curriculum that incorporates the principles of the science of learning within the context of continuous learner development as a professional. Using Fink's Taxonomy of Significant Learning, we crafted six holistic program goals to guide our choices of assessments and teaching/learning (T&L) activities. Our T&L activities are evidence-based, require extensive collaborative discourse, and use 1) Interleaving; 2) Distributed practice; 3) Self (and other)-explanation; 4) Elaborative interrogation; 5) and Retrieval-based practice.

Design: Instructional methods and materials used:

Based on the evidence that very little learning occurs from a lecture-based curriculum, and that our six holistic program goals require significant learning in several domains, we replaced all pre-clinical lecture hours with three T&L activities within 15 contact hours per week on average. Our T&L activities are Peer Instruction (PI), Team-Based Learning (TBL), and WrightQ, our adaptation of problem-based learning. We require reading for our out-of-class preparation and provide no recorded lectures. For the pre-clinical phase, the T&L activities provide students with daily immediate feedback on their learning and most 'summative' assessments are completed by individuals, followed their teams to facilitate learning. In the clinical phase, didactic time uses active learning.

Outcomes:

- Daily attendance is robust.
- Students consider the daily collaborative learning is the best way to learn.
- Frequent low-stakes assessment data provides for early academic intervention.
- First cohort performance on USMLE Step 1 at national average, no change from prior years.
- Faculty would never return to lecturing.

Feasibility and transferability for adoption:

We have created a curriculum with meaningful learning experiences built upon the science of learning. Students have largely endorsed active learning. The faculty effort required to make this transformation is significant.

References:

Brown, Peter C., Roediger III, Henry L, McDaniel, Mark A. Make it Stick: The Science of Successful Learning. 2014. Belknap Press of Harvard University Press. Cambridge, MA.

Branzetti, Jeremy, Gisondi, Michael A., Hopson, Laura R., Regan, L. Aiming beyond competent: the application of the taxonomy of significant learning to medical education. *Teach & Learn Med*, 2019; 31 (4), 466-478.
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Karpicke, Jeffrey D. *Retrieval-Based Learning: A Decade of Progress*. Purdue University, West Lafayette, IN, United States. 2017 Elsevier Ltd.

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Domestic Violence Training for Medical Students: An empathic experiential exercise placing students In Her Shoes

Submission Type: Innovation Abstract

Accepted as: Poster

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Jayne Peterson, University of Arizona College of Medicine – Phoenix

Abstract Body:

Objective or purpose of innovation:

Domestic violence (DV) affects every community across America, regardless of gender, marital status, race, age, and sexual orientation. There is minimal medical training in DV that aims to enhance empathy or understanding of resources to help victims affected by DV. Additionally, studies of medical student training in empathy and awareness and utilization of community resources for this sensitive topic are lacking.

Background and/or theoretical framework and importance to the field:

As a college of medicine, we provide training to our students on how to screen for DV occurrences and provide resources to best manage their care. Once in clinical practice, there is significant confusion as to why a victim, “just won’t leave” which leads to not understanding the full scope of the issue and which could also lead to a decline in empathy for the victim.

Design: Instructional methods and materials used:

Experiential learning is an innovative approach to education on this challenging topic. We sought to study the impact of a commercially available experiential educational activity on empathy and knowledge of community resources by medical students. Our innovation included the utilization of the In Her Shoes kit, which was not previously studied as a medical student training tool.

Outcomes:

This experiential activity was an effective and meaningful method to help students appreciate the dilemmas and barriers faced by victims of domestic violence. Additionally, our research indicated that comfort, awareness, and confidence in providing care emphatically increased after this activity.

Feasibility and transferability for adoption:

The strengths of the innovation include ease to incorporate into the curriculum and the opportunity to include community DV resource members to build relationships. The limitations include some lack of diversity in the In Her Shoes kit (mainly sexual orientation) and the potential for limited participation the the large group discussion.

References:

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2018 National Crime Victims' Rights Week Resource Guide: Crime and Victimization Fact Sheets
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"In Her Shoes/In Their Shoes," developed and owned by the Washington State Coalition Against Domestic Violence, Seattle, Washington, USA, www.wscadv.org. Accessed October 10, 2019

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Enhancing Ambulatory Education and Career Exploration in the Fourth Year of Medical School

Submission Type: Innovation Abstract

Accepted as: Poster

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Patricia Cornett, University of California, San Francisco, School of Medicine

Abstract Body:

Objective or purpose of innovation:

Develop a longitudinal clinical experience for fourth year medical students to gain advanced ambulatory skills while exploring a specialty/subspecialty of interest.

Background and/or theoretical framework and importance to the field:

In the traditional clerkship model medical students have little exposure to the ambulatory practice environment. Many schools have developed longitudinal clerkships in the third year that offset this disparity, yet not all students participate. The fourth year of medical school has traditionally been less structured than the first three years, and it provides an ideal opportunity for ambulatory curricular innovation. As part of a major institutional curriculum redesign, we developed SPAN (Specialty Practice Ambulatory sub-iNternship) a required longitudinal ambulatory preceptorship for fourth year students at UCSF.

Design: Instructional methods and materials used:

SPAN students are paired 1:1 with a faculty member in a specialty/subspecialty of the student's choosing. Students complete 16 half-day outpatient clinic sessions with their preceptor over the course of the fourth year. Students and preceptors have periodic feedback sessions to review the student's goals and growth; preceptors use a standardized tool to complete 8 direct observations of the student's clinical skills and students complete 6 self-reflections over the course of the year.

Outcomes:

In the 2019-2020 inaugural year 132 students are participating in SPAN; over 95% of students were matched with a preceptor in their first or second choice specialty. Mid-point course feedback will be obtained in December 2019.

Feasibility and transferability for adoption:

SPAN allows for flexibility and individual tailoring of learners' experiences and creates a structure of frequent low-stakes feedback and self-reflection that facilitates student growth. Because SPAN is so individualized, session scheduling and tracking of required assessments is complex and preceptor recruitment is intensive. Students pursuing non-ambulatory specialties for residency or who are not matched to their first choice specialty may be less invested in SPAN.

References:

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Williams CK et al. A Scoping review of undergraduate ambulatory care education. *Med Teach*. 2013; 35(6): 444-453.

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Farm to Clinician. A Culinary Medicine Approach to Interprofessional Healthcare Education

Submission Type: Innovation Abstract

Accepted as: Poster

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Abstract Body:

Objective or purpose of innovation:

Educate future healthcare professionals about the importance of nutrition in the prevention and treatment of disease utilizing an experiential interprofessional approach. Local food systems in Montana were emphasized.

Background and/or theoretical framework and importance to the field:

Obesity is widely prevalent, affecting over 90 million US adults in 2015-2016. This burden of disease demands urgent attention, yet many physicians & students report lack of confidence discussing nutrition and lifestyle choices, particularly when it comes to dealing with overweight and obese patients. Further, current medical schools are not meeting the minimum required 25 hours of nutrition education recommended by the National Academy of Sciences.

Design: Instructional methods and materials used:

During the fall semesters of 2017 – 2019, dietetic interns at Montana State University led culinary medicine workshops for nursing students, medical students and faculty. Workshops consisted of a farm tour, nutritional education, hands on culinary experience, and conversation over a prepared meal. Participants in this interprofessional exercise were also asked to problem solve non-pharmacological treatment plans for a hypothetical patient with metabolic syndrome.

Outcomes:

Mixed-method post surveys were administered to evaluators, dietetic interns, and students. Participant respondents indicated they better understood how food can be utilized in disease prevention.

Feasibility and transferability for adoption:

Strengths included science-based didactic sessions, chef developed Mediterranean-style recipes, and attention to local food systems in Montana. An experiential learning environment with rich discussion among professions was also meaningful. Limitations included time commitment required to complete workshops. Durability of nutritional knowledge acquired and practical application into future clinical practice is unknown and likely a limitation.

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Fostering Inclusion and Addressing Racial Bias: Implications for Diversity in Academic Medicine

Submission Type: Innovation Abstract

Accepted as: Poster

Authors:

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Abstract Body:

Objective or purpose of innovation:

Our multi-pronged approach adopted at the University of California – San Francisco (UCSF) was established toward creating and maintaining a diverse, equitable, and inclusive academic environment. On the basis of our experience with diversity and inclusion at our institution, the most successful intervention is a comprehensive, institutional approach toward creating an environment of inclusion, teaching cultural humility, building collaboration and trust, and recognizing the impact of implicit bias in evaluations and recruitment.

Background and/or theoretical framework and importance to the field:

While an increasingly diverse workforce of clinicians, researchers, and educators will be needed to address the nation's future healthcare challenges, underrepresented in medicine (UIM) perspectives remain relatively absent from academic medicine. Prior studies have identified differential experiences within the learning environment, lack of social supports, and implicit bias in evaluations as barriers to the academic interests and successes of UIM learners. The UCSF Differences Matter initiative has shown that interventions focused on recruiting diverse academic faculty, building strong social communities, facilitating cross-cultural communication and understanding, and mitigating disparities in summative assessments can positively affect the educational experience for UIM learners and contribute to their academic success.

Design: Instructional methods and materials used:

Slide deck

Outcomes:

Two-fold increase in the number of black and Latino faculty members within seven years, increased resident diversity, successful training of > 400 faculty and staff on language and issues related to diversity/equity/inclusion, restructuring of medical student methods of evaluation.

Feasibility and transferability for adoption:

Strengths: universal topic relevant to all institutions

Limitations: experience of one institution may not always be easily expanded to others

Note: Data from this study was published in a manuscript in Teaching and Learning in Medicine (<https://doi.org/10.1080/10401334.2019.1670665>)

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Tomas Diaz, J. Renee Navarro & Esther H. Chen (2020) An Institutional Approach to Fostering Inclusion and Addressing Racial Bias: Implications for Diversity in Academic Medicine, Teaching and Learning in Medicine, 32:1, 110-116, DOI: 10.1080/10401334.2019.1670665

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From Course to Practicum: The Evolution of a Fourth Year Medical Student Transition to Internship Course

Submission Type: Innovation Abstract

Accepted as: Poster

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Abstract Body:

Objective or purpose of innovation:

Our purpose was to improve engagement and effectiveness of our 4th year medical student Transition to Internship (TTI) course.

Background and/or theoretical framework and importance to the field:

Our TTI course used to be similar to 1st year courses – it was lecture-heavy with content determined by faculty. However, 4th year students have different educational needs than first years. Adults learn best in contexts that are self-directed, connected to previous experience and changing social roles, and problem-based. The purpose of TTI, to provide a final review of knowledge and skills to be successful in internship, is quite different from other course goals and thus TTI should be structured to maximize learning potential.

Design: Instructional methods and materials used:

Using adult learning theory, literature, program director interviews, and evaluation data, we identified challenges in the structure, goals, and expectations of TTI and modified it significantly to match student needs. The course was re-structured as a practicum and changes were made to its format, length, attendance, pedagogy, and assessment. Major changes include allowing students to decide which sessions to attend and replacing the final summative exam with a formative one.

Outcomes:

The percentage of large didactics changed from >50% in 2013-14 to 20% in 2018-19. 96% of students in AY 2017-18 and 97% of students in AY 2018-19 rated the course as excellent or good, compared to 79% in earlier years. The 2018 annual program director survey revealed that 27% of our graduates are perceived to be in the top 10% of interns for overall clinical performance and for the first time, none are perceived as being in the bottom 10% of interns.

Feasibility and transferability for adoption:

Though this student-centered approach may result in decreased overall attendance, we have found that it increases student engagement in their final weeks and increases readiness for internship.

References:

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Elnicki DM, Gallagher S, Willett L. Course Offerings in the Fourth Year of Medical School: How U.S. Medical Schools Are Preparing Students for Internship. Acad Med. 2015;90:1324–1330.

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Home Schooling: What patients and families teach students in a geriatric home visit

Submission Type: Innovation Abstract

Accepted as: Poster

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Abstract Body:

Objective or purpose of innovation:

By focusing on patients and families as teachers in a geriatric home visit, we hoped students could reflect on the importance of this role in general.

Background and/or theoretical framework and importance to the field:

The educational theory of co-production describes the contributions of patients and families to the education of future physicians. Literature shows that participation in Patients as Teachers appreciation programs engenders gratitude and awareness of meaning in medical students.

Design: Instructional methods and materials used:

Forty 3rd year students performed a home visit with a geriatrician and participated in patient care by speaking with individuals involved at home. After the visit, students reflected on what they learned about the patient as teacher by participation in structured verbal and written activities. We analyzed those results using qualitative methods.

Outcomes:

Students expressed gratitude that: 1) patients shared their lives and bodies with them, 2) families coached them how to communicate effectively with older patients, 3) patients disclosed how they confronted multiple challenges that students had otherwise not appreciated, and 4) families demonstrated their commitment to one another and revealed the toll of daily caregiving. Students were inspired to remain humble by learning from patients as their equals in ways that surpassed textbooks or lectures.

Feasibility and transferability for adoption:

Home visits are a riveting way to form an emotional bond with and express gratitude to patients by seeing them holistically as unique people in their own environment. Coordinating home visit schedules for students, patients, and preceptors requires thoughtful planning. Outpatient preceptors may find it challenging to incorporate home visits into their schedules.

References:

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Perez AA, Pelletier SR, Klein IA, Shields HM. Patient as Co-Teacher on Rounds: a Pilot Study.. *J Gen Intern Med.* 2018 Jul;33(7):1010-1012. doi: 10.1007/s11606-018-4421-y.

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Improv for Implicit Bias: A Novel Workshop for Standardized Patients

Submission Type: Innovation Abstract

Accepted as: Oral Presentation

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Abstract Body:

Objective or purpose of innovation:

Provide education for Standardized Patients (SPs) to recognize and mitigate the impact of implicit bias in medical education

Background and/or theoretical framework and importance to the field:

Pervasive implicit biases exist in healthcare with deleterious consequences. Medical schools commonly use Standardized Patients (SPs) to teach and assess clinical skills. Despite use of objective assessment tools, negative bias can manifest in SP performance and assessment of students. With limited best practices available for addressing these issues, this workshop aimed to educate SPs about implicit biases and minimize their effect on student assessments.

Design: Instructional methods and materials used:

A five-hour workshop presented improv activities and didactics about the impact of bias in personal and professional environments. Attendees completed pre- and post-workshop surveys that assessed awareness of implicit bias and confidence in addressing instances of prejudiced/discriminatory behavior.

Outcomes:

The workshop was offered three times to accommodate 89 participants. Pre- and post-survey comparisons indicated improvement in self-reported ability to recognize negative implicit biases in SP activities (94% vs 32%); having tools to minimize impact on SP performances (82% vs. 62%); and comfort in engaging in conversation about prejudices with peers (86% vs. 67%) or with supervisors (86% vs. 51%). Thematic analysis of written responses demonstrated improved awareness of bias and enhanced recognition for separating intention versus impact of behaviors.

Feasibility and transferability for adoption:

The workshop effectively created an environment for open discussions, learning and reflections about implicit bias. Interactive activities interspersed with didactics fostered high levels of engagement. Insufficient time to discuss strategies for mitigating implicit bias suggests the need for a longitudinal curriculum.

References:

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Incorporating Elements of Attitude and Purpose for Disadvantaged Student Success at the University of Hawai‘i John A. Burns School of Medicine ‘Imi Ho‘ōla Post-Baccalaureate Program

Submission Type: Innovation Abstract

Accepted as: Poster

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Abstract Body:

Objective or purpose of innovation:

Implement curriculum changes to promote student success in a post-baccalaureate pathway program for disadvantaged pre-medical students.

Background and/or theoretical framework and importance to the field:

The ‘Imi Ho‘ōla Post-Baccalaureate Program is a proven pathway for disadvantaged students pursuing careers in medicine. Upon successful completion, students matriculate into medical school the following year. A recent program evaluation identified that a high score on the Attitude scale of the Learning and Study Strategies Inventory (LASSI) was a significant factor in student success. The curriculum was recently revised to include program innovations which align and reinforce attitude as it relates to student success.

Design: Instructional methods and materials used:

LASSI is a formal assessment administered pre and post participation. The significance of the LASSI Attitude scale focuses on promoting relevance to academic and career goals and may offer insight as to the student’s perceived purpose. Several strategies and innovations addressing attitude and purpose were implemented throughout the program.

Outcomes:

‘Imi Ho‘ōla has significantly impacted the representation of disadvantaged medical students. Innovative curricular changes focusing on student attitude and purpose have been met with preliminary positive feedback.

Feasibility and transferability for adoption:

The strength of this curricular innovation is the reinforcement of the students’ purpose for successfully completing the program and reinforcing their desire to become physicians. Limitations include the small sample size by nature of each cohort of the program. In addition, factors such as cohort demographics, pre-admission criteria, and academic evaluations, need to be taken into account, which may impact retention.

References:

Garner J, McKendree J, O’Sullivan H, Taylor D. Undergraduate medical student attitudes to the peer assessment of professional behaviours in two medical schools. *Education for Primary Care*. 2010;21(1):32-37.

West C, Sadoski M. Do study strategies predict academic performance in medical school? Medical Education. 2011;45(7):696-703.

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Increasing Usage of Wellness in Undergraduate Medical Education

Submission Type: Innovation Abstract

Accepted as: Poster

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Abstract Body:

Objective or purpose of innovation:

University of Nevada, Las Vegas School of Medicine aims to incorporate wellness activities that medical students will continue to utilize long-term to promote healthy coping strategies for reducing stress.

Background and/or theoretical framework and importance to the field:

There is a high prevalence of stress in medical students that can negatively impact their well-being and providing compassionate care for patients². Studies show that mindfulness-based approaches are effective in decreasing stress^{3,4,5,6}. To increase wellness activity usage and student participation, it is important to provide easy accessibility. It is likely that busy students will continue with activities that are offered on campus compared with needing to find opportunities elsewhere.

Design: Instructional methods and materials used:

During the pre-clerkship years, wellness activities were offered to students (yoga, mediation, etc) on campus during breaks in students' schedules. Surveys to assess the number of wellness techniques used before medical school versus the end of basic sciences were completed by 58 students. The survey included 24 activities that fell under the categories of physical movements, spiritual/mindfulness, nutrition/supplements, and body manipulation.

Outcomes:

Before medical school, 58 students used a total of 223 wellness tools with a mean of 3.84 (SD=2.79) per student. At the end of basic sciences, the number increased to 272 with a mean of 4.69 (SD=3.11) per student. Wellness activities offered by UNLV demonstrated either a consistent level of technique usage (massage, dance) or an increase in usage (yoga, tai chi, meditation).

Feasibility and transferability for adoption:

Wellness activities were offered on campus during scheduled breaks, offering students easier access to these sessions. Limitations include survey phrasing, where activities usage was asked through “have used/currently use” format. Future surveys should include separate categories of “have used” versus “currently use” to elicit wellness technique usage.

References:

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5. Slavin, S. J., Schindler, D. L., & Chibnall, J. T. (2014). Medical student mental health 3.0: Improving student wellness through curricular changes. *Academic Medicine : Journal of the Association of American Medical Colleges*, 89(4), 573-577. doi:10.1097/ACM.0000000000000166 [doi]
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Medical Students' Attitudes Toward High-Value Care After Pre-Clinical Curriculum Integration at an Academic Medical Center

Submission Type: Innovation Abstract

Accepted as: Poster

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Abstract Body:

Objective or purpose of innovation:

Assess the impact of incorporating Choosing Wisely (CW) recommendations into the pre-clinical case-based curriculum (CBL) on student attitudes and familiarity with high-value care, and to continue to improve student engagement and curricular innovations in this domain.

Background and/or theoretical framework and importance to the field:

The US wastes nearly \$1 trillion annually on healthcare expenditures¹. Medical students receive insufficient education regarding the delivery of high-value care and the importance of resource stewardship. Research suggests that a physician's resource usage is strongly influenced by practices to which they are exposed during training². Early exposure to high-value care may catalyze changes in culture and attitudes.

Design: Instructional methods and materials used:

The Hunderfund survey³ was distributed to second-year medical students in October 2018 to assess baseline attitudes towards cost-conscious care. The survey will be distributed in October 2019 to the next class of second-year medical students after inclusion of CW guidelines in pre-clinical curriculum.

Outcomes:

Baseline surveys revealed the majority of respondents agreed that physicians have a role in controlling health spending, but 67% of students were unfamiliar with high-value care resources. Based on 2019 responses, we will assess changes in familiarity and attitudes towards cost-conscious care after increased exposure to high-value curriculum.

Feasibility and transferability for adoption:

Integration of CW principles into existing CBL structure ensured students were consistently exposed to high-value care issues in interactive, small group settings. Limitations include comparing two subsequent classes of second-year students. Because this is phase one of curricular changes, it is unknown if this delivery method is the most effective or if the attitude changes are long-lasting.

References:

1. Institute of Medicine (IOM). 2013. Best Care at Lower Cost: The Path to Continuously Learning Health Care in America. Washington, DC: National Academy of Medicine.
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Pediatric Trauma Resident Training in Virtual Reality and 360 Video

Submission Type: Innovation Abstract

Accepted as: Poster

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Abstract Body:

Objective or purpose of innovation:

For pediatric trauma residents to learn best practices on effective response protocols within a safe, low-pressure virtual setting. Upon completion, residents should be able to effectively understand appropriate methods of treating trauma patients using the primary and secondary survey assessments.

Background and/or theoretical framework and importance to the field:

Residents in pediatric trauma are thrust into the intense, unpredictable environment of emergency medicine. Many feel marginalized in terms of how they may help effectively. These modules enable residents-in-training to immerse themselves in the emergency room and allow them to work within a safe, albeit hyper-realistic environment.

Design: Instructional methods and materials used:

The process started with a needs assessment to find gaps in knowledge from former residents. The SME worked closely with the Educational Technology team to design and script scenarios to tackle those gaps and formative questions to assess their learning throughout the experience. The process was then followed by multiple iterations based on a feedback loop from residents and med students who were testing the experience.

Outcomes:

Our team just finished developing the learning experience, and it will be implemented with the incoming cohort of residents. Dr. Lowe will work with a study specialist to conduct tests across different groups of residents and doctors in order to determine efficacy and retention of the skills tested.

Feasibility and transferability for adoption:

Experiencing medical training material in VR offers a more immersive experience to digital content that traditional video lacks. However, the medium is not yet fully accessible as it requires expensive hardware to build and access the material.

References:

Curtis, H. A., Trang, K., Chason, K. W., Biddinger, P. D. Video-Based Learning vs Traditional Lecture for Instructing Emergency Medicine Residents in Disaster Medicine Principles of Mass Triage, Decontamination, and Personal Protective Equipment. *Prehospital and Disaster Medicine*. 2018; 33 (1): 7–12.

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Playing Doctor: Implementing a Medical Improv Course at the University of California, San Diego

Submission Type: Innovation Abstract

Accepted as: Poster

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Abstract Body:

Objective or purpose of innovation:

Developing a framework for incorporating medical improv into the pre-clinical curriculum.

Background and/or theoretical framework and importance to the field:

Medical improv takes the ideas of improv and applies them to clinical situations. While it has gained popularity over the past decade, there is a lack of structure in implementing improv into the pre-clinical curriculum. Most classes offer a single seminar or limited exposure (< 10 hours), creating the need for a systematic approach to create and deliver medical improv courses with maximal benefit to students.

Design: Instructional methods and materials used:

UC San Diego School of Medicine launched its inaugural medical improv elective for students in the pre-clinical curricula in Spring 2019. Based on Katie Watson's workshop "Medical Improv: Train the Trainer", this 9 week, 18-hour, experiential-learning course systematically introduced students to improv exercises focusing on different clinical topics each week. Themes included active listening in patient encounters, dealing with ambiguity, juggling multiple goals, and understanding/overcoming unconscious bias and assumptions. Each session built upon ideas from the previous week and challenged students to step outside of their comfort zones through performance and small group discussion.

Outcomes:

The inaugural class (n=7) expressed both personal and professional benefit from participation, and there is a second cohort (n=9) currently taking the course. There has been broad support and the elective will be offered year-round for first and second-year students.

Feasibility and transferability for adoption:

We describe a framework for developing a comprehensive medical improv course for other medical institutions. One limitation was the dependence on the facilitators' previous experience with improv. Our small sample size (n=16) limits interpretation of study results. However, we plan to conduct this course 3 times per year and collaborate with other schools to determine the impact of a medical improv elective.

References:

Watson K, Fu B. Medical improv: a novel approach to teaching communication and professionalism skills. *Annals of Internal Medicine*. 2016;165:591-592

Watson K. Serious play: teaching medical skills with improvisational theater techniques. *Art and Medical Education*. 2011;86:1260-1265.
Hoffman-Longtin K, Rossing J, Weinstein E. Twelve tips for using applied improvisation in medical education. *Medical Teacher*. 2018;40(4):351-356
Fu B. Common ground: frameworks for teaching improvisational ability in medical education. *Teaching and Learning in Medicine*. 2018;31(3): 342-355

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QLab: Teaching Medical Students the Ins and Outs of Writing USMLE-Style Questions

Submission Type: Innovation Abstract

Accepted as: Poster

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Neil Haycocks, UNLV School of Medicine

Abstract Body:

Objective or purpose of innovation:

This innovation's objective is to design an educational strategy that enhances student facility with USMLE-style multiple-choice questions (MCQs) while teaching basic science content.

Background and/or theoretical framework and importance to the field:

Medical students answer thousands of MCQs during their studies, and MCQ exams such as USMLE Step 1 play a significant role in student progress and resident selection. Despite this, little formal guidance is typically given on how MCQs are constructed. The utility of teaching students about the process of writing exam items within the context of a discrete basic science topic was explored.

Design: Instructional methods and materials used:

Students were given a presentation on writing MCQs using key points derived from the National Board of Medical Examiners.¹ They were then divided into small groups and tasked with writing USMLE-style MCQs around a predetermined set of answer choices related to glomerular disorders of the kidney. The questions were submitted to the instructor during class and critiqued, revised, and compared in real time.

Outcomes:

On the subsequent exam, students averaged 87.2% on the glomerular disorder questions versus the NBME benchmark average of 74.0% for those items. Anecdotal student feedback was positive and suggested that insight into MCQ construction is valuable for both learning and optimizing exam performance.

Feasibility and transferability for adoption:

The strengths of this approach include simplicity of design and a high degree of student engagement. The outcome analysis is limited by the fact that not all students participated in the exercise, and the number of relevant exam questions was relatively small. Implementation with larger cohorts and more extensive measurement of outcomes is planned to further evaluate the validity of this strategy.

References:

1. Paniagua MA, Swygert KA. (Eds.). Constructing Written Test Questions For the Basic and Clinical Sciences. 4th ed. Philadelphia (PA): National Board of Medical Examiners; 2016. 94 p.

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Required Longitudinal Service-Learning and its Effects on Medical Students' Attitudes Towards the Underserved

Submission Type: Innovation Abstract

Accepted as: Poster

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Abstract Body:

Objective or purpose of innovation:

Our Community Service Curriculum requires all medical students to participate in service-learning throughout all four years. Since a majority volunteer with underserved populations, a primary outcome of interest is how attitudes towards the underserved may be affected by this interaction.

Background and/or theoretical framework and importance to the field:

Studies show medical students' attitudes towards the underserved worsen significantly as they complete their medical education^{2,3,10}. One intervention that may mitigate this pattern is service-learning. Service learning with underserved populations is hypothesized to promote humanistic qualities, and to help students rediscover their altruistic reasons for entering the field^{5,7}. While the implementation of required service learning in medical school curricula is uncommon, several small projects have supported the hypothesized positive impact on attitudes towards underserved populations^{1,4,5,6,7,8,9,11,12}.

Design: Instructional methods and materials used:

Our curriculum emphasizes service-learning in unique but generalizable ways, starting with an initial participatory community learning immersion. After this, each student selects an organization to volunteer for service-learning. With the exception of dedicated study and the initial summer break, students must volunteer at least four hours each month, have required reflections regularly, and continuously collaborate with the organizations regarding goals and projects.

All students in our first class (n=58) took the validated survey, Medical Student Attitudes Towards the Underserved (MSATU) at the beginning of medical school and at the end of their didactic phase.

Outcomes:

We ran a one-way ANOVA comparing the change in opinions towards the underserved in students who interact with the underserved through service learning versus those who do not. Those who interact with the underserved scored with significantly better opinions on the MSATU (<0.05).

Feasibility and transferability for adoption:

This innovation's major strength is that it offers a plausible intervention to the issue of worsening attitudes towards the underserved seen in medical students. Limitations include a small sample size given we are a new school.

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Resident perceptions of an equity, diversity and inclusion (EDI) curriculum during first year of implementation.

Submission Type: Innovation Abstract

Accepted as: Oral Presentation

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Abstract Body:

Objective or purpose of innovation:

(1) Conduct a needs assessment of pediatric residents on culturally-effective care training, skills, attitudes and learning climate; and (2) Analyze resident feedback from a new EDI curriculum to identify strengths and areas for improvement.

Background and/or theoretical framework and importance to the field:

Equity, diversity and inclusion (EDI) curricula in residency may mitigate bias and disparities in healthcare and improve learning climate; however, resident perspectives are rarely reported.

Design: Instructional methods and materials used:

We surveyed 125 pediatric residents to identify gaps in culturally-effective care and learning climate. We then implemented a longitudinal EDI curriculum that consisted of monthly 45-minute didactic sessions and two 4-hour sessions addressing (1) EDI definitions and history and (2) microaggressions. Common themes in residents' free-text feedback were reviewed and synthesized using content analysis.

Outcomes:

109 of 125 residents (87.2%) completed the survey. 25% of residents did not feel their background is valued at our institution and 20% of female residents experience gender-based discrimination at least monthly. Over one year, 323 resident evaluations were received for curricular sessions. Most responses (57.0 %) endorsed an overall positive impression. Key feedback themes include: relevance of lecture topic, need for additional time to cover the content, need for screening tools and patient resources, importance of patient case examples to supplement instruction, and novel/"eye opening" content.

Feasibility and transferability for adoption:

To our knowledge, we are among the first to report on residency learning climate with respect to EDI. Our study does have several limitations. Responses were self-reported and limited to a single, large pediatric residency program. Social desirability bias may have also affected evaluations.

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Simulation-Based Mastery Learning to Teach Distal Radius Fracture Reduction

Submission Type: Innovation Abstract

Accepted as: Poster

Authors:

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Abstract Body:

Objective or purpose of innovation:

This innovation evaluated the effectiveness of a distal radius fracture simulation based mastery learning curriculum to teach reduction to orthopedic surgery and EM interns.

Background and/or theoretical framework and importance to the field:

Distal radius fractures are one of the most common orthopedic injuries managed in the emergency department, but emergency medicine and orthopedic trainees may have limited opportunities to learn to reduce these fractures. Simulation-based mastery learning (SBML) has led to significant procedural competence improvements in other settings.

Design: Instructional methods and materials used:

We created a novel DRF simulator and a mastery learning checklist using the Angoff Method of standard setting. The simulator and checklist were used to create a SBML curriculum for all orthopedic surgery and EM interns (n=22) at the study site. Orthopedic surgery and EM faculty participated in the curriculum design and implementation. A pre-test exam established baseline competence. Training included asynchronous education and a readiness assessment test, followed by expert demonstration and deliberate practice with feedback. Residents completed a post-test exam, requiring reaching a minimum passing score of 90%.

Outcomes:

All participants met the passing score. The pre-test mean for the cohort was 40.2% (SD = 14.7%) and post-test mean was 94.1% (SD = 3.3%), with a skills exam increase of 53.9% ($p < .001$). Post-survey confidence levels were statistically significantly higher than pre-survey confidence in all aspects of the DRF procedure ($p < .001$).

Feasibility and transferability for adoption:

Strengths include multidisciplinary (EM and Orthopedic) development of the training curriculum, and training of interns from both specialties. Post-survey responses confirmed that the feedback received during the training session was thought to be useful for trainee learning and that the mannequin realistically simulated a DRF.

References:

N/A

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Supporting the Development of Whole Physicians through Implementation of a Longitudinal, Spiral, Skills-Based Well-Being Curriculum In ARCH Weeks

Submission Type: Innovation Abstract

Accepted as: Oral Presentation

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Abstract Body:

Objective or purpose of innovation:

This well-being curriculum aims to generate awareness of the structural and individual factors that predispose medical students to burnout and other mental health challenges, and to develop well-being skills that can be incorporated into everyday routines.

Background and/or theoretical framework and importance to the field:

Medical students experience a high prevalence of burnout¹, depression¹, and anxiety². Studies of structured curricula to address these issues suggest that offering a variety of evidence-based skills training is more effective than mandating training in any one area.³ At UCSF School of Medicine, eight ARCH Weeks (Assessment, Reflection, Coaching, and Health) over four years provide protected curricular time for students to develop emotional awareness and healthy habits of mind for working in a complex healthcare system.

Design: Instructional methods and materials used:

The ARCH Weeks scaffold this student-driven, skills-based well-being curriculum. During ARCH Week 1, students receive a foundational didactic on wellness trends and reflect on how they attend to their own wellness. The remaining time is protected for students to choose one mandatory well-being skill selective to explore during ARCH weeks 1 through 4 as a foundational self-care practice. Led by local experts, examples of evidence-based skills offered for exploration include mindfulness, mind-body medicine, nutrition-on-the-run, and reflective writing.

Outcomes:

Outcomes are assessed via student responses to psychometric instruments, selectives' evaluations, de-identified individual well-being SMART goals, and responses from student focus groups. Initial evaluations from ARCH Week 1 show high ratings for skills selectives.

Feasibility and transferability for adoption:

The student-driven, skills-based well-being curriculum within ARCH Weeks is a novel approach to introducing and incorporating wellness training in medical school. Limitations include that this is a pilot program at a single school without a control group to compare pre and post skill-selectives burnout and resilience levels.

References:

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The Case Cover Sheet – A tool used for integration during Problem-Based Learning (PBL) tutorial at University of Nevada School of Medicine (UNLV SOM).

Submission Type: Innovation Abstract

Accepted as: Poster

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Abstract Body:

Objective or purpose of innovation:

An integrated medical school curriculum requires planning and coordination by the various course directors and teaching faculty to ensure seamless execution and avoid missed opportunities for interweaving. We created a tool for PBL tutorials that serves to facilitate discussion that incorporates concepts from the various disciplines of medicine.

Background and/or theoretical framework and importance to the field:

Our preclinical curriculum includes various disciplines of medicine – Emergency response, Population health, Organ system-based basic-science, PBL, Community outreach, Bioethics, Biostatistics, and Epidemiology. PBL comprises 20% of the curriculum, and it's cases are written to reference material presented in all courses - thus, tutorial sessions serve as ideal forums for interweaving. PBL Facilitators, who are clinicians in practice, need notification of the students' curricular activities in order to prompt and emphasize discussion that would allow for synthesis and application of concepts learned from the various courses.

Design: Instructional methods and materials used:

Thus, a concise graphic case cover sheet was created to summarize the students' weekly course topics. The PBL guides are encouraged to review this case cover sheet. A 9-item questionnaire using 5-point Likert scale was devised to evaluate the case cover sheet utility.

Outcomes:

Most PBL Facilitators look at every case cover sheet (4.4), agree that students find value in the faculty's ability to prompt discussion that overlaps with basic science and other courses (4.3), agree that presenting students with opportunities to discuss concepts from various courses allows for application of knowledge that is relevant and meaningful to clinical practice (4.3), and agree that having a case cover sheet is valuable (3.8).

Feasibility and transferability for adoption:

The case cover sheet is easy to produce. There are inconsistencies in the faculty Facilitators' use of the content provided, so faculty development on why and how to emphasize certain discussion would be beneficial.

References:

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The Creation, Evolution and Evaluation of a Student-led Peer Assisted Learning Program

Submission Type: Innovation Abstract

Accepted as: Poster

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Abstract Body:

Objective or purpose of innovation:

We describe the introduction, evolution, and evaluation of our student-led, group Peer Assisted Learning (PAL) medical school program.

Background and/or theoretical framework and importance to the field:

While PAL programs are common among medical schools, there is little consensus on the optimal recruitment and training processes to optimize tutor effectiveness, and variability in reported outcomes.¹ Our medical school has a long standing PAL program composed of individual near peers (MS-3 & MS-4) assisting their colleagues (MS-2 & MS-1) in preclinical basic science courses. In 2017, a student led group PAL program was introduced to provide additional tutoring resources.

Design: Instructional methods and materials used:

The AMEE framework for PAL programs informed the construction and evolution of our school's group tutoring program.^{2,3,4} The Kirkpatrick model was chosen to assess our PAL programs.⁵

Outcomes:

At the end of the 2018-19 academic year, a mix method design using both online class wide surveys and focused small groups were used to assess the effectiveness of our PAL program. Perceptions of the PAL program were favorable from both tutors and tutees (Kirkpatrick level 1). Actual learning was demonstrated in 3 of the 6 preclinical courses by comparing standardized test scores for tutees before (Test Cycle 1) and after (Test Cycle 6) the tutoring program was implemented (Kirkpatrick level 2).

Feasibility and transferability for adoption:

Two well described theoretical frameworks helped guide the development of our group PAL program. We will assess whether actual test and clinical performance of tutors on their clinical rotations was impacted by their experience (Kirkpatrick level 3). Limitations of this study include our preliminary analysis, single institution study, and low response rates to our tutor (13/38) and tutee (77/290) surveys.

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The Heart Sink Visit: Skills for Managing Difficult Encounters in Primary Care

Submission Type: Innovation Abstract

Accepted as: Poster

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Abstract Body:

Objective or purpose of innovation:

To create a workshop the goals of improving residents' comfort with difficult encounters (DEs) and providing participants with a toolkit for managing such interactions.

Background and/or theoretical framework and importance to the field:

DEs encompass 15% of visits due to various patient, provider, and situational factors, taking up a disproportionate amount of time and emotional energy. They compromise providers' ability to provide care, increase burnout, and promote action bias. They also leave patients frustrated, making them more likely to seek second opinions and have poorer outcomes. All providers encounter these situations, but often receive little formal training.

Design: Instructional methods and materials used:

During the workshop, participants reviewed factors that contribute to DEs and discussed skills for mitigating them. Attendees then participated in a pre-visit mindfulness exercise designed to temper personal factors. Finally, in small groups based on the Danish Empathy Model, individuals evaluated personal cases and applied newly learned solutions. Pre- and post-evaluations were collected using a standard 5 point Likert scale and analyzed using chi-squared statistics.

Outcomes:

Eighty-seven evaluations were collected. Pre-course, participants felt neutral about their comfort level (M=3.2) and training for DEs (M=2.9). Most participants reported that they learned a new skill (M=4.3) and felt more comfortable managing DEs as a result of the course (M=4.1). Most agreed that managing DEs was a teachable skill (M=4.5) and that similar workshops should be incorporated into residency (M=4.4).

Feasibility and transferability for adoption:

Strengths: This curriculum is novel, drawing from limited evidence based research and psychosocial literature in an actively growing field of interest with multiple successful iterations.

Limitations: The analysis was based on opinion as opposed to formal assessment of participant knowledge.

References:

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The UCSF Learning and Caring Environment (LACE) Initiative to Optimize Clinical Learning Environments

Submission Type: Innovation Abstract

Accepted as: Poster

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Abstract Body:

Objective or purpose of innovation:

Pilot a comprehensive assessment of clinical learning environments that engages stakeholders to drive improvement.

Background and/or theoretical framework and importance to the field:

There is increasing interest in the role of clinical learning environments (CLE) in medical education. Recent conceptualizations of learning environments recognize their complexity, identifying personal, social, organizational and physical components. This complexity creates potential hurdles for comprehensive quality assessment and effective quality improvement of CLEs.

Design: Instructional methods and materials used:

In the fall of 2018, UCSF's School of Medicine launched the Learning and Caring Environment initiative, to assess the quality of CLEs associated with major clinical departments and identify improvement opportunities. We appointed 4-5 faculty per department to ad-hoc assessment teams charged with multisource data collection about all four components of CLEs. Focusing on student, resident and faculty perspectives, teams collected qualitative data through observations, focus groups and interviews, and collated existing quantitative data (evaluations and surveys). We examined data against four pillars proposed for exemplary learning environments: 1) Shared goal (improving health) between the health and educational systems; 2) Work is learning, learning is work; 3) Value of diverse perspectives/inclusive environment; 4) Continuous improvement for individuals, teams and institutions.

Outcomes:

Thus far, we completed assessment and recommendations reports for Pediatrics and Internal Medicine. The assessment teams shared these reports with clinical and education leadership, and together created actionable plans in response to recommendations. We are too early in the process to draw conclusions about impact on the quality of CLEs, yet have already accomplished

several “quick wins.” For example, supporting pillars 1 and 3, wellbeing initiatives for hospital staff now explicitly include learners.

Feasibility and transferability for adoption:

Sharing information across stakeholders has created opportunities to recognize common goals and formulate plans that benefit all who work, learn and are cared for in CLEs. Qualitative data collection, while time-intensive, adds depth to quantitative data.

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Third Year Resilience Days: Fortifying Students Against Burnout

Submission Type: Innovation Abstract

Accepted as: Oral Presentation

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Abstract Body:

Objective or purpose of innovation:

To improve third year medical students resilience skills by implementing resilience days.

Background and/or theoretical framework and importance to the field:

Medical students experience an increase in burnout and decline in empathy in the clinical years.¹ While many preclinical wellness curricula have been developed,^{2,3} few institutions have focused on resources for the clinical years. In the 2018-19 academic year, we implemented a resilience program that aimed to equip third-year medical students for the challenges they face on the wards, strengthen connections with peers, and improve their sense of well-being.

Design: Instructional methods and materials used:

Factors that contribute to burnout in the third year were identified. Five 90-minute workshops were developed to build coping skills and discuss crucial areas: Gender Inequity, Anxiety, Non-accidental Trauma, Assertiveness, and Death. Space was made in the curriculum for five required "Resilience Days," with topics corresponding to clinical rotations. Time was split between a workshop and bonding with classmates. Midway through and at the end of the academic year, students responded to confidential surveys that assessed their resilience using the Brief Resilience Scale (BRS) and perceptions of the impact of the days.

Outcomes:

Of the class of 160 students, 80% completed the final survey. Of the respondents, 62% experienced a direct positive effect on their mental health from the program, 68% learned new skills, and 61% felt less alone. Less than 5% would have preferred to stay on the wards. There were no significant differences in the BRS scores of the aggregated students in December 2018 (3.00, n=147) or June 2019 (2.99, n=133).

Feasibility and transferability for adoption:

Students cited time for connecting with classmates and learning new skills as strengths of the program. Limitations include inadequate measures to evaluate impact due to multiple factors contributing to resilience.

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Translating Curricular Values into Decision Making Principles for Curricular Transformation

Submission Type: Innovation Abstract

Accepted as: Poster

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Abstract Body:

Objective or purpose of innovation:

To describe the process of creating and using specific curricular values as a framework for curriculum reform.

Background and/or theoretical framework and importance to the field:

Curricular values are fundamental to the construction of meaningful learning environments, program activities and goals, and processes of shared curricular decision making¹. However, discussions of how curricular values are operationalized during curricular transformation is scarce in medical education, with most discussions of curricular change focused on structural or content elements, and values left as vague, idealistic statements within larger change management models^{2,5,6,7,8}.

In 2013, long-standing student evaluations demonstrating cognitive overload, lack of preparation in critical clinical tasks and concerns for student wellbeing, drove the Child Health Advocate/Physician Assistant (CHA/PA) program on a five year journey to curricular transformation. To achieve a complete overhaul of the curriculum, the faculty translated curricular values into clear operating principles and decision-making criteria.

Design: Instructional methods and materials used:

Faculty initially developed five curricular values based on review of the educational literature and iterative discussion - integrated, learner-centered, competency-based, clinical, and creative. In 2015, a review of the curricular values alongside descriptive statements and examples, consolidated the final six curricular values of integration, learner-centeredness, competency-based, contextualized learning, adaptability, and sustainability. In 2018, the values were refined further and codified into the mnemonic LICENSE, for internal and external stakeholders. Posters of the values exist in key decision-making venues and guide faculty decisions when curricular changes are proposed.

Outcomes:

In 2018, two primary values— learner-centeredness and integration were operationalized into practice. In 2019, the values of competency-based and contextualized learning are in operationalization. Sustainability has emerged as a holistic ‘supervalue’, while adaptability speaks to future innovation as values stabilize.

Feasibility and transferability for adoption:

Translating values into practices is time and labor intensive. However, when used as coordinating and orienting mechanisms for curricular transformation, values provide an anchoring benchmark for all activities.

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Using Museums & Galleries in Interprofessional Education: skill development, team building, and reflection

Submission Type: Innovation Abstract

Accepted as: Poster

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Abstract Body:

Objective or purpose of innovation:

This project integrates museum-based sessions into a community-based, interprofessional education program. Project aims include promoting effective teaming, enhancing observation skills, and providing opportunities for guided reflection.

Background and/or theoretical framework and importance to the field:

In this Interprofessional Student Hotspotting program, teams of students work with individuals who have complex health and social needs to provide care coordination and support community-based, person-centered interventions. Students learn to work collaboratively to identify and address social, behavioral and structural barriers to health while developing IPEC competencies.

Design: Instructional methods and materials used:

Museum-based teaming sessions have been designed to prepare students for interprofessional, cross-sector, community-engaged learning. At program kickoff, student teams participate in a Visual Thinking Strategies facilitated examination of artistic work, and a Back-to-Back Drawing Exercise (Objective: enhance observation skills and promote teaming). At program end, student teams participate in Personal Response Tours (Objective: individual and group reflection on the learning experience).

Outcomes:

Student feedback after the first museum-based learning session has been overwhelmingly positive. We hypothesize that the addition of intentional teaming and reflection activities in this novel, non-healthcare setting will cultivate clinically applicable skills including greater interprofessional teamness and IPEC competencies (Interprofessional Attitudes Survey, Blumenthal, 2012 and Student Logbook Analysis), increased tolerance for ambiguity (Intolerance of Ambiguity Scale, Budner, 1962) and enhanced student learning through reflection (analysis of students' written and verbal reflections). This poster will share findings from students' reflective writings.

Feasibility and transferability for adoption:

Education interventions in museum settings, using art as the primary tool for instruction, have demonstrated to be effective learning environments for health professions education. Learning activities can be short, one-time experiences or expanded into a longitudinal curriculum but do require background knowledge and training of faculty, partnership with a museum educator and access to a museum or gallery.

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What factors influence interest in surgical careers by medical students from diverse backgrounds? Building a questionnaire

Submission Type: Innovation Abstract

Accepted as: Poster

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Abstract Body:

Objective or purpose of innovation:

The purpose of this project was to develop a questionnaire to ascertain what factors influence medical students from diverse backgrounds toward or away from surgical careers.

Background and/or theoretical framework and importance to the field:

African-Americans and Hispanic-Americans currently compromise less than 3% and 4% of academic surgical faculty in the US, despite a higher proportion of minority patients. We must explore the reasons for this low interest level in surgery.

Design: Instructional methods and materials used:

We followed guidelines for questionnaire development set by Artino¹. We reviewed the literature and held interviews and focus groups with medical students to guide item development building from a previous study identifying factors influencing student interest in internal medicine². We examined response process with cognitive interviews of students asking about each item on the questionnaire. Medical students participating varied in year of training and interest in a surgical career.

Outcomes:

We held two focus groups with 12 students ranging from first to fourth-year students with varying degrees of interest in surgery. Focus groups and interviews highlighted the importance of social factors in forging opinions about surgery, even prior to matriculation in medical school. Effectiveness of oral and written communication between students and members of a healthcare team influenced student's impressions surrounding a field. Eight students (3 very interested in surgery, 2 mildly and 3 no) took items from the internal medicine survey modified for these points and participated in cognitive interviews eliciting their thinking about each item on the questionnaire. This resulted in minor clarification of items.

Feasibility and transferability for adoption:

This questionnaire incorporates unique social factors that may be influencing interest in surgical fields. However, only UCSF students were used in the development of the questionnaire and thus it may not be widely representative.

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What if I don't kayak? Diversity and inclusion in a Pacific Northwest residency program.

Submission Type: Innovation Abstract

Accepted as: Poster

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Abstract Body:

Objective or purpose of innovation:

Education innovation to improve diversity, inclusion, and equity education in a large, academic internal medicine residency program.

Background and/or theoretical framework and importance to the field:

According to the AAMC, in 2015, 7.7% of full-time U.S. medical school faculty self-identified as underrepresented in medicine (URM), compared to 30% of the U.S. population. Until 2016, the UW internal medicine residency program had limited formal processes to recruit minority physicians. This prompted the founding of a resident-led group to support minority physicians in training.

Design: Instructional methods and materials used:

UW internal medicine residents created an advocacy group, the Resident Diversity Committee (RDC), which worked with residency program leadership to craft an intentional strategy to recruit diverse applicants, foster an inclusive climate for trainees, and integrate social justice principles into the residency curriculum.

Outcomes:

RDC grew from 6 residents and a faculty advocate to 30 current members. The residency program has adopted RDC's intentional recruitment strategy, correlating with a sustained increase in URMs matching at our program. RDC efforts led to the hiring of an assistant residency program director (APD) for diversity and inclusion. Finally, RDC and faculty mentors are creating a workshop on race in medicine for all internal medicine residents.

Feasibility and transferability for adoption:

The Department of Medicine has funded RDC to support equity, diversity and inclusion work by residents. This funding, combined with an APD and formal didactics, allows sustainability

despite trainee turnover. Still, more work is needed. In a 2018 climate survey UW graduate medical education, URM respondents reported lower mean scores than non-URMs on program support of differences by race/ethnicity. There remain few URM faculty. Inclusivity requires sustained effort.

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Research Abstracts

A Call to Medicine: A Multicenter Study of Sense of Calling and Physician Wellbeing

Submission Type: Research Abstract

Accepted as: Oral Presentation

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Abstract Body:

Research Statement/Research Question:

To evaluate associations between sense of calling and physician wellbeing.

Background and relevance of the study:

Medicine is often viewed as a “calling”- a desire to commit one’s life to work that is personally meaningful and socially significant.¹ A sense of calling in arduous fields, such as music and academia, has been associated with greater job satisfaction, commitment, and wellbeing.^{2,3} No studies have determined if similar outcomes exist in medicine. In the setting of strenuous training and demanding careers, sense of calling has the potential to protect physician wellbeing.

Design and Methods:

We conducted an anonymous multi-institutional cross-sectional survey of 1143 faculty internists and neurologists. The survey included five validated scales measuring sense of calling,¹ emotional exhaustion, depersonalization,⁴ cynicism,⁵ resilience,⁶ and work engagement.⁷ Primary outcomes were associations between sense of calling and these markers of wellbeing. Multivariate regressions were used, controlling for site, physician age, gender, race, specialty, years in practice, practice setting, compensation, clinical time, and faculty track.

Results:

A total of 433 physicians (37.8%) responded. Respondents were similar in gender and specialty to the invited population; most were clinician educators (183/393, 47%). Mean sense of calling was 5.04/6.00 (SD 1.17). Twenty-eight percent had symptoms of emotional exhaustion and 12% had symptoms of depersonalization. Sense of calling was negatively associated with emotional exhaustion (beta -0.57, 95% CI -0.69 to -0.44, $p < 0.001$), depersonalization (beta -0.46, 95% CI -0.63 to -0.29, $p < 0.001$), and cynicism (beta -0.60, CI -0.74 to -0.47, $p < 0.001$), and positively associated with resilience (beta 0.14, 95% CI 0.07 to 0.21, $p < 0.001$) and work engagement (beta 0.45, 95% CI 0.36 to 0.53, $p < 0.001$).

Conclusions:

Our findings show that sense of calling has beneficial associations with multiple aspects of physician wellbeing. Educators should find ways to cultivate, advance, and protect sense of

calling in the process of learner professional identity formation to produce well and engaged doctors.

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A Comparison of Medical School Performance Outcomes Between Students With and Without an Identified At-Risk Factor

Submission Type: Research Abstract

Accepted as: Poster

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Abstract Body:

Research Statement/Research Question:

The purpose of this study is to determine if there are differences in Years 3 and 4 medical licensure exams, clinical performance, and “Match” outcomes between students with an identified academic “at-risk” factor and students with no identified “at-risk” factors.

Background and relevance of the study:

Although many students enter medical school with high levels of academic success, their prior experiences may not have fully prepared them for the rigors of medical school. Because medical school requires a large personal and financial commitment, it is important to understand situations where students struggle and determine how academic struggles may impact medical students' success.

Design and Methods:

With IRB approval, members of the medical school staff de-identified a dataset with demographic, application, and examination variables, and this data was examined by researchers from the College of Education. Each medical student with at least one “at-risk” factor was matched with a student from the same application year who did not have any risk factors. Factors used to determine “at-risk” status were measures from years 1 and 2 of medical school including block examination scores, Comprehensive Basic Science Exam scores, and grades from the Practice of Medicine, and Advanced Clinical Skills courses.

Results:

Among the students who met criteria, a significant correlation was found between students with risk factors and those without risk factors on STEP and Shelf exam performance. Students with no risk factors were also significantly more likely to earn honors grades in clerkships than students with risk factors. However, no significance was found between the groups in placing into SOAP during the Match process.

Conclusions:

Students with risk factors can be differentiated from students without risk factors based on STEP exams, Shelf exams, and clerkship grades. Further investigation is needed to understand the underlying causes for the discrepancy of performances between these groups in order to provide additional academic and personal support.

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Academic achievement associated with sleep quality among medical students

Submission Type: Research Abstract

Accepted as: Poster

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Abstract Body:

Research Statement/Research Question:

Is the grade point average (GPA) of the recent semester of medical students associated with their sleep quality?

Background and relevance of the study:

Medical education comprises strenuous study, overnight shifts, and long hours of night study. Poor sleep quality may have a negative effect on academic achievement. This study aimed to determine the association between GPA and sleep quality among medical students at Thammasat medical school.

Design and Methods:

A cross-sectional study was conducted in 2017 at Thammasat medical school, Thailand. A sample of 554 medical students completed a self-reported questionnaire including Pittsburgh Sleep Quality Index (PSQI) to assess sleep quality, Thai perceived stress questionnaire to assess the severity of perceived stress, and Thai depression inventory to assess the severity of depressive mood respectively. Students' characteristic data, duration of sleep per day, duration of using smartphones per day and their GPA of the recent semester were collected. A multivariable linear regression model was used to determine an independent effect of the PQSI score on the GPA adjusting for duration of night sleep per day, duration of using smartphones per day, gender, studying academic year, stress score, and depression score.

Results:

The mean GPA of participants was 3.08 ± 1.12 . The mean duration of night sleep and using smartphones per day were 6.2 ± 1.4 hours and 6.9 ± 3.5 hours respectively. The mean PQSI score was 5.6 ± 2.3 . There were 233 students having poor sleep quality (PQSI score >5) with the prevalence of 42.8 percent. By multivariable linear regression model, the mean GPA decreased 0.06 points (95% confidence interval of $\beta = -0.14$ to -0.01 , $p=0.031$) for every one increasing the PQSI score.

Conclusions:

Poor sleep quality and quantity were evident among medical students at Thammasat medical school. Poor sleep quality is an independent factor associated with a lower GPA.

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Assessing the Impact of Grading Changes on Student Performance and the Learning Environment

Submission Type: Research Abstract

Accepted as: Poster

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Abstract Body:

Research Statement/Research Question:

What impact does a change from Honors/Pass/Fail to Pass/Fail grading have on student performance and wellness during the first 18 months of medical school?

Background and relevance of the study:

The University of Colorado School of Medicine (CUSOM) transitioned from Honors/Pass/Fail to Pass/Fail grading beginning with MS1s in the 2018-2019 academic year (co 2022). This change was made to alleviate stress and decrease student competition, thereby promoting wellness and a collaborative learning environment. However, without motivation to achieve an Honors designation, student performance could decrease on preclinical knowledge exams. As more medical schools consider similar grading changes, it is important to consider the potential positive and negative impacts.

Design and Methods:

Eighteen preclinical exam scores for the co 2022 (no Honors) were compared to the exam scores for the co 2021 (Honors) using the Rasch model, a 1-parameter item response theory (IRT) model. Common items across exams were used to compare student proficiencies, taking into account differences in exam difficulty. Student responses to learning environment and wellness questions on an end-of-phase survey were also compared. T-tests were run on all results to determine statistical significance.

Results:

Student proficiencies were similar across the two cohorts. There were statistically significant differences for five exams, and for three of those exams the estimated student ability was higher for the Pass/Fail students. Average wellness ratings were significantly better for the Pass/Fail cohort, with more than a 20% drop in the number of students reporting burn-out and a 15% drop in reporting feeling overwhelmed. Significantly fewer Pass/Fail students reported that “Competition for grades is intense,” and significantly more reported that “Students spend time assisting each other.”

Conclusions:

The removal of the Honors designation was not accompanied by a decrease in student performance, but student wellness and perceptions of the learning environment significantly increased. These positive outcomes provide support for the implemented grading changes at the CUSOM.

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Does a Coach Role Benefit Coaches? A Cross-Sectional Survey of Coach Self-Efficacy, Job Satisfaction, and Burnout

Submission Type: Research Abstract

Accepted as: Poster

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Abstract Body:

Research Statement/Research Question:

Does self-efficacy, job satisfaction, and burnout differ between longitudinal coaches, those receiving funding for teaching, and those who do not?

Background and relevance of the study:

Coaching is a new role for faculty¹⁻³ and coaches benefit from serving as coaches, particularly in professional development⁴⁻⁶. Clinician-educators including coaches face multiple responsibilities that can both be rewarding and also contributors to burnout^{7,8}. Using Social Cognitive Career Theory⁹ as a framework, we conducted a cross-sectional survey of faculty to compare self-efficacy, job satisfaction, and burnout¹⁰⁻¹⁴ between coach and non-coach faculty.

Design and Methods:

Coaches (funded 20%), faculty with other funded education positions (“funded faculty”), and faculty without funded education positions (“unfunded faculty”) at a state-funded school of medicine completed a 48-item survey in Fall 2019. Questions measured faculty self-efficacy in teaching, professional development, and scholarship; job satisfaction; and burnout. We analyzed results primarily using descriptive statistics, chi-square analyses and analyses of variance followed by post-hoc tests.

Results:

202 of 384 faculty (52.6%) responded with 186 complete surveys. Coaches (n=39) and funded faculty (n=71) had significantly higher professional development self-efficacy than unfunded faculty (n=76) (mean [SD]: 3.63[0.73], 3.77[0.72], 3.29[0.71], $p < 0.001$). Coaches had significantly lower scholarship self-efficacy than funded faculty (3.84[0.93], 4.23[0.37], $p=0.028$). Teaching self-efficacy did not differ across the groups. More coaches and funded faculty experienced high job satisfaction than unfunded faculty (82.1%, 90%, 64.5%, $p=0.001$). Burnout was prevalent, with 56.2% of faculty meeting criteria for burnout. Coaches and unfunded faculty experienced more burnout than funded faculty (64.1%, 63.2%, 44.3%, $p=0.038$).

Conclusions:

Coaches report high professional development self-efficacy and job satisfaction, similar to other funded educators, and higher than peers without funded educational roles. The simultaneous

finding of high job satisfaction and burnout requires further study. We plan to conduct qualitative interviews with faculty participants to further explore these relationships.

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Equity in Learning and Assessment: A Narrative Study of UIM Learner Perspectives Along the Continuum of Medical Training

Submission Type: Research Abstract

Accepted as: Poster

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Abstract Body:

Research Statement/Research Question:

How do UIM learners characterize their achievements, the assessment practices that reflect their achievements, and the concept of equity in assessment during clinical training?

Background and relevance of the study:

Research on UIM learners has focused on deficits: negative learning experiences and lower performance outcomes. However, focusing on deficits does not account for the successes, nor does it capitalize on the strengths and contributions UIM learners bring to the learning environment and patient care. Alternatively, the anti-deficit achievement framework¹ informs research questions about how UIM learners persist and successfully navigate their education. Understanding learner perceptions of successful and equitable assessment practices through the anti-deficit lens will guide efforts towards creating an equitable assessment system.

Design and Methods:

Our study employed narrative research techniques using semi-structured interviews of 20 UIM 4th year medical students and residents to explore individual experiences and achievements. We analyzed interviews using re-storying and thematic analysis.²

Results:

Participants' stories of achievements during clinical training focused on their impact on patient care, and final assessments and grades received. Learners described assessments that captured attainment of competence across competencies, included observation and continuity, and assessed for growth as inherent to achievement. Participants defined an equitable assessment system as one that allows learners to have equal access and opportunity to showcase their skills and knowledge regardless of their background, interest, or identity. An equitable assessment system was characterized as one that raises awareness among clinical supervisors about possible inequities, bias, and the impact of likability on ratings, includes observation of learners, and assesses for growth over time.

Conclusions:

UIM learners characterize equity in assessment and a powerful assessment system in similar ways. Assessment systems that train clinical supervisors on inequities, measure the attainment of a range of competencies and growth, were considered equitable. Our study offers lessons to others working towards creating an equitable assessment system.

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Examining the role of power in conflicts between healthcare professionals

Submission Type: Research Abstract

Accepted as: Poster

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Abstract Body:

Research Statement/Research Question:

This study examines the role of power in conflicts between healthcare professionals and recommends a constructive approach to negotiating power and conflict in healthcare.

Background and relevance of the study:

Conflicts between healthcare professionals can have detrimental impacts on patient care¹⁻⁴; they are largely avoided and perceived negatively by healthcare professionals⁵. Power, which is defined as having influence over others⁶, is thought to play a role in experiences of and response to conflicts. However, this role is poorly understood.

Design and Methods:

We conducted an exploratory research on healthcare professionals' experiences of intra- and interprofessional conflicts. We interviewed 249 randomly-selected healthcare professionals working at academic medical centers in the Pacific Northwest in the United States, in Switzerland, and in Hungary. We identified power as an important component in participants' discourses around conflicts. We report qualitative analyses of the data that highlight the role of power dynamics in conflict experiences.

Results:

When power was involved in conflicts, healthcare professionals reported experiencing a sense of alienation from the team as a result of their perceived lower power compared to their counterparts. They felt that power differentials increased intergroup differences between levels of the hierarchy, between professions, and between specialties. Furthermore, healthcare professionals struggled to engage in conflicts when these conflicts involved power differentials and occurred in front of others such as colleagues, patients, and families.

Conclusions:

Our findings suggest that power can increase feelings of isolation when conflicts occur, posing a threat to the cohesiveness of healthcare teams. Power differentials also prevent professionals from engaging in conflicts, particularly when these conflicts occur in front of others. Given the negative role of power in conflicts, adopting a constructive approach by learning to negotiate power differentials and to use them as resources to engage in conflicts is critical.

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Experiences and Resiliency of First Generation Medical Students - University of Arizona

Submission Type: Research Abstract

Accepted as: Oral Presentation

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Abstract Body:

Research Statement/Research Question:

This study sought to describe and compare the experiences and resiliency of First Generation (FG) college students in medicine at two southwestern universities.

Background and relevance of the study:

60% of FG college students will leave college within the first two years of matriculation^{1,2,3}.

Little is known about FG college students who persist into postgraduate and professional degrees¹. Understanding FG students' experiences in medical school presents an opportunity to understand the protective attributes that lead to their academic persistence.

Design and Methods:

Focus groups were conducted with FG first year students at two southwestern institutions. Ten FG students participated in focus group discussions. Initial analysis of our qualitative data, revealed subtle themes not identified by the current literature. Using Grounded Theory and we developed a more sensitive interview protocol in order to capture a richer data set. Seven interviews (30 – 45 mins.) were conducted and analyzed using Social Justice and Socio-cultural Perspective framework to investigate FG nuanced experiences and relationships with institutional entities.

Results:

Our study revealed FG medical students' perceptions of institutional and social capital at both institutions. Below are our findings:

- FG are motivated to pursue their medical education out of a commitment to family and community.
- FG students seek out and develop strong relationships with individuals who recognize and respect their experiences in and out of our medical school

FG students' family and community are drivers to pursue and complete their medical education. FG valued individual staff and faculty rather than offices or institutional entities that support their retention in medical school.

Conclusions:

FG activate various institutional and social capital to navigate medical school. FG are equipped to engage successfully with supportive staff and faculty. Selecting FG students who are likely to embody these qualities will directly contribute to retaining a diverse physician workforce and improve health outcomes under-served populations.

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Expert reasoning in the context of ill-structured clinical problems: Exploring the experiences and sources of ‘comfort with uncertainty’

Submission Type: Research Abstract

Accepted as: Oral Presentation

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Abstract Body:

Research Statement/Research Question:

We sought to explore the processes that expert clinicians use to determine that they are capable of managing a patient problem despite a lack of certainty about exact nature of the problem. In doing so, we aimed to explore how clinicians identify potential risks, and the actions they take to preemptively mitigate these risks.

Background and relevance of the study:

To act with confidence while simultaneously remaining uncertain is a paradox that epitomizes expert practice.¹ Yet how experts comfortably navigate complex, ill-defined problems remains poorly understood.^{2,3} We sought to examine the behaviors of experts who work in settings rife with uncertainty, exploring what they do to work “comfortably” despite lingering uncertainties.

Design and Methods:

We employed a constructivist grounded theory (CGT) approach to explore experiences of uncertainty in emergency medicine (EM) faculty. We used a critical incident technique (CIT) to elicit narratives about decision-making immediately following participants’ clinical shifts, exploring how clinicians made judgments about whether problems were within their scope of practice, when they felt compelled to enlist others’ help, and how they determined when a problem should be triaged to others. Two investigators analyzed the narrative transcripts, coding data line-by-line using constant comparative analysis to organize transcripts into focused codes, key conceptual categories, and then major themes.

Results:

Participants identified multiple forms of uncertainty, organized around conceptualizations of the problem they were facing and the actions they would consider taking in those moments. They described iterative cycles of forward planning and monitoring that generated variable levels of comfort with the situation. This spectrum of comfort in led to a variety of responses: owning the problem with comfort, co-owning the problem with others, triaging the problem to others, or moving forward despite discomfort.

Conclusions:

Clinicians experience multiple forms of uncertainty. Their multitude of potential responses are informed by variable levels of comfort that result from real-time self-monitoring and forward planning.

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Extinguishing Burnout at its Source: Addressing Wellness Course Efficacy for Medical Students

Submission Type: Research Abstract

Accepted as: Poster

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Abstract Body:

Research Statement/Research Question:

Our research assesses medical student wellbeing, and evaluates whether taking a compassion or mindfulness-based elective course alleviates or minimizes the psychological stress of attending medical school. Our project examines the effects of two CNUCOM student wellness courses, Mindfulness-Based Stress Reduction (MBSR) and Healer's Art, and whether student participation in either course will confer decreased levels of burnout compared to students who do not enroll in either.

Background and relevance of the study:

Attending medical school is considered highly stressful and many studies suggest medical students may be at increased risk of psychological issues, anxiety, burnout, and decreased life satisfaction^{2,5}. Importantly, stress experienced during medical school predicts postgraduate mental health issues and studies have shown up to one-third of physicians have experienced burnout^{3,4}. To combat this trend, wellness courses are being implemented for medical professionals at many institutions. While MBSR and other wellness courses have been studied for physicians, their efficacy for medical students remains unknown¹.

Design and Methods:

We invited CNUCOM medical students to complete an optional online survey based on the Oldenburg Burnout Scale (OLBI) once per semester. We compared the mean OLBI scores of students who took a wellness elective course over the past six months to students who have not taken either course. We analyzed the results using independent samples t-test through the SPSS program.

Results:

Our results show that taking a wellness course may alter burnout scores for subsets of students. Importantly, after completing a wellness elective, students identifying as male showed significantly reduced burnout scores compared to those who did not ($p=0.023$).

Conclusions:

Given that the MBSR and Healer's Art courses appear to reduce burnout in male CNUCOM medical students, ongoing studies will continue exploring gender disparities. Furthermore, analyzing pre-/post-course longitudinal data will improve understanding of medical student

needs and identify programs that alleviate distress, to ultimately reduce burnout among physicians.

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Facilitating Class Culture Committed to Professionalism and Diversity Among Incoming Medical Students

Submission Type: Research Abstract

Accepted as: Poster

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Abstract Body:

Research Statement/Research Question:

We studied the progression of a medical school class through Tuckman's stages of group development.

Background and relevance of the study:

Medical students join a field committed to professionalism and diversity. To accept these values, they need to build such a culture within their class. Tuckman identified 4 stages of systematic group development: forming, storming, norming, and performing¹. The goal of this activity was to help stimulate progression for a class of medical students through these four stages.

Design and Methods:

We promoted the forming stage by dividing MS1's into 16 groups with facilitators. We then promoted storming via a small group exercise that was adapted from the Safe Zone Project's "Identity Signs" activity². The facilitators progressed through a series of questions allowing each participant to share personal and private stories reflecting their past experiences. Next, we promoted the norming and performing stages through a debriefing activity. We evaluated the workshop using a nine-question pre- and post-survey with a 5-point Likert Scale.

Results:

Of 125 students, 89 (71%) responded to the pre-survey and 55 (44%) responded to the post-survey. The overall comfort level of students decreased following the event (4.12 to 4.04). However, the comfort level increased in three areas: having a difficult conversation with classmates, sharing differing opinions, and engaging in conversations about controversial topics (3.44 to 3.71, 3.87 to 3.89, and 3.89 to 3.98, respectively).

Conclusions:

We believe that the overall decrease in comfort level indicates that the class has entered the storming stage because the activity put students in a situation to practice uncomfortable conversations, which they came to realize is more difficult than initially perceived. The three areas of improvement correlate directly with workshop activities and may have helped the class move toward the norming and performing stages.

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Factors Which Influence MMI Ratings at Three Medical Schools: Considerations for Examining Unintended Consequences

Submission Type: Research Abstract

Accepted as: Poster

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Abstract Body:

Research Statement/Research Question:

Scores on the Multiple-Mini Interview (MMI¹) may be influenced by factors related to applicants (differences in interested traits, demographics²), raters (demographics³), or examinations (case difficulty, date⁴). We sought to compare and contrast the influences of such factors in scores at three institutions as a first step in identifying and minimizing unintended influences in the MMI.

Background and relevance of the study:

The MMI, a tool in holistic admissions, may be affected by local factors which result in unintended influences on applicant scores¹. In MMI, applicants interact with and are rated by multiple raters, each with a unique case. These raters and cases vary in stringency and difficulty^{1,4}. Consequently, while it is expected that MMI scores will vary based on differences in applicants' knowledge and skills (an intended factor), the scores may also vary based on unintended factors related to applicant or rater demographics or case characteristics.

Design and Methods:

We analyzed MMI scores from UUSOM, ESFCOM, and UA-TSOM across two admissions cycles using fixed and random effects linear models. These analyses examined the effects on MMI scores of applicant and rater race/ethnicity, age, and gender as well as applicant gender, socioeconomic background, first-generation status, age, or rural background. These analyses revealed the magnitude of change in scores for each demographic factor compared to a reference (male compared to female).

Results:

We found small to modest differences in MMI scores in two or more schools related to all factors studied except rater and applicant age. The largest difference was rater race/ethnicity (black/Latino raters gave higher scores). Rural background had small negative influence in all schools.

Conclusions:

Unintended factors appear to influence MMI scores across schools. The impact of these influences on admissions decisions and ways to mitigate them require further exploration. This insight is important for schools who aim to recruit a diverse student body^{5,6}.

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Faculty and resident perceptions of student challenges when transitioning to procedural clerkships

Submission Type: Research Abstract

Accepted as: Oral Presentation

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Abstract Body:

Research Statement/Research Question:

What are the perceptions and recommendations by faculty and residents for students transitioning into procedural clerkships?

Background and relevance of the study:

Faculty report that students struggle during the transition into procedural clerkships (those that have a surgical or operating room (OR) component). Understanding how faculty and residents see these challenges and eliminating them, educators can develop a curriculum to ease student transition into procedural clerkships.

Design and Methods:

We developed an interview guideline exploring faculty perceptions of student challenges and probed thoughts on curriculum interventions that they believed would be the most beneficial for students. One researcher conducted semi-structured qualitative interviews during the Summer of 2019 with 8 faculty and 8 senior residents in the Departments of Anesthesia, Surgery, and Obstetrics/Gynecology observing students in 5 teaching sites. Site directors purposely sampled participants to represent experience with students and diverse cultural backgrounds. Content analysis is underway and preliminary challenges and curricular suggestions are reported.

Results:

Interviews lasted 30-60 minutes. We identified four primary sources of challenges: clerkship site and logistical differences, level of student experience at the start of the clerkship, inconsistencies due to misinformed clinical educators, and lack of student use of soft skills, such as situational awareness and interprofessional communication. Curricular suggestions included general sessions: anatomy and pharmacology refreshers, simulation sessions to review student responsibilities and integration of OR team members into the curriculum especially related to OR equipment, etiquette, and scrubbing-in. Site-specific suggestions include: simulations to review equipment location, OR etiquette that is site-specific, and having clinical educators introduce the medical student to the OR team.

Conclusions:

This study identifies specific curricular strategies that could reduce the challenges students face when transitioning to procedural clerkships. Curricular interventions must be developed as part of a transition curriculum and within each clerkship site.

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Faculty Attitudes Toward “Value” Influence the Learning Environment for Teaching and Delivering High Value Care

Submission Type: Research Abstract

Accepted as: Poster

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Abstract Body:

Research Statement/Research Question:

The purpose of this study was to explore the clinical learning environment for teaching high value care (HVC) concepts to Graduate Medical Education learners from the perspective of attending physicians.

Background and relevance of the study:

The importance of resident education in HVC, including quality improvement, patient safety, patient experience and cost-conscious care, has been increasingly recognized, with curricular innovations across the continuum of medical education. The informal curriculum, or clinical learning environment in which HVC principles are applied and role modeled, has a significant impact on resident delivery of HVC.

Design and Methods:

Semi-structured interviews were conducted with a random sample of physician faculty at the University of Utah, School of Medicine. Interviews were conducted via Skype, audio recorded, and transcribed verbatim. Transcripts were qualitatively analyzed using an open, focused coding method from the grounded theory model. Common themes were identified, coded, and categorized.

Results:

Twenty-three faculty participated, representing 62.5% of clinical departments. Four major themes were identified: the meaning of value, the physician's role in delivering HVC, engaging learners, and barriers in HVC. The value equation (value = quality / cost) has served as a unifying framework, but is also a source of confusion for faculty, with many continuing to seek a quantifiable unit of “value.” The degree to which physicians implemented HVC principles in their daily practices and their perceived role in delivering HVC varied by departmental barriers. All participants agreed that trainees are important in value improvement initiatives, often as the frontline of healthcare teams, although a constant barrier in engaging them in improvement efforts has been a lack of resources.

Conclusions:

Faculty understanding of HVC concepts influences their willingness and ability to engage

learners in value improvement initiatives and the delivery of HVC. Faculty development in HVC concepts is an important next step to enhance the learning environment for teaching HVC to health professions learners.

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Faculty perceptions of the decision to eliminate tiered grades in core clerkships: a qualitative study

Submission Type: Research Abstract

Accepted as: Poster

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Abstract Body:

Research Statement/Research Question:

In the context of eliminating tiered grades and increasing direct observation and feedback in core clerkships, how do faculty perceive the change?

Background and relevance of the study:

Recognizing challenges with fairness, equity, learning, and wellness in core clerkships, the University of California, San Francisco, School of Medicine eliminated core clerkship grades and added work-based assessments for frequent feedback (Hauer, Dweck).

Design and Methods:

This qualitative study used a grounded theory approach to analyze data from semi-structured interviews (Charmaz, McGrath). Using purposive sampling (Etikan, Robinson), we recruited teaching faculty and education leaders in the Departments of Medicine and Surgery. The interview guide included open-ended questions about participants' perceptions of the new approach to assessment, including advantages and concerns.

Results:

Eighteen faculty participated, including 11 Medicine and 7 Surgery. Faculty expressed optimism about the impact of the change on their clinical educator roles and communicated a desire for faculty development to enhance feedback and evaluation skills. They described benefits to students' learning and wellness but theoretical concern for students' motivation and professional development. Faculty shared uncertainty about larger systemic consequences involving the residency match and institutional reputation. Participants acknowledged that the traditional grading system is imperfect, yet felt that a departure from this system represents significant culture change from the system in which they trained.

Conclusions:

The range of opinions expressed illustrate tensions in faculty perceptions of the grade change in two large departments. Faculty shared varied emotional reactions to the elimination of clerkship grades, experiencing the change as an exciting opportunity that can enhance students' learning and position the institution as an innovative leader within medical education. They weighed these emotions alongside feelings of threat and uncertainty. While discourse about assessment and grading frequently addresses learners, institutions must grapple with the impact of assessment changes on teaching faculty.

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From clerkship grading to assessment for learning: a qualitative exploration of student perceptions surrounding changes to core clerkship assessment

Submission Type: Research Abstract

Accepted as: Oral Presentation

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Abstract Body:

Research Statement/Research Question:

1) How do students perceive learning experiences in core clerkships following elimination of honors grades and enhancement of direct observation and feedback? 2) How do students perceive messaging from supervisors about these changes?

Background and relevance of the study:

Assessment plays a key role in learning.¹⁻⁴ Students perceive honors grading during core clerkships as unfair and inequitable, and negatively impacting their learning and well-being.⁵⁻⁸ Eliminating honors grading and emphasizing frequent direct observation and feedback may address these problems and promote learning.⁹⁻¹⁶

Design and Methods:

In this qualitative study, core clerkship students at one institution participated in semi-structured interviews in summer 2019 exploring learning experiences during the year following elimination of honors grading and addition of twice-weekly observation and feedback from supervisors. Interview questions addressed learning behaviors, student and supervisor attitudes regarding the assessment changes, motivation, team dynamics, and feedback. We analyzed data using a constructivist grounded theory approach.

Results:

Eighteen students participated, including five with experience in both honors-eligible and pass/fail clerkships. We identified 4 major themes that together enabled students to engage with their clerkships and patients following the assessment changes: (1) Students were motivated by learning and patient care rather than by performing to impress supervisors; (2) Students formed close, collaborative relationships with peers and team members that felt genuine rather than hierarchical; (3) Students employed effective learning behaviors, including taking learning risks, seeking and accepting feedback, and practicing reflection; and (4) Students felt a sense of agency, with ability to set learning priorities, attend to personal wellness, and act authentically. Students perceived that while residents supported the grading change, faculty opinions were mixed due to concerns surrounding insufficient tools for differentiating students.

Conclusions:

Students perceive a transition from honors grading to increased feedback as supporting their engagement in learning, thereby benefitting their development and patients' care. Ongoing evaluation of the consequences of this shift in assessment is needed.

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How Institutional Leaders Think about Investing in Educators: Identifying Value Factors.

Submission Type: Research Abstract

Accepted as: Poster

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Abstract Body:

Research Statement/Research Question:

This study aims to identify value factors that university and health systems leaders deem important regarding intramural programs that invest in health professions educators.

Background and relevance of the study:

Investments in educators are vital in health professions education.¹ Measurements of the success of investment in research and clinical faculty are well-defined and widely accepted. However, definitions of value are less clear for programs that invest in educators. Defining value factors that are meaningful to university and health systems leaders should be essential when designing and evaluating such programs. This study explores institutional leaders' perspectives on meaningful value factors in relation to two established intramural programs that invest in educators: an education endowed chair program, and an education innovations grant program.

Design and Methods:

We conducted a thematic analysis interviewing a purposive sample of chancellors, deans, department chairs, and affiliated health systems leaders at the University of California San Francisco. Interview questions were framed with Value Measuring Methodology (VMM) domains: operational, financial, political/strategic, social/societal, and individual.² Interviews were recorded, transcribed, and coded by two investigators. Themes were identified through an iterative consensus-building approach.

Results:

We interviewed thirty-one leaders spanning the institution. Leaders expressed interest in value factors from each VMM domain, both tangible and intangible. By domain, those factors were: Operational - recruitment/retention, education scholarship, educational program; Financial - funding for education; Political/strategic - symbolic, future success of the institution, driving innovation, connecting the organization; Social/societal - improving patient care, training health care workforce, engaging with external community and institutions; Individual - career/stature, developing individuals.

Conclusions:

Institutional leaders described a broad range of value factors, both tangible and intangible, that are important to them when considering the impact of programs that invest in educators/education. This helps inform the rationale, design and evaluation of such programs.

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How Physicians Define and Perceive 'Pimping' - An Instructional Practice They Decline to Recommend

Submission Type: Research Abstract

Accepted as: Poster

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Abstract Body:

Research Statement/Research Question:

How do clinician educators define and value the practice of “pimping” in medical education?

Background and relevance of the study:

"Pimping", an inquiry-based teaching practice that often involves embarrassing learners, has been under intense scrutiny for over two decades^{1,2}. Understanding its perception and value can help us improve how we teach faculty to engage in inquiry-based teaching.

Design and Methods:

This mixed methods study collected data from 137 anonymous physicians within and outside of AZ using a Qualtrics survey of 5-point (non-neutral option) scaled and open-ended items. Analysis includes cross-tabulation; descriptive statistics, and grounded theory.

Results:

No matter how physician participants defined "pimping", they perceived it as "moderately effective", "very effective" or "extremely effective" for teaching medical students/residents in areas related to ACGME competencies: medical knowledge (~70%), critical thinking skills/clinical reasoning skills (~66%), patient care (~51%). Fewer considered this practice as moderately to extremely effective for practice-based learning and improvement (~47%), systems-based practice (external, 33%; AZ, 43%) and professionalism (external, 31%; AZ, 35%). Approximately two-thirds found "pimping" moderately to extremely effective for promoting participation in learning and motivation to learn. Less than half found it moderately to extremely effective for promoting a constructive learning environment (48%, cf 50%, AZ) or confidence in learning (42%, cf, 53%, AZ). The net promoter score for using "pimping" to teach residents (external, -43.48 with 64%, detractors; AZ, -40 with 57%, detractors) and medical students (external, -57.97 with 71%, detractors; AZ, -59 with 65%, detractors) contradicted participants' refusal to characterize it as "learner mistreatment" (64%). Few participants recommended "pimping" for teaching medical students (external, 13%; AZ, 6%) or medical residents (external, 20%; AZ, 17%).

Conclusions:

Participants declined to recommend "pimping" for teaching medical students or residents, and urged constructive inquiry methods that promote professionalism and confidence in learning. Future studies will address how to teach and promote such practices.

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Impact of Using 4th Year Medical Student Documentation for Billing on Students and Faculty

Submission Type: Research Abstract

Accepted as: Oral Presentation

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Abstract Body:

Research Statement/Research Question:

What is the impact of using 4th year medical student documentation (MSD) for billing on faculty/resident administrative burden, and student direct observation, feedback, and learning experiences?

Background and relevance of the study:

In 2018, the Center for Medicare & Medicaid Services (CMS) updated its policy on MSD in order to allow medical students to legally document Evaluation/Management services for billing purposes.

Design and Methods:

Quantitative survey data was collected from medical students and their resident/faculty evaluator counterparts at a major academic teaching center, children's hospital and county safety net hospital. Data collected from 2018-2019 surveys reflect pre-MSD intervention, whereas 2019-2020 data reflects MSD changes. Questions were added to all end of block rotation evaluations. We asked students how often their notes were reviewed by faculty/residents, were included in the medical record, and how valuable note writing was for their learning. In 2019-2020, additional items relating to physical presence, policy adherence, and preparation were added. We also added eight items to the attending/resident assessment of students. Supervising physicians were asked to compare time spent documenting and providing feedback before and after the MSD pilot. Descriptive statistics of these items were calculated and differences between the years were compared using chi-squared test.

Results:

We compared fourth year course evaluations from the first three months of 2019-2020 (n=122) to 2018-2019 (n=1198). 78% of students compared to 49.4% reported that faculty/residents very often or always reviewed their notes ($p < 0.05$). 79.4% vs. 48.3% ($p < 0.05$) report note use in the medical record. 75% of students compared to 48.2% thought note-writing was very useful or essential. From resident/faculty evaluations we found 89.6% reported less or the same amount of time spent on documentation and 90.9% reported more or the same amount of time on providing feedback.

Conclusions:

These results show early benefits of incorporating medical student documentation into fourth year rotations for both students and faculty.

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Implicit Race and Gender Bias, Bias Awareness, and Impact of a Course for Clinical Faculty

Submission Type: Research Abstract

Accepted as: Poster

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Abstract Body:

Research Statement/Research Question:

We developed a plan to rigorously evaluate an online course that examines whether clinician implicit race and gender bias predicts the impact of implicit bias education.

Background and relevance of the study:

Based on student appeals for clinical faculty competence in the area of implicit bias in healthcare we developed and will evaluate the impact of a brief UWSOM course titled: Implicit Bias in the Clinical and Learning Environment.

Design and Methods:

With funding from the Health Research Services Administration (HRSA), using elements of Impact Science framework (creating awareness, catalyzing action, affecting change, disseminating science¹), we assessed implicit bias education for clinical teaching faculty. We proposed to evaluate impact of exposure to the UWSOM course on; provider bias awareness; patient-centered communication; and development of anti-bias behavior strategies. Our online study includes demographic and clinical practice questions, completing a 35-minute online implicit bias course, the Race and Gender Implicit Association Tests, explicit bias measures, pre/post bias awareness scale, pre/post patient-centered communication measured using case vignettes, and open-ended questions about development of anti-bias strategies to improve patient care and teaching. Using publicly available email information, we are recruiting a national sample of primary care providers (PCP) (medical doctors, clinical nursing faculty, physician assistants) from large and small, public and private academic medical centers, in 8 US census divisions. Data analysis includes descriptive statistics, bivariate and multivariate analysis.

Results:

Currently 89 PCPs have completed the study. Our recruitment plan was successful with respondents representing 8 US Census divisions. We will present PCP implicit gender bias and implicit race bias scores, baseline bias awareness scores, post course bias awareness scores, and pre/post communication scores and self-reported action for behavior change.

Conclusions:

Our research is a model for rigorous evaluation of clinical faculty education using an Impact

Science framework. The study model will guide future rigorous evaluation of educational interventions for clinical educator faculty.

References:

1 <https://www.cdc.gov/od/science/impact/framework.html>

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Lessons from the AAMC Core Entrustable Professional Activities (EPAs) for Entering Residency Core EPA Pilot Project: Qualitative Analysis of the M3 Survey

Submission Type: Research Abstract

Accepted as: Poster

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Abstract Body:

Research Statement/Research Question:

The purpose of this study was to understand students' perspectives on the Core Entrustable Professional Activities (EPAs) pilot that broadly inform other current and future EPA-based curricular development and assessment approaches.

Background and relevance of the study:

The Association of American Medical Colleges' Core EPAs were developed to promote a shared understanding of essential tasks graduating students should be able to perform under indirect supervision upon entering residency.¹ Students at the 10 schools participating in the Core EPAs Pilot Project² are important stakeholders in these schools' Core EPAs implementation efforts.

Design and Methods:

An online questionnaire administered to M3 students at the 10 pilot schools in Spring 2019 included two open-ended questions at the end of the survey: "What aspects of EPA implementation at your school" a) "have been most helpful to you as a learner?" (HELPFUL), and b) "could be improved or altered?" (IMPROVE). The data were independently analyzed for themes by two study team members (LS and KM); iterative analysis was performed until consensus was reached.³

Results:

Of 687 M3-student respondents, 335 (49%) provided narrative comments. Across schools, predominant HELPFUL themes included: EPAs created common expectations for learners and faculty; and the culture of feedback was positively impacted by EPA implementation; predominant IMPROVE themes included: the detrimental impact of a lack of general awareness of EPAs among all stakeholders (particularly assessors); and a lack of shared understanding of assessment and feedback of EPAs particularly in relation to grades.

Conclusions:

Students identified the Core EPAs framework as useful in helping them to both understand what is expected in their clinical performance, and to obtain frequent, quality feedback on their clinical skills. Substantive and ongoing-faculty development efforts, communication about curricular and assessment practices, and user-friendly workplace-based assessment systems are warranted for effective implementation of Core EPAs.

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Medical Student Self-Complexity and Resilience

Submission Type: Research Abstract

Accepted as: Poster

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Abstract Body:

Research Statement/Research Question:

To explore the association between self-complexity and resilience using a novel survey instrument tailored for medical students.

Background and relevance of the study:

Exposure to various stressors throughout medical school is associated with depression, anxiety, and burnout. Although personal resilience has been shown to mitigate the effects of stress, further research is needed to identify modifiable behaviors that enhance resilience. One under-explored protector against stress is self-complexity. Self-complexity is a measure of the various activities, roles, and identities that a person holds, and the degree of differentiation between those diverse aspects. Higher self-complexity buffers against stress by allowing life experiences to affect some but not all of a person's aspects.

Design and Methods:

In this cross-sectional study, 112 matriculating first-year medical students (90%) completed an online, confidential questionnaire assessing resilience (Brief Resilience Scale) and self-complexity. Association between self-complexity and resilience was examined through frequency distributions and Pearson correlations.

Results:

Medical students indicated how often they participate in 8 activities that reinforce their personal identity beyond professional work. Students most commonly reported engaging in physical exercise, social events, food culture, media, and mindfulness activities 1-3x per week, and creative expression, community participation, and hobbies less than 1x per week. Scores on the resiliency scale ranged from 2 to 5 with a 3.6 average, with 1 indicating lowest resiliency and 5 indicating highest. No linear association was found between a composite measure of self-complexity and resilience (Pearson correlation= -0.05 and p=0.59).

Conclusions:

Medical students matriculate with normal levels of resilience and engagement in several identity-reinforcing activities. Prospective follow-up surveys will examine changes in breadth and depth of activities and corresponding changes in resilience. For medical schools seeking to help students reduce stress, increasing self-complexity may be a target for intervention by strengthening resiliency and ultimately buffering against depression, anxiety, and burnout.

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Perceptions of Leadership: Residents' struggles in overcoming bias

Submission Type: Research Abstract

Accepted as: Oral Presentation

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Abstract Body:

Research Statement/Research Question:

How do physician residents perceive, respond to and develop bias about clinical leadership?

Background and relevance of the study:

Shared leadership leads to improved healthcare outcomes¹⁻³, yet has been difficult to implement⁴⁻⁷. In a prior study, we identified that bias about professional background and gender influences residents' perceptions of optimal leadership in resuscitations⁸. To design effective interventions to mitigate biases, we must understand how residents engage with and develop these biases.

Design and Methods:

We conducted a qualitative study using thematic analysis, informed by leadership categorization theory. Using a semi-structured guide we interviewed 24 residents from internal medicine and anesthesia, equally distributed over program, training level and gender. During the interview they watched a video-recorded scripted resuscitation scenario with either a female or male nurse practitioner (NP) leader.

Results:

Participants described male and female leaders in the video as confident, calm and competent, but also described female, and not male, leaders as "aloof" and unapproachable. Despite the labeling, most residents on recall identified the leader as a physician. They attributed this to never seeing a NP lead a resuscitation, and not knowing the training or skill set of NPs. Most residents acknowledged the existence of bias related to professional background and gender, more in others than themselves, although many uncovered their own biases during the interview. Residents described leading resuscitations as challenging, but also as "algorithmic" and "simple" when justifying why NPs could lead resuscitations. Finally, residents recognized the cycle of bias, where a female or NP may not be given space to lead, which decreases confidence and thereby ability. This perpetuates the belief that females or NPs cannot lead.

Conclusions:

Resident physicians recognize the existence of bias in healthcare leadership, and struggle with overcoming these biases. Interventions to mitigate bias should focus on increasing understanding of professional roles and disrupting the self-perpetuating cycle of bias.

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Physical Activity and Resiliency Among Medical Students

Submission Type: Research Abstract

Accepted as: Poster

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Abstract Body:

Research Statement/Research Question:

Can regular exercise promote resiliency among medical students?

Background and relevance of the study:

Resiliency theory provides a framework for addressing mental and physical well-being by focusing on positive social and individual variables¹. Bolstering resiliency at medical schools has become a central dogma in the campaign to fight rising early burnout rates and diminished well-being. While regular physical activity has long been associated with psychological health benefits such as reductions in depression², research regarding physical activity's relationship to resiliency appears limited.

Design and Methods:

This study surveyed 124 recently matriculated first-year medical students (response rate: 90%) regarding their weekly exercise habits. Students documented average daily participation in cardiovascular and non-cardiovascular exercise. These rates were correlated to scores on the Brief Resiliency Scale (BRS)³.

Results:

There was no significant positive or negative correlation between exercise frequency and BRS scores (Non-cardiovascular: $R = .165$, $p = .0884$; Cardiovascular: $R = .016$, $p = .886$). Exercise activity was high with 86% of students reporting at least one 30-minute period of cardiovascular activity per week. 100% of students reported at least one period of non-cardiovascular activity per week.

Conclusions:

These findings do not provide support for the hypothesis that regular exercise bolsters resiliency. It is possible such a relationship exists. However, our results may have been affected by the relative homogeneity of students' exercise habits suggesting that students may already be using exercise to bolster resiliency. As we follow this cohort longitudinally, we predict physical activity rates will decline as schooling intensifies and BRS scores will fall. Subsequent analyses will explore additional effect modifiers, confounders, and demographics.

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Scaffolding Self-Assessment of Clinical Skills with Technology

Submission Type: Research Abstract

Accepted as: Oral Presentation

Authors:

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Abstract Body:

Research Statement/Research Question:

The purpose of this pilot project is to improve third year undergraduate medical students' capacity for self-directed learning in clinical skills by improving their abilities to self-assess videos of their performance on clinical skills OSCEs. We used a structured self-assessment tool to answer the question: "Does structured self-assessment help students target their self-directed learning (SDL) needs?"

Background and relevance of the study:

Blanch-Hartigan¹ found that medical students were overall moderately capable of engaging in self-assessment, and they improved over the course of their education. However, a 2012 review of 67 studies on video reflection of patient encounters accompanied by expert feedback found that such interventions yielded better feedback and performance for students^{2,3}. We set out to determine whether technological tools scaffolded self-reflection enough to reduce the need for expert involvement.

Design and Methods:

This mixed-methods pilot examined students' ability to use scaffolded tools to reflect on their videos. A volunteer sample of 55 third-year medical students reviewed a video of their clinical skills OSCE. While they watched the video, they rated their performance along three dimensions (History, Physical Examination, Patient-Physician Interaction). At the end of the survey, students wrote two achievable action items based on their reflections.

Results:

Student self-assessment scores were compared with the student's OSCE scores across and within each category using a paired-samples t-test. Compared to their OSCE scores, students' mean self-ratings underrated their history taking skills by 11.5 points ($df=54$, $p < .001$), overrated their physical exam skills by 24 points ($df=54$, $p < .001$), and underrated their PPI skills by 10.2 points ($df=54$, $p < .001$).

Conclusions:

The discrepancies between students' post-OSCE reflections and their OSCE scores indicates that reflection scaffolding tools alone will not support students' ability to autonomously reflect on their practice, and expert involvement in reflection may promote better SDL.

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Simulation-based training of general surgery residents in the brain death examination

Submission Type: Research Abstract

Accepted as: Poster

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Abstract Body:

Research Statement/Research Question:

Does simulation based training in the brain death examination improve a resident's ability to conduct the examination?

Background and relevance of the study:

Knowledge of, and comfort with, performing the brain death examination (BDE) is an essential aspect of a provider's responsibilities in the surgical intensive care unit (SICU). We hypothesized that simulation-based training (SBT) would improve general surgery resident competence, understanding, and familiarity with the BDE.

Design and Methods:

First and second year general surgery residents underwent a SBT module on the BDE. The participants completed pre, immediately post, and three-month post-simulation surveys. Descriptive statistics and McNemar's test were used for analysis.

Results:

Overall, fourteen residents participated in the SBT. Only three residents had previously performed a BDE. Following the simulation, residents were more comfortable performing the BDE (2/14vs.11/14, $p<0.01$). Participants were more likely to report being knowledgeable regarding the steps (4/14vs.13/14, $p<0.01$), and indications (3/14vs.11/14, $p=0.01$) post-simulation. Residents were more confident in their ability to elicit a cough or gag reflex (2/14vs.13/14, $p<0.01$), occulocephalic reflex (1/14vs.12/14, $p<0.03$), or perform an apnea test (3/14vs.12/14, $p<0.01$).

At three-months, residents were more knowledgeable in the indications for the BDE (2/13vs.12/14, $p=0.008$), and more confident in their skills including eliciting the cough or gag reflex (2/14vs.9/13, $p=0.02$) or occulocephalic reflex (1/14vs.9/14, $p=0.01$). There was no difference in resident comfort with the BDE, knowledge of its steps, or performing the apnea test at 3-months ($p>0.05$).

Conclusions:

SBT of the BDE improved general surgery residents' comfort and understanding of this important aspect of surgical critical care. Though not all gains were durable at three months,

more frequent simulation may improve knowledge retention. Additionally, long term studies are needed.

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Araki T, Yokota H, Ichikawa K, et al. Simulation-based training for determination of brain death by pediatric healthcare providers. Springerplus. 2015;4:412. Published 2015 Aug 12. doi:10.1186/s40064-015-1211-4
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Stress among preclinical medical students is associated with poor academic performance

Submission Type: Research Abstract

Accepted as: Poster

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Abstract Body:

Research Statement/Research Question:

Stress among preclinical medical students is associated with poor academic performance

Background and relevance of the study:

The rigors of the undergraduate medical school curriculum is known to contribute to higher levels of stress among students than their peers within general population. Studies have shown medical student stress levels are linked to numerous variables - burnout, academic satisfaction, female sex, unreasonable academic expectations - and appears to peak in year 3. The relationship between stress and academic performance during medical school has been studied internationally with conflicting results due to varying stress measuring tools, program geographic location, among other reasons. More data is needed regarding documentation of stress and academic performance among U.S medical students.

Design and Methods:

All class of 2021 students (N=58) from the University of Nevada, Las Vegas School of Medicine completed the Perceived Stress Scale before and after the preclinical phase. Quantitative data regarding stress levels were abstracted from the surveys. Students' Mean NBME exam scores were used to rank and divide students into three academic performance-based groups – top 1/3 (N = 20), middle 1/3 (N = 19), bottom 1/3 (N = 19). Data consisting of mean stress scores, standard deviation, 95% confidence interval, minimum, maximum, ANOVA and post hoc analysis were gathered for the three groups.

Results:

The bottom 1/3 group had significantly (<0.05) higher stress levels than both the top 1/3 group and middle 1/3 group. The top 1/3 group and middle 1/3 group did not have significantly different stress levels compared to each other.

Conclusions:

Medical students with lower academic performance have significantly higher stress levels than their colleagues. Low performing students may benefit the most from Wellness activities aimed at reducing stress.

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Supplementing Medical School Curriculum with Student Led Professionalism and Diversity Initiatives

Submission Type: Research Abstract

Accepted as: Poster

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Abstract Body:

Research Statement/Research Question:

We evaluated the effectiveness of a student-led Professionalism and Diversity Committee in promoting medical student development.

Background and relevance of the study:

Professionalism and diversity training are vital components of preclinical medical education and can be difficult to integrate into the formal curriculum. We created a student-led Professionalism and Diversity Committee of students from each class interested in developing interprofessional skills, increasing awareness of internal biases and working with administration towards institutional change.

Design and Methods:

This was a single-center study of second-year medical students. A retrospective pre-post survey asked students how comfortable they felt about ten statements regarding conflict with patients and classmates of different backgrounds (Very Uncomfortable to Very Comfortable). Students also compared their present-day comfort level to one year ago (less, same, more). Finally, students assigned points (out of 100) to interventions based on their relative importance in shaping their views. We used the Tuckman stages of group development (forming, storming, norming, performing) to better understand our results.

Results:

Eighty-nine surveys were returned (71%). Students reported feeling most comfortable while “working with classmates with different cultural backgrounds” (4.48/5) and least comfortable when “sharing differing opinions” (3.08/5). Comfort levels improved for all statements except when asked about “sharing differing opinions,” where a majority reported either no change or

decreased comfort after one year (67.4%). On average, students assigned more points to the intervention, “Small group sessions on difficult topics” suggesting that these sessions were most impactful (25.6/100.0).

Conclusions:

A majority of students felt uncomfortable sharing their opinions with others whose opinions differed, suggestive of group behavior in the storming phase. A medical-student led Professionalism and Diversity Committee may create spaces for skill development to promote increased comfort with these topics thus helping students move through storming and into norming and performing stages and prepare them for the medical profession.

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Tuckman, Bruce W. and Jensen, Mary Ann C. (1977). Stages of Small-Group Development Revisited. *Group & Organization Management*, 2(4), 419-427. Copyright 1977 by Sage Publications. Reprinted by permission of Sage Publications

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Teaching students to practice according to evidence: Does an active-learning information mastery course translate to skill and confidence in finding, appraising, and applying evidence?

Submission Type: Research Abstract

Accepted as: Poster

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Abstract Body:

Research Statement/Research Question:

Does an active-learning course based on the information mastery approach lead to measurable increase in skills required to find, appraise, and incorporate evidence in clinical practice?

Background and relevance of the study:

Clinical decision-making must incorporate the best available evidence. It is not clear what the best way is to teach the skills required to find, appraise, and apply evidence. A relatively recent approach is to teach information mastery instead of teaching traditional evidence-based medicine. Proponents of information mastery argue that the traditional EBM skills do not translate well to clinical practice: cost, lack of time, poor retention of skills, and low confidence are all barriers. Information mastery seeks to build a set of focused skills that enable clinicians to quickly find, appraise, and apply evidence in practice. There is a lack of research that measure the outcomes the information mastery approach in medical education.

Design and Methods:

A class of 58 second-year medical students were enrolled in a semester-long active learning information mastery course. Students complete a pre-course and post-course assessment to measure skill in finding, appraising, and applying evidence. For this we use the ACE tool (Assessing Competency in Evidence Based Medicine). Students also complete a pre-course and post-course survey of self-reported knowledge and skill in evidence management. Results are analyzed using descriptive statistics.

Results:

We've collected pre-course data. The course is presently in progress, and post-course data will be collected in December. Pre-course survey results show an even distribution of self-perceived ability ranging from low to high. Pre-course assessment results show that students have low skill in asking good questions, and very low skill in appraisal and application of evidence.

Conclusions:

We will combine pre-course data with post-course data (to be collected December 2019) to conclude whether the information mastery approach successfully increased skill to find, appraise, and apply evidence or not among medical students.

References:

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Ilic D et al. Development and validation of the ACE tool: assessing medical trainees' competency in evidence based medicine. BMC Medical Education 2014;14:114

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The Consult Cognitive Load Instrument: Development and Validity Evidence

Submission Type: Research Abstract

Accepted as: Poster

Authors:

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Patricia O'Sullivan, University of California, San Francisco, School of Medicine

Abstract Body:

Research Statement/Research Question:

To measure cognitive load (CL) during consults.

Background and relevance of the study:

Effective inpatient consultation is essential for training and patient care. However, our limited understanding of learning during consults fails our inpatient trainees. CL describes the mental effort required to complete a complex task such as a consult. When CL can be measured, learning can be optimized. A CL measure is needed to improve consult learning and, consequently, patient care.

Design and Methods:

We developed the Consult Cognitive Load (CCL) instrument using Wilson's item response modeling approach. We developed construct maps representing three CL dimensions. We selected and refined 12 items by reviewing the literature, discussing findings with experts, and conducting cognitive interviews. We included questions about likely CL predictors for use in latent regression analysis. We developed scoring guides to relate responses to construct map levels. After a pilot (N=33), we requested participation from internal medicine subspecialty fellowship and psychiatry program directors at five University of California campuses. Between March and September 2019, we distributed the CCL to all rotating fellows and residents in participating programs. Trainees completed the CCL once within 24 hours of their most recent new consult. For analysis, we used the Rasch Partial Credit Model.

Results:

Of 326 trainees, 142 (44%) responded during busy inpatient rotations. All items except one had excellent fit. Wright maps showed appropriate banding of thresholds and increase in mean respondent positions, supporting construct validity. Reliability was 0.8 or higher across all CL dimensions. Latent regression highlighted significant CL predictors including consult difficulty and prior consult experience.

Conclusions:

We developed and calibrated an instrument to measure trainee CL during inpatient consults and provided validity evidence. The CCL can now be used to answer research questions about consult learning, address institution-specific questions about trainee CL, track CL formatively for assessment, and determine appropriate trainee consult volume, which may impact rotation structure.

References:

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They don't see a lot of people my color: a mixed-methods study of racial/ethnic stereotype threat in medical students

Submission Type: Research Abstract

Accepted as: Oral Presentation

Authors:

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Abstract Body:

Research Statement/Research Question:

How do medical students experience racial/ethnic stereotype threat (ST) and how does it impact their clinical learning experience?

Background and relevance of the study:

ST is a psychological phenomenon in which members of negatively stereotyped groups worry about conforming to those stereotypes, a fear which impairs performance by increasing cognitive load and inhibiting the display of previously-acquired skills.^{1,2} There are disparities in ST: 56% of medical students from backgrounds underrepresented in medicine (UIM) are vulnerable to ST compared to only 11% of non-UIM students.³ The ways in which ST manifests amongst clinical medical students is not known. Characterizing this phenomenon can enable educators to design interventions to mitigate it.

Design and Methods:

This mixed methods study uses an explanatory sequential design at two institutions. In phase one, we administered the quantitative Stereotype Vulnerability Scale (SVS) to core clerkship students to assess the prevalence of ST. Phase two entailed semi-structured interviews using purposive sampling of diverse students with high SVS scores. We use a qualitative phenomenographic approach to analyze experiences of stereotype threat.⁴ We considered reflexivity through group discussion and journaling.

Results:

Overall, 52% (184/353) of students responded to the survey. Collectively, 28% of respondents had high vulnerability to ST: 82% of black, 45% of Asian, 43% of Latinx, and 4% of white students. We interviewed 18 students with interviews lasting 29-50 minutes. Four cross-cutting themes characterized students' experiences around ST: (1) workplace experiences were consistently colored through the lens of race, (2) internal dialogue around racially-charged events interfered with interviewees' clinical experiences and performance (3) power dynamics complicated participants' navigation of racially charged incidents (4) students developed coping mechanisms to withstand threats on clinical clerkships.

Conclusions:

ST is highly prevalent among minority medical students and interferes with students' learning.

There is a need to develop strategies for allyship and education of faculty to help mitigate the effects of ST.

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Understanding the Learning Environment: What Domains Matter Most?

Submission Type: Research Abstract

Accepted as: Poster

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Abstract Body:

Research Statement/Research Question:

We used an appreciative inquiry approach¹ to explore faculty, resident, and student perceptions of teaching in clinical learning environments, specifically related to successes and challenges. We sought to understand the relative focus of Gruppen et al.'s recently identified four domains² at play in the perceptions shared.

Background and relevance of the study:

The learning environment is central to the quality of learners' medical education experience, especially in clinical settings focused on patient care. Gruppen et al. theorize that the learning environment can be organized into four domains: personal, social, organizational, physical/virtual space.² As a check on this conceptual framework, we explored the extent to which interview and focus group quotations coded as Successes or Challenges focused on each domain.

Design and Methods:

We interviewed 13 faculty and residents from two departments and conducted interviews with four MS4s and focus groups with 20 MS3s. The interviews and focus groups were transcribed and coded at the line-by-line level. Three team members took excerpts coded as Successes or Challenges, and after training, assigned points for each excerpt across the four domains according to the perceived importance of the domain to the perceptions being expressed (e.g., personal = 30; social = 60; organizational = 5; space = 5, totaling 100 points/excerpt).

Results:

The average number of points assigned to each domain varied across excerpts (0 to 80). Successes tended to have relatively more points for the personal (mean = 26.5) and social interaction (mean = 47.6) domains. Challenges tended to have relatively more points for social interactions (mean = 34.1) and organizational (mean = 35.5) barriers.

Conclusions:

Our data help to validate the utility of Gruppen's four domains and reinforce that the four domains are overlapping. Our findings suggest that personal characteristics and social relationships more often contribute to successful clinical learning moments while challenges are more often influenced by organizational components.

References:

1. Cooperider D, Whitney D. Appreciative Inquiry: A Positive Revolution In Change, California: Barrett. In: Koehler Publishers, Inc; 2005.
2. Gruppen LD, Irby DM, Durning SJ, Maggio LA. Conceptualizing Learning Environments in the Health Professions. Academic Medicine. 9000;Publish Ahead of Print.

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What can a student learn from you? A qualitative inquiry of teachers' perceptions

Submission Type: Research Abstract

Accepted as: Poster

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Lynne Robins, University of Washington School of Medicine

Abstract Body:

Research Statement/Research Question:

What do teachers perceive as their unique contributions to student learning in contemporary medical education?

Background and relevance of the study:

The widespread presence of easily accessed digital information, adoption of active and technology-mediated learning formats and changes in clinical-care delivery have substantially transformed medical student education. Little is known about how these transformations influence teachers' roles in facilitating student learning.

Design and Methods:

Teaching faculty at a single institution were recruited using purposive sampling. A single investigator conducted semi-structured interviews; these were audiotaped, transcribed, deidentified and entered into Dedoose software¹. Three researchers used a phenomenological approach² to explore teachers' perceptions of teaching and learning in classrooms and clinical settings. They read a subset of transcripts holistically and created a consensus codebook. Remaining transcripts were coded by a single researcher, with 10 percent independently coded and compared by a second researcher. Excerpts coded as "teacher value added" were grouped into themes and analyzed based on teaching setting (preclinical vs. clinical).

Results:

Fifteen faculty (7 males, 8 females; 12 MD, 2 PhD and 1 DAT) participated. Four faculty taught only in preclinical settings, 4 only in clinical settings, and 7 in both settings. Common themes among all teachers included: interpersonal or communication skills; knowledge application, information organization, critical thinking, enthusiasm for medicine, learning environment management and teaching to the learner's level. Unique themes for preclinical teachers included connecting ideas and fostering curiosity. Unique themes for clinical teachers included role modeling, exposure to real people, dealing with uncertainty, and feedback.

Conclusions:

Teachers identify their unique roles in facilitating complex cognitive processes and tailoring teaching to individual students. Preclinical and clinical faculty identify unique functions in their respective settings. Additional analysis, to be presented, will focus on faculty who teach in multiple settings and unique contributions of PhD vs. MD faculty to medical student learning.

References:

1. Dedoose Version 8.0.35, web application for managing, analyzing, and presenting qualitative and mixed method research data (2018). Los Angeles, CA: SocioCultural Research Consultants, LLC www.dedoose.com.
2. Starks, H and Trinidad, SB. Choose Your Method: A Comparison of Phenomenology, Discourse Analysis, and Grounded Theory. *Qualitative Health Research*; Volume 17 Number 10. December 2007 1372-1380

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Where does biochemistry go? Student experiences across the medical curriculum

Submission Type: Research Abstract

Accepted as: Poster

Authors:

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Abstract Body:

Research Statement/Research Question:

In the context of UCSF's Bridges curriculum, what are student experiences of, and the relationships between, learning biochemistry in pre-clerkship, clerkship, and Step 1 preparation phases?

Background and relevance of the study:

Medical biochemistry is often viewed as a memorization-driven discipline^{1,2}, and tends to be rated less on the Graduation Questionnaire than other disciplines in preparing students for clerkships³. Yet, care for patients with and prevention of several prevalent chronic diseases in the US requires an ability to apply understanding of biochemistry to clinical decision-making. In order to promote deep learning, UCSF provides a metabolic map for students as a reference on exams. Students see the map as a valuable tool for learning, but express concerns that its use may disadvantage them when they take Step 1⁴. Since little is known about the degree to which reducing pre-clerkship rote memorization influences how students' study for Step 1, and how they apply this knowledge in clerkships, this study explores students' longitudinal experiences of biochemistry throughout the curriculum and the interconnectedness of their approaches through each phase.

Design and Methods:

We conducted a thematic analysis after interviews with 10 4th year students about their longitudinal experience with biochemistry. We analysed interviews for key themes through an iterative consensus-building approach, yielding initial codes. Transcripts were double-coded and reconciled.

Results:

Initial results suggest that students consider rote memorization to be a significant focus in preparing for Step 1, and do not feel that focus on conceptual understanding in the pre-clerkship phase necessarily impaired their ability to prepare for Step 1 or in clerkships. However, students perceive biochemistry to be addressed minimally, if at all, during clerkships.

Conclusions:

We will present more in-depth findings and conclusions here.

References:

1. Schumann JH. Would Doctors Be Better If They Didn't Have To Memorize? Shots: Health news from NPR 2015; <https://www.npr.org/sections/health-shots/2015/04/21/401254790/would-doctors-be-better-if-they-didnt-have-to-memorize>. Accessed June 19, 2018.

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Small Group, Workshop and Panel Discussion Abstracts

Competency Committees (CC) in Undergraduate Medical Education (UME)- Utopian Fantasy-Dystopian Reality

Submission Type: Panel Discussion

Accepted as: Workshop

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Carrie Phillipi, Oregon Health & Science University School of Medicine

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Sharad Jain, University of California, Davis, School of Medicine

Abstract Body:

Rationale:

As Schools increasingly embrace the ideal of competency based medical education (CBME), they face the need to develop effective, efficient, and valid processes and structures to assess learner performance in the workplace, both for formative and summative progression decisions. There are many potential barriers to accomplishing this goal, such as the development of practical assessment tools, and faculty and staff training to ensure that these tools are used appropriately. Trainees must also buy in and participate as self-directed learners. Data collection and visualization is needed for accurate interpretation and constructive use. One potential solution for the latter problem, in use in many graduate medical education settings, is the development of competency committees (CC). A few medical schools have piloted the use of CC, some in a targeted cohort of learners.

Learning Objectives:

- 1) Discuss approaches that UME programs have taken in determining the structure and function of CCs, and
- 2) Build on the experience of pilot programs in adapting CCs to their own settings

Session Methods and Format:

0-10 minutes Introductions, needs assessment - small and large group discussion (ARS if possible)

10-30 minutes Challenges faced in thinking about adopting CC - Small group work: learner cases with readiness for progression decisions, followed by debrief

30-45 minutes Examples of CC. Brief Didactic - 2 presenters (7.5 min each) share experience with their CC

45-65 minutes Table topics:

- 1 What is the ideal composition of a CC?
- 2 Who should be assessed and how often (all learners versus 'problem learners' etc.)?
- 3 How should the committee make decisions (what types of data to collect and how /how often)?

- 4 What should be done with the data (formative, summative, and for each, what are the actionable next steps)?
- 5 How can one sustain such an effort-time, money, training?

65-80 minutes Large group report back on above

80-90 minutes Wrap up, questions, evaluations

Experience:

Dr. Butani is the Director of Student Development in the Office of Medical Education at UC Davis

Dr. Plant is the Chair of the Fourth year Oversight Committee (of the Committee on educational Policy) at UC Davis

Dr. Phillipi is a Member of the Core EPA Pilot, and Vice Chair of Education at OHSU

Dr. Long is Director of the UCSF Education in Pediatrics Across the Continuum (EPAC)

Dr. Jain is the Dean of Students at UC Davis

References:

Crossing the Gap: Using Competency-Based Assessment to Determine Whether Learners Are Ready for the Undergraduate-to-Graduate Transition. Murray KE, Lane JL, Carraccio C, Glasgow T, Long M, West DC, O'Connor M, Hobday P, Schwartz A, Englander R; Education in Pediatrics Across the Continuum (EPAC) Study Group. Acad Med. 2019 Mar;94(3):338-345

Competency Committees in Undergraduate Medical Education: Approaching Tensions Using a Polarity Management Framework. Monrad SU, Mangrulkar RS, Woolliscroft JO, Daniel MM, Hartley SE, Gay TL, Highet A, Vijayakumar N, Santen SA. Acad Med. 2019 Jun 4. doi: 10.1097/ACM.0000000000002816

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Dashboard Showcase: The Role of Educational Data Across WGEA Institutions

Submission Type: Panel Discussion

Accepted as: Panel Discussion

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Sean Girard, Washington State University Elson S. Floyd College of Medicine
Claire Cioni, Stanford University School of Medicine
Erin Griffin, University of California, Davis, School of Medicine
Zahra Dabzadeh, University of California, Irvine, School of Medicine
Corrin Sullivan UNLV School of Medicine,
Katherine Wigan, University of California, Los Angeles David Geffen School of Medicine

Abstract Body:

Rationale:

Medical schools have begun to leverage a proliferation of educational data to drive improvements at the individual student and programmatic levels. We are in a time of tremendous creativity and development in how this data is collected, managed, displayed, and shared. However, educators and administrators at each institution may be familiar only with their own school's use of data. This dashboard showcase session will present examples from nine WGEA institutions to convey the breadth of development throughout the region.

Learning Objectives:

1. Differentiate types of dashboards according to their overall purpose, types of data, and visualization methods.
2. Identify the top opportunities and challenges for educators and administrators in driving dashboard development.
3. Analyze the appropriate use of educational data in different contexts and consider the potential pitfalls in this work.

Session Methods and Format:

1. Overview and introduction – 10 minutes
2. Dashboard demonstrations and discussion of lessons learned. Each presenter (nine total) will give a brief demonstration of one or two dashboards from their own institution and discuss the challenges in this work. Each presentation will be capped at five minutes, plus two minutes for Q&A – 65 minutes
3. Q&A and facilitated large group discussion – 15 minutes

Experience:

Michael Campion has led many educational analytics activities at the University of Washington School of Medicine in his role as Director of Academic & Learning Technologies, and has participated in national projects on the topic.

Lina Lander, ScD, is an Associate Dean of Education Technology at the University of California San Diego School of Medicine, where she is responsible for developing and implementing strategies to support the educational mission of the School of Medicine.

Christen White is the Project Manager and Business Analyst for the Academic Affairs Data Mart at University of Washington School of Medicine. She works across units to provide data infrastructure and support from beginning to end of the data lifecycle.

Zahra (Zara) Dabzadeh has served as the Quality Data Analyst on the University of California, Irvine School of Medicine's Education Compliance and Quality (ECQ) team since June 2017.

Michele Doucette has been overseeing the curriculum mapping and reporting for CU School of Medicine Undergraduate Medical Education since 2014.

Sean Girard is part of the founding technology team at Washington State University Elson S. Floyd College of Medicine, and has spent the last three years building and extending the learning and curriculum management system used in the MD program.

Claire Cioni has served as an Evaluation Analyst at Stanford University School of Medicine's Evaluation and Instructional Development team since October 2017.

Erin Griffin, PhD, leads the UC Davis School of Medicine Research, Evaluation and Analytics Unit, and has extensive background in epidemiology, public health, education, data science, statistical modeling, research design, and program evaluation.

Corrin Sullivan, PhD, is Assistant Dean of Education for the University of Nevada Las Vegas School of Medicine, with experience in curriculum operations, curricular development, implementation and coordination, education policy, and organization management.

Katherine Wigan oversees various ed tech projects including dashboard creations using Business Intelligence tools.

References:

N/A

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Imposter Syndrome Across the Continuum of Medical Education

Submission Type: Panel Discussion

Accepted as: Poster

Authors:

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Thomas Flynn, Loma Linda University School of Medicine

Reed Krause, Loma Linda University School of Medicine

Dan Rogstad, Loma Linda University School of Medicine

Tamara Shankel, Loma Linda University School of Medicine

Abstract Body:

Rationale:

First described in 1978 by two clinical psychologists in a group of high-achieving women who struggled to internalize their success,¹ imposter syndrome (IS) has now been described and documented in both men and women across multiple professions from K-12 education, finance, law, accounting, and higher education.² In medical education, imposter syndrome has been described in 30% to 40% of students and residents.^{3,4} Despite significant accomplishments, those suffering from IS are unable to take ownership of their own success. They believe they have achieved success by deceiving others into believing they are intelligent and capable. They live with the fear that they will be discovered as intellectual frauds. This fear is a strong predictor of psychological distress, is linked with perfectionism, often triggers excessive anxiety and self-doubt, and can negatively affect career advancement. In this session, we discuss the medical culture contributions to IS, common triggers for IS, and how the “imposter cycle” may lead to burnout and depression. Panelists provide personal stories of IS across the continuum of medical education from medical school, through residency, and into early and experienced career faculty. Finally, we describe resources and practical tips to recognize, prevent and overcome Imposter Syndrome.^{5,6}

Learning Objectives:

At the end of this session attendees will be able to:

- 1) Define & recognize Imposter Syndrome in oneself and among colleagues along the entire continuum of medical education and professional development
- 2) Describe risk factors and situations that can trigger Imposter Syndrome
- 3) Implement steps to refer, resources to consult, and practical daily tips to overcome the Imposter Syndrome

Session Methods and Format:

- 5 minutes: Introductions, Agenda and Objectives of the Session
- 15 minutes: Overview of the topic, reflective self-assessment quiz
- 30 minutes (7 minutes / person): Personal stories of their own experience with Imposter Syndrome from medical student to resident to early career and experienced faculty
- 30 minutes: Q&A with panelists
- 10 minutes: Closing reflective exercise, next steps and evaluations
- Take Homes include printed and online resources and a self-assessment tool.

Experience:

All authors are from the Loma Linda School of Medicine:

1 Lawrence Loo, MD, (panel moderator) is Professor of Medicine and has spent years counseling struggling students, residents and faculty.

2 Thomas Flynn, BA, is currently a senior medical student, whose undergraduate degree was in Theology before entering medical school.

3 Reed Krause, MD, is currently a third year Internal Medicine resident who is applying to a fellowship program.

4 Daniel Rogstad, MD, PhD, is an Infectious Disease specialist, Assistant Professor of Medicine and recently appointed Assistant Dean for Basic Science Education

5 Tamara Shankel, MD, MSHPEd is an Associate Professor of Medicine and Senior Associate Dean for Medical Student Education

References:

1. Clance P, Imes S: The imposter phenomena in high-achieving women: dynamics and therapeutic intervention. *Psychotherapy: Theory, Research, and Practice*. 1978; 15:241-7.

2. Parkman A: The imposter phenomenon in higher education: incidence and impact. *Journal of Higher Education Theory and Practice* 2016; 16:51-60.

3. Henning K, Ey S, Shaw D. Perfectionism, the imposter phenomenon and psychological adjustment in medical, dental, nursing and pharmacy students. *Medical Education* 1998; 32:456-64.

4. Legassie J, Zibrowski EM, Goldszmidt MA. Measuring resident well-being: impostorism and burnout syndrome in residency. *Journal of General Internal Medicine* 2008; 23:1090-4.

5. LaDonna KA, Ginsburg S, Watling C. "Rising to the level of your incompetence": what physicians' self-assessment of their performance reveals about the imposter syndrome in medicine. *Academic Medicine*. 2018; 93:763-768.

6. Mullangi S, Jagsi R. Imposter syndrome: treat the cause, not the symptom. *JAMA*. 2019; 322:403-404.

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Patient and family designed curricula in all levels of physician education

Submission Type: Panel Discussion

Accepted as: Poster

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Abstract Body:

Rationale:

Authentic patient and family engagement has found a footing at academic medical centers across the U.S. through the inclusion of the voice of patients, families, and caregivers serving on Patient and Family Advisory Councils (PFAC), with engagement mainly focused on quality and patient education activities. At Stanford Health Care, the 10-year old program comprises of 150 patient and family partners who participate in 16 PFACs, Peer 2 Peer Programs, and improvement activities throughout the organization. Recent partnerships have expanded the involvement of patients and families in medical education programs, including in the development and delivery of curricula for medical students, residents, and fellows.

By integrating patients and families from the beginning of the development of the curriculum, they are moving beyond the already powerful role of storytellers. Patients and families are incorporated in the design of curricula, contributing to the decision of what future clinicians need to learn to best care for patients and families. In this process, patients and families help bridge the gaps in traditional physician-defined medical education curricula. This panel has been designed to share each member's unique perspective as a learner, educator or administrator in these programs.

Learning Objectives:

- Define a PFAC, its main purpose and list the potential benefits, initiatives, and results.
- Describe how learners' patient care skills have benefited through engagement with patients and families via a patient-informed curriculum.
- Outline key elements of what is required to develop a program for authentically partnering with and engaging patients and families in medical education.

Session Methods and Format:

The 6-person panel will include two patient and family advisory council (PFAC) board members, one medical student, one EMED resident, one Family Medicine full professor, and one education administrator. A moderator will facilitate the discussion and prompt with key information points.

1-10 min: Moderator to open session with introductions, with an overview of PFACs, the program at Stanford, and the various collaborative programs that our PFAC members are involved in, particularly those pertaining to the education of physicians and medical students.

10-40 min: Each moderator will have 6 minutes each to elaborate on what their experience and involvement with PFAC programs has been, particularly highlighting long-lasting takeaways and practice changes. We will allow for audience questions and engagement during this time.

40-50 min: Questions/answers from participants, as well as key discussion points by the moderator to facilitate deeper conversations, knowledge exchange, and stress important points from the session with the participants. The goal of this time will be to help participants formulate thoughts and ideas about how to adapt our model at their own institutions.

Experience:

2 PFAC members - who have contributed to medical student education curricula

Medical student - who has experienced this curriculum

EMED resident - who has experienced this curriculum

Family Medicine full professor - who has developed and teaches medical student curriculum that integrates PFAC members participation

Education administrator - who has developed and sustains the medical student PFAC.

A moderator - EMED physician who serves as the PFAC director for her department for the past 5 years.

References:

N/A

For more information about this abstract please contact: [vlobo@stanford.edu]

Postbaccalaureate and prematriculation programs that prepare students for academic success in medical school: lessons learned from current medical students

Submission Type: Panel Discussion

Accepted as: Panel Discussion

Authors:

Stephen Schneid, University of California, San Diego School of Medicine and Skaggs School of Pharmacy and Pharmaceutical Sciences

Lindia Willies-Jacobo, Kaiser Permanente School of Medicine

Patrick Loehr, University of California, San Diego School of Medicine

Olivia LaMonte, University of California, San Diego School of Medicine

Laurel Ball, University of California, San Diego School of Medicine

Oluwaposi Omiwade, University of California, San Diego School of Medicine

Russyan Mabeza, University of California, Los Angeles David Geffen School of Medicine

Abstract Body:

Rationale:

The percentage of postbaccalaureate premedical programs (PBPPs) and prematriculation programs has been growing steadily. Since these programs should help prepare students for medical school, their proliferation occurs at a time when medical school admissions committees have been shifting to a more holistic review of medical school applicants with a desire to improve diversity, equity, and inclusion. UC San Diego (UCSD) has two programs that have demonstrated a positive impact on students' academic performance in medical school.

The first program is the Postbaccalaureate Premedical Program (PBPP) offered through UCSD Extension, in partnership with the School of Medicine and Division of Biological Sciences. UCSD PBPP alumni attending UCSD SOM did not significantly differ in their performance in first year basic science courses compared to the rest of the SOM class, even they had lower mean GPA and MCAT scores.

The second program is the 7-week UCSD SOM prematriculation program called Core Topics in Biomedical Sciences (CTBS). The overall performance in CTBS correlates significantly with Year 1 performance and was found to be a strong predictor for Year 1 performance.

Learning Objectives:

By the end of this panel, participants should be able to:

1. Describe the factors that students believe are critical to a postbaccalaureate premedical program in helping them succeed in medical school
2. Describe the skills that are necessary for a faculty advisor to help postbaccalaureate premedical students succeed
3. Describe the factors that students believe are critical to a medical school prematriculation program in helping them succeed in medical school

Session Methods and Format:

1. Overview of the two UCSD programs, including research on outcomes (15 minutes): SS

2. Current medical students from UCSD and UCLA who participated in one or both of these programs and a former faculty advisor will share their experience and how they benefited; (60 minutes): PL, OL, LB, OO, RM, LWJ
3. Audience will have an opportunity to ask the panel additional questions (15 minutes): SS, LWJ, PL, OL, LB, OO, RM

Experience:

Stephen D. Schneid, MHPE teaches basic science to medical students at the University of California, San Diego School of Medicine teaches in the two programs.

Lindia Willies-Jacobo, MD is the Associate Dean for Admissions at the Kaiser Permanente School of Medicine and was the faculty advisor for many of the students on the panel.

Patrick Loehr is a first-year medical student at the University of California, San Diego School of Medicine and alumnus of the UCSD PBPP.

Olivia LaMonte is a first-year medical student at the University of California, San Diego School of Medicine and alumna of the UCSD PBPP and UCSD prematriculation program

Laurel Ball is a second-year medical student at the University of California, San Diego School of Medicine and alumna of the UCSD PBPP.

Oluwaposi Omiwade is a second-year medical student at the University of California, San Diego School of Medicine and alumnus of the UCSD PBPP and UCSD prematriculation program.

Russyan Mabeza is a second-year medical student at the University of California, Los Angeles School of Medicine and alumnus of the UCSD PBPP.

References:

<https://www.aamc.org/download/485324/data/msq2017report.pdf>

Andriole DA et. al. Postbaccalaureate premedical programs to promote physician workforce diversity. J Best Pract Health Prof Divers. 2015; 1036-1048.

For more information about this abstract please contact: [sschneid@ucsd.edu]

Re-envisioning the Role of Pre-Matriculation Programs: Finding Common Ground and Creating Diverse Approaches

Submission Type: Panel Discussion

Accepted as: Panel Discussion

Authors:

Joanna Arnold, University of California, Davis, School of Medicine

Margaret Rea, University of California, Davis, School of Medicine

Sally Fortner, University of New Mexico School of Medicine

Ranna Nash, University of Nevada, Reno School of Medicine

Athena Ganchorre, University of Arizona

Abstract Body:

Rationale:

Medical School pre-matriculation programs (PMP) were originally developed with the primary objective of increasing enrollment and improving academic performance and retention of students from groups in medicine.¹ These programs were typically offered only to students from financially or educationally disadvantaged backgrounds and provided instruction in basic sciences including anatomy, histology and biochemistry. In the last ten years, the number of medical schools offering a PMP has increased significantly. Literature suggests that a majority of these programs follow the traditional model focusing on specific student populations with the goal of improving academic success and retention despite the fact that outcome data is limited.²⁻³ In the absence of compelling data to support the historical model, some institutions are re-envisioning the role of the PMP and developing programs to better meet the specific needs of their institution and student population.⁴ This panel will present four unique PMPs each designed to achieve institution specific goals and objectives. Panelists will describe program length, population served, student selection, curriculum and outcomes. Following the panel presentation, session participants will have the opportunity to discuss elements of each of these programs and consider new directions for implementing or re-designing a PMP to fit the mission of their home institution and meet unique needs of their student population.

Learning Objectives:

- Describe the historical model of medical PMPs and identify potential limitations.
- Compare/contrast four unique models for a medical PMP.
- Evaluate relevance of PMP models to context of their home institution.
- Apply knowledge of local context and PMP models to consider design or restructure of a PMP.

Session Methods and Format:

Introduction (5 minutes): Historical models and current landscape

Panel Presentation (40 minutes): Four unique PMP models:

- 1) Focuses on development of cognitive skills, clinical reasoning and social belonging.
- 2) Mandatory PMP focusing on reflective practice, communication, help-seeking behaviors and professional development.
- 3) PMP for students in an 8-year BA/MD program focusing on wellness frameworks, budgeting, and learning strategies.

- 4) Focuses on helping non-traditional students build a network to facilitate social support and academic success.

Audience Questions (10 Minutes)

- Opportunity to ask questions of presenters.

Small Group Discussion (20 minutes)

- Using information presented by panelists, participants will identify needs at their home institution that could be addressed with a PMP and describe a model to meet identified needs.

Large Group Discussion and Wrap-up (20 minutes)

- Small groups will have the opportunity to share insights from their discussion.

Experience:

Joanna Arnold developed the elements of the UC Davis PMP focusing on cognitive skills and clinical reasoning.

Margaret Rea developed the elements of the UC Davis PMP focusing on resilience and social belonging.

Sally Fortner is the co-creator of and director for the JumpStart course for the Combined BAMD program at the University of New Mexico School of Medicine.

Ranna Nash is the creator of MedFIT and developed sessions focusing on team development, cognitive skills, professional development, and resilience.

Athena Ganchorre developed and facilitates portions of the UACOM PMP focused on academic support and the development of peer learning communities.

References:

1. Hairrell, AR, et al. Impact of pre-matriculation instruction on student acculturation and first-year academic performance in medical school. Medical Sci Educ. 2016;26:519.
2. Heck AJ, et al. A survey of the design of pre-matriculation courses at US medical schools. Med Sci Educ. 2017;27:229.
3. Schneid, SD et al. A summer pre-matriculation program to help students succeed in medical school. Adv in Health Sci Educ. 2018;23:499.
4. Heck AJ, Underwood T. A pre-matriculation course that focuses on a metacognitive approach to learning. Med Sci Educ. 2016;26:515.

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A Standardized Approach to Patient Identifiers in Medical School Curriculum to Reduce Bias

Submission Type: Small Group Discussions

Accepted as: Small Group Discussion

Authors:

Amanda Kost, University of Washington School of Medicine

Peter Fuerst, University of Washington School of Medicine

Abstract Body:

Rationale:

Language and social constructs such as race and gender impact both health and power. How language is used can lead to conscious and unconscious acts of discrimination, bias, and stigmatization. Students and faculty raised concerns about how patient identifiers (including age, gender/sex, race/ethnicity, ability etc.), were used during teaching. The University of Washington School of Medicine (UWSOM) convened a workgroup to research and make recommendations about use of seven patient identifier areas in the curriculum. The 22-member workgroup included faculty, staff, residents, and students from all 4 years. The workgroup reviewed available literature and drafted recommendations about how to use patient identifiers for seven areas: age, gender/sex, race/ethnicity, sexual orientation, disability, size, and stigma in the curriculum. The 22 draft recommendations were sent to over 11,000 students, faculty, and staff associated with the medical school for public comment with 437 respondents. After revision of initial recommendations based on stakeholder feedback, 3 rounds of a consensus process with 27 key stakeholders led to the formal adoption of 12 recommendations in the seven areas. The recommendations were adopted by our doctoring course and working group members created guidelines for implementation of the recommendations in the basic science courses. Next steps will include implementation guidelines for clerkships for the recommendations. Overall, use of the recommendations will standardize the approach to the use of identifiers, ensuring clarity and transparency to students, with a goal of decreasing bias in oral and written communication about patients. To our knowledge, we are the first medical school to undergo an institution-wide process to standardize the use of patient identifiers with the goal to limit bias and stigma across the entire curriculum.

Learning Objectives:

1. Summarize medical literature regarding patient identifiers.
2. Discuss one institution's recommendations for key patient identifiers.
3. Describe responses from stakeholders at that institution about the identifier recommendations and implementation considerations.
4. Dialogue about the role of patient identifiers in the quest for health equity.

Session Methods and Format:

Welcome and introduction – 2 minutes

Review of methods to generate patient identifier recommendations – 10 minutes

Group discussion of what other schools have done and their responses to the process and recommendations – 10 minutes

Review of implementation considerations for basic science courses and the doctoring course – 10 minutes

Group discussion of implementation considerations – 5 minutes

Group discussion about how patient identifiers can promote health equity – 5 minutes

Wrap and take home points – 3 minutes

Experience:

Amanda Kost chaired the patient identifier workgroup and is the course director for a required longitudinal course on health systems science that includes content related to diversity and health equity. Peter Fuerst was a member of the patient identifiers workgroup and is the block director for the basic science course that includes genetics, biochemistry, and other fundamental concepts.

References:

Acquaviva KD, Mintz M. Are we teaching racial profiling? The dangers of subjective determinations of race and ethnicity in case presentations. Acad Med. 2010;85(4):702-705.

Eckstrand KL, Potter J, Bayer CR, Englander R. Giving context to the physician competency reference set: Adapting to the needs of diverse populations. Acad Med. 2016;91(7):930-935.

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A Wellness Black Hole: Multi-Specialty Institutional Approaches to Parenting and Childcare in Graduate Medical Education

Submission Type: Small Group Discussions

Accepted as: Small Group Discussion

Authors:

Marguerite Spruce, University of California, Davis

Alicia Gingrich, University of California, Davis

Matthew Adams, University of California, Davis

Margaret Rea, University of California, Davis, School of Medicine

Susan Guralnick, University of California, Davis

Abstract Body:

Rationale:

Well-Being has risen to the forefront in the GME world, finally achieving recognition as a central issue of training. However, a critical aspect of well-being is often left unconsidered. The majority of GME trainees are in that time of life when decisions and actions regarding parenthood, parenting, and childcare must be made. The breadth and impact of these considerations are enormous, with personal and professional factors, including the impact on a resident's training, training program, personal and family life, and resulting stress. Some programs and institutions have made significant efforts to address these issues, providing access to a variety of resources and support. Many more have not. The workshop leaders will present data from a survey of residents and fellows across all specialties at their institution (184 respondents, 66.9% medical and 33.1% surgical) regarding parenting and childcare. They will present information about often under-recognized problems that fall into one of three key domains: timing of childbearing, childcare, and burnout. They will also propose solutions. Participants will work in small groups to assess and discuss how their programs and institutions have addressed, or plan to address, these key domains. They will leave with new ideas, resources, and tools they can apply and adapt at their home institutions.

Learning Objectives:

- Identify critical well-being issues faced by residents and fellows regarding parenthood, parenting, and childcare
- Apply available data regarding key domains considered by residents regarding parenthood, parenting, and childcare during GME training
- Propose resources to assist trainees with decisions, solutions, and support regarding parenthood, parenting, and childcare issues during GME training

Session Methods and Format:

- Panel Introduction (2 minutes)
- Presentation of Survey Results (8 minutes)
- Small Group Activity #1: Discussion of the Key Domains (15 minutes)
 1. Timing of parenthood
 2. Childcare
 3. Burnout
- Brief panel overview of the domains based on survey results and available literature

- Participants will then discuss these domains in small groups with a focus on their institutional experiences and potential methods for improvement.
- Small Group Activity #2: “Design a Parent-Friendly Training Program” (15 minutes)
- Using the information gathered from the presentation and discussion, participants will be tasked with designing a residency program that encourages and supports trainee parents.
- Concluding Remarks and Large Group Discussion (5 minutes)

Experience:

Marguerite Spruce is a surgical resident and mother who created and administered the survey.

Alicia Gingrich is a surgical resident and mother of 3 who analyzed the survey results.

Matthew Adams is an internal medicine resident and father.

Margaret Rea is a psychologist and mother who has spent 15 years counseling individual residents and developing institutional programs to improve well-being in UME and GME.

Susan Guralnick is a professor of pediatrics, Associate Dean for GME, former residency program director and proud mother of 3.

References:

Cole S, Arnold M, Sanderson A, Cupp C. Pregnancy during otolaryngology residency: experience and recommendations. *Am Surg.* 2009;75(5):411-415.

Sandler BJ, Tackett JJ, Longo WE, Yoo PS. Pregnancy and Parenthood among Surgery Residents: Results of the First Nationwide Survey of General Surgery Residency Program Directors. *J Am Coll Surg.* 2016;222(6):1090-1096. doi:10.1016/j.jamcollsurg.2015.12.004

Stack SW, McKinney CM, Spiekerman C, Best JA. Childbearing and maternity leave in residency: determinants and well-being outcomes. *Postgrad Med J.* 2018;94(1118):694-699. doi:10.1136/postgradmedj-2018-135960

Mayer KL, Ho HS, Goodnight JE. Childbearing and child care in surgery. *Arch Surg Chic Ill 1960.* 2001;136(6):649-655. doi:10.1001/archsurg.136.6.649

Snyder RA, Tarpley MJ, Phillips SE, Terhune KP. The case for on-site child care in residency training and afterward. *J Grad Med Educ.* 2013;5(3):365-367. doi:10.4300/JGME-D-12-00294.1

Berkowitz CD, Frintner MP, Cull WL. Pediatric resident perceptions of family-friendly benefits. *Acad Pediatr.* 2010;10(5):360-366. doi:10.1016/j.acap.2010.06.013

Herman RE, Koppa D, Sullivan P. Sick-child daycare promotes healing and staffing. *Nurs Manag (Harrow).* 1999;30(4):46-47.

Holliday EB, Ahmed AA, Jagsi R, et al. Pregnancy and Parenthood in Radiation Oncology, Views and Experiences Survey (PROVES): Results of a Blinded Prospective Trainee Parenting and Career Development Assessment. *Int J Radiat Oncol Biol Phys.* 2015;92(3):516-524. doi:10.1016/j.ijrobp.2015.02.024

Brown EG, Galante JM, Keller BA, Braxton J, Farmer DL. Pregnancy-related attrition in general surgery. *JAMA Surg.* 2014;149(9):893-897. doi:10.1001/jamasurg.2014.1227

For more information about this abstract please contact: [mfwinkler@ucdavis.edu]

Approaching Evolving Medical Student Needs: An Investment in Curricular Staff

Submission Type: Small Group Discussions

Accepted as: Poster

Authors:

Krista Newberry, UC Davis School of Medicine
Polly Latow, UC Davis School of Medicine
Mary Paliescheskey, UC Irvine School of Medicine
Andrea Martinez, UC Irvine School of Medicine

Abstract Body:

Rationale:

Medical students routinely contact curricular staff for logistical, academic and psychological support. We have noted over the past few years that Curricular staff are being approached by students with increasingly more diverse and complex issues, often needing immediate response. This is of concern because Curricular support staff training and expectations have not changed and differ from that of a Student Affairs staff. The adverse impact on Curricular staff was recently evidenced in the 2019 Staff Engagement Survey at UC Davis.

This small group discussion will explore examples of strategies and resources that schools have implemented to address the increasing demand and how effective the changes have been in supporting student wellness, contributing to a positive learning environment (LCME Element 12.3) and addressing staff well-being and effectiveness. Recommendations about communicating expectations, trainings, resources and support will be solicited from participants.

Learning Objectives:

At the end of the sessions, the participants should be able to:

- 1) Describe current resources and training provided to Curricular staff for addressing student support
- 2) Discuss different perspectives and methods of how to appropriately handle medical student concerns
- 3) Identify ideal onboarding and training opportunities to support Curricular staff

Session Methods and Format:

This session will begin with an overview of the current status of the impact of student demand on curricular staff at UC Davis and UC Irvine.

- Overall Introduction - framing the issue (5 minutes)
 - School A (10 minutes) *
 - School B (10 minutes)

*Each school will highlight current strategies their institution has implemented to support Curricular staff & share some examples of challenges that continue to arise that confirm the need for further training and support for staff.
- This presentation will be followed by a small group discussion at each table about the types of training made available to Medical Education staff in relation to handling medical student needs and demands at WGEA schools (30 minutes).

- Participation in the discussion will be encouraged using audience response tools, handouts and prompting questions. Areas of specific discussion will include nature of student demands, impact on Curricular staff, institutional barriers and solutions to meet staff needs.
- Each small group will have a representative present a summary of their group's discussion (20 minutes).
- The remaining time will be used for a brief summary and question & answers (15 minutes).
- Information shared by the small groups will be compiled and distributed to participants in a summary report which will be sent out after the conclusion of the WGEA conference by the activity authors.

Experience:

Polly Latow, is the Third and Fourth Curriculum Manager at the UC Davis School of Medicine
 Andrea Martinez, MHA is a Curricular Affairs Coordinator at the UC Irvine School of Medicine
 Krista Newberry, is the PreClerkship Curriculum Manager at the UC Davis School of Medicine
 Mary Paliescheskey, is a Curricular Affairs Coordinator at the UC Irvine School of Medicine.

References:

Hu, Wendy; Flynn, Eleanor; Mann, Rebecca; Woodward-Kron, Robyn: From Paperwork to Parenting: Experiences of Professional Staff in Student Support, 2016 John Wiley & Sons Ltd and The Association for the Study of Medical Education; MEDICAL EDUCATION 2017 51: 290–301

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Benefits and Barriers of Interprofessional Education Beyond the Classroom

Submission Type: Small Group Discussions

Accepted as: Small Group Discussion

Authors:

Boyd Richards, University of Utah School of Medicine

Sara Hart, University of Utah

Wendy Hobson-Rohrer, University of Utah

Haley Godwn, University of Utah School of Medicine

Abstract Body:

Rationale:

Medical schools need to include interprofessional education (IPE) in their curricula not only to meet accreditation standards but to optimize students' readiness to practice in today's team-based healthcare environment. This is most often accomplished in classroom settings.

IPE is defined as "an intervention where the members of more than one health or social care profession learn interactively together, for the explicit purpose of improving interprofessional collaboration or the health/well being of patients/clients, or both."¹ Benefits of IPE for learners continue to emerge in the literature (e.g., development and promotion of interprofessional thinking and acting, promotion of beneficial information and knowledge exchange)². Barriers have also been identified (e.g, coordinating curricula across professions, shared endorsement)².

Increasingly, IPE advocates recognize that interactive IPE in clinical settings is preferable to classroom based settings."³ The focus of this session will be to explicitly explore benefits and barriers to inclusion of IPE in clinical context. We believe that this is an important and timely topic because many medical schools, including the University of Utah School of Medicine seek to move more of their clinical training outside of the university hospital and into community, rural and underserved settings (See UUSOM RUUTE program or OSHU's COMPADRE program, for example). As we do so, we argue that optimizing IPE should be a prime objectives. In this session, we support this argument by showcasing three different examples of clinically based IPE training opportunities at the UUSOM: 1) student hotspotting⁴ (team of students work with patients who frequently use ERs to assess and resolves reasons for overuse of services), student run clinics, an ambulatory outpatient clinic for the underserved. These examples will serve as a springboard to a rich discussion of the benefits and barriers to expanding such programs more widely.

Learning Objectives:

- Identify benefits and barriers of situating IPE in clinical contexts
- Describe one or more success stories of IPE in a clinical context
- Identify opportunities for increasing IPE in clinical context at your institution

Session Methods and Format:

- [5 minutes] Introduction to the rationale, importance, timeliness, and relevance of IPE beyond the classroom
- [15 minutes] Descriptions of each of the following IPE settings at UUSOM: 1) hotspotting, 2) student run clinic, 3) ambulatory outpatient clinic for the underserved. We will prepare a distribute a handout with descriptive information about each example to save time.

- [25 minutes] Q&A period followed by guided discussion using the following questions:
 - What are some of the benefits and barriers of IPE in clinical contexts?
 - What lessons can be learned from the shared examples about overcoming barriers to realize benefits?

Experience:

Sara Hart, PhD, RN, is Director of Student and Community Engagement & Associate Professor of Nursing.

Wendy Hobson-Rohrer, MD, MSPH, is the Executive Medical Director of the South Main Clinic and Associate Vice President, Health Sciences Education.

Haley Godwin is a student leader of the Midvale student-run clinical in Salt Lake City.

Boyd Richards, PhD, is Director of Educational Research and Scholarship, with many years experience supporting/evaluating a yearlong LIC in Cooperstown, New York.

References:

1. Reeves S, Perrier L, Goldman J, Freeth D, Zwarenstein M. Interprofessional education: effects on professional practice and healthcare outcomes. Cochrane Database of Systematic Reviews. 2013(3).
2. Homeyer S, Hoffmann W, Hingst P, Oppermann RF, Dreier-Wolfgramm A. Effects of interprofessional education for medical and nursing students: enablers, barriers and expectations for optimizing future interprofessional collaboration - a qualitative study. BMC Nurs. 2018;17:13-13.
3. Walmsley L, Fortune M, Brown A. Experiential interprofessional education for medical students at a regional medical campus. Can Med Educ J. 2018;9(1):e59-e67.
4. Hotspotting to Improve Care, Lower Costs, <https://uofuhealth.utah.edu/innovation/blog/aamc/2013/aamc13-hotspotting.php>

For more information about this abstract please contact: [boyd.richards@hsc.utah.edu]

Bringing Critical Race Theory To Medical Education: Achieving Health Justice Through Critical Pedagogy

Submission Type: Small Group Discussions

Accepted as: Small Group Discussion

Authors:

Edwin Lindo, University of Washington School of Medicine

Abstract Body:

Rationale:

Critical Race Theory (CRT) is a pedagogical and theoretical framework that has proven effective in bringing practices of equity and justice to other fields, like Law and Education by using a racial justice lens. It is time that CRT be brought to Medicine. Our students and trainees rightfully demand that we create an environment that embraces their unique differences, doesn't marginalize them, and simultaneously brings equity and justice to our patients. This is no easy task, but CRT and Critical Pedagogy can provide us a framework on the path we can pursue to get much closer than we currently are. The presenter will discuss the course he created at UW School of Medicine called Critical Race Theory & Medicine and the feedback from students who took the course.

Learning Objectives:

1. Understand the tenets of Critical Race Theory and Critical Pedagogy
2. Appreciate how Critical Race Theory and Critical Pedagogy can achieve positive outcomes when applied to Medical Education, Medical Research, and Teaching.
3. Explore how CRT and Critical Pedagogy can be applied by attendees in their institutions.
4. Understand the benefits of having CRT in the Medical Education curriculum.

Session Methods and Format:

30 mins: Presentation on CRT

15 mins: Q&A that will include a case study for attendees to practice implementing Critical Race Theory and Critical Pedagogy tenets.

Experience:

Edwin Guillermo Lindo, JD is faculty in the Department of Family Medicine where his work focuses on topics of Race, Racism, and Health Justice; is the Associate Director for Critical Teaching and Equity within the Center for Leadership and Innovation in Medical Education; and creator of the medical school course, Critical Race Theory & Medicine.

References:

N/A

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Case Based Active Learning with an Electronic Medical Record

Submission Type: Small Group Discussions

Accepted as: Small Group Discussion

Authors:

Dustin Worth, University of Washington School of Medicine

Abstract Body:

Rationale:

While case based learning has increased in medical education, the majority of such cases are delivered live¹. This presentation explores the advantages of increased interactivity when technology is utilized. With an innovative delivery via an electronic medical record (EMR), foundation students are also exposed to the intricacies involved in practicing with an EMR.

Learning Objectives:

- 1) Recognize the static nature of paper-based case presentations
- 2) Identify opportunities for students to "be the physician" rather than passively being fed information - i.e. searching the chart, ordering studies, prescribing treatment, etc.
- 3) Adapt cases to technology

Session Methods and Format:

Will start with a 20 minute presentation describing the process of adapting a paper-based case to an interactive format within an EMR. Emphasis is on identifying the physicians role, within the case, and engaging students to take on that role. A 5 min video is then shared, showing delivery to a group of 40 first year medical students. The session will conclude with 20 minutes for questions and discussion regarding opportunities to utilize technology in improving case based learning.

Delivery has previously been given at the American Medical Association's ChangeMedEd™ 2017 Conference.

Experience:

Family Medicine physician, with background in computer science, teaching since 2015, very excited to integrate medicine, teaching, and computers.

References:

Case-Based Learning and its Application in Medical and Health-Care Fields: A Review of Worldwide Literature; Susan F. McLean, J Med Educ Curric Dev. 2016 Jan-Dec; 3: JMECD.S20377.

For more information about this abstract please contact: [dworth@uidaho.edu]

Don't let your article get eaten by the shark (of predatory publishing): considerations, criteria, and tools for publishing open access

Submission Type: Small Group Discussions

Accepted as: Small Group Discussion

Authors:

Karen Heskett, University of California, San Diego School of Medicine

Terry Henner, University of Nevada, Reno School of Medicine

Abstract Body:

Rationale:

Medical school faculty have long been under pressure to publish in academic journals.¹ As schools place increased emphasis on student research, medical students, too, are seeking publishing opportunities. With the increasing emphasis on both faculty and student research and publishing, faculty as well as students need to be more aware of the latest trends in scholarly publishing. The Association of American Medical Colleges 2018 Medical School Graduation Questionnaire showed an upward trend in medical student participation in scholarly research with 50% reporting they authored a peer-reviewed article.² Additionally, students are building a record of publication as a tactic to improve chances of matching in competitive to residency programs.³ Evolving trends in the publishing industry, together with advances in information technologies have spawned new types of venues for these scholarly communications. These include open access journals, institutional repositories, and pre-print archives. For both faculty and students, these new trends may not be well understood. While these emerging platforms expand opportunities for scholarly communication, they also present perils and pitfalls. A failure to distinguish between predatory and legitimate publishers, to understand constraints imposed by license agreements, or to lack skills by which to evaluate the credibility or reputation of a journal, can undermine efforts to publish a manuscript and even affect one's academic reputation.⁵

Learning Objectives:

- Participants will understand the distinguishing features and mechanisms of different platforms including open access and hybrid options, institutional repositories, preprint archives and other emerging platforms.
- Following this session, participants will understand the criteria and tools used for evaluating the legitimacy of a journal and learn to apply them when assessing the credibility of publishing entities.
- Following the session, participants will be able to evaluate the suitability of a given publishing type for their research and submission needs, and be able to choose the journal venue that is most beneficial and appropriate for their work and institution.

Session Methods and Format:

The session includes a short didactic lecture (20 - 25 minutes), a guided discussion to allow participants to interact with one another and presenters (10 - 15 minutes), and a planned exercise (10 - 15 minutes) provides an opportunity to apply the criteria and tools presented in the session in order to evaluate specific journals. Questions will be responded to throughout the session.

Experience:

Karen has been developing and leading workshops on scholarly research impact, NIH compliance, and open access for many years, and regularly works with undergrads, grads, staff, researchers and faculty.

Terry develops educational programs for faculty, researchers, and students that focus on skills and tools useful in tracking research impact, increasing the online visibility of scholarly profiles, and optimizing scholarly communication.

References:

1. Rawat, S., Meena, S. "Publish or perish: Where are we heading?" J Res Med Sci. 2014 19(2): 87–89.
2. AAMC. Medical School Graduation Questionnaire. All Schools Summary Report 2018. Available at: <https://www.aamc.org/download/490454/data/2018gqallschoolssummaryreport.pdf>. Accessed Nov 8, 2018
3. Beaubien S, Eckard M. Addressing faculty publishing concerns with open access journal quality indicators. J Libr Sch Commun 2014;2: eP1133 DOI: <http://doi.org/10.7710/2162-3309.1133>.
4. Wang, JV, Keller M. "Pressure to publish for residency applicants in dermatology." Dermatol Online J. 2016 Mar 16;22(3). pii: 13030/qt56x1t7ww.
5. Berger M, Cirasella J. Beyond Beall's List: Better understanding predatory publishers. College & Research Libraries News 2015;76:132-135. DOI: <https://doi.org/10.5860/crln.76.3.9277>

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Faculty Teaching Shifts for an Augmented Clerkship Experience

Submission Type: Small Group Discussions

Accepted as: Poster

Authors:

Moises Gallegos, Stanford University School of Medicine
Al'ai Alvarez, Stanford University School of Medicine
Nounou Taleghani, Stanford University School of Medicine
Maria Alfonso, Stanford University School of Medicine
Michael Gisondi, Stanford University School of Medicine

Abstract Body:

Rationale:

Medical students receive minimal opportunities for direct observation of clinical encounters by faculty members across all clerkships. Emergency medicine clerkships have similar challenges to direct observation, in addition to pressures of time-sensitive care and unanticipated surges in patient volume.

Emergency medicine exposes medical students to patient encounters that require efficient bedside evaluation, complex medical decision making, and skillful procedural competency. Teaching shifts are suggested as a means to improve student experience by providing faculty with uninterrupted and dedicated time for directed skill development, including bedside instruction of physical exam maneuvers and advanced coaching on medical decision making, and additional opportunities for direct observation.

Time limitations also pose a challenge to assessment for competency based medical education. Teaching shifts represent an opportunity for direct clinical observation of medical student allowing for evaluation of entrustable professional activities of patient care, communication, and systems practices. Faculty evaluations can be targeted to specific tasks or learning objectives, based on the trajectory of student performance during the clerkship, improving individualized learning plans.

The implementation of teaching shifts varies among institutions, including choice of instructor (faculty member vs. senior resident), number of learners (one-on-one vs. multiple students), and instruction method (clinical observation only vs. additional didactic time). The ideal teaching shift includes learning goals and objectives, flexibility to meet individualized needs of learners, and accommodations for the challenges of the teaching site.

Stanford Emergency Medicine has two years of accumulated experience refining teaching shifts for our clerkships. We focused on direct observation as the key design feature – while avoiding any negative impact on clinical operations metrics. Student evaluations over two years of this program are exceptional, highlighting the teaching shift as “incredibly helpful,” “incredible 1:1 attention,” “valuable to direct observation and dedicated feedback,” and requesting that teaching shifts remain a focus of our clerkship.

Learning Objectives:

This session aims to describe the rationale, design, implementation, and anticipated learning

outcomes of faculty teaching shifts. The presenters will offer numerous practical suggestions for incorporating teaching shifts throughout all clinical rotations, regardless of discipline. Through discussion, participants will construct a teaching shift framework for augmenting the clerkship experience.

Session Methods and Format:

Review clerkship curriculum goals by the Alliance for Clinical Education and AAMC/LCME (Presenters, 5 min)

Identify gaps in clerkship experience for medical student observation (Presenters, 5 min)

Brainstorm ideal characteristics of a learning encounter (Group, 5 min)

Conceptualization of an ideal teaching shift (Group, 10 min)

Discuss challenges to teaching shift implementation (Group, 10 min)

Redesign previously suggested teaching shift frameworks/models (Group, 10 min)

Experience:

Moises Gallegos is assistant clerkship director for the advanced clinical rotation at Stanford Emergency Medicine, and has been recognized for his on-shift teaching skills with a CDEM Resident Teacher Award and an institutional Faculty Excellence in Teaching Award. Al'ai Alvarez is assistant program director at Stanford Emergency Medicine where he serves as a champion for well-being and curating challenging yet supportive learning environments for clerkship students.

References:

N/A

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From idea to implementation: An “on the ground” guide to taking your good ideas and turning them into an even better curriculum

Submission Type: Small Group Discussions

Accepted as: Small Group Discussion

Authors:

Adelaide McClintock, University of Washington School of Medicine

Meagan Williams, University of Washington School of Medicine

Abstract Body:

Rationale:

Educators face many challenges to taking great ideas and successfully implementing them to become living, breathing curricula. This small group discussion will leverage collective experience to advance ideas along the continuum of implementation through the exchange of ideas across levels of experience. Using David Kern’s Six Step Approach to Curriculum Development as a road map, facilitators will add additional focus on the actions and skills needed to accomplish each step. The discussion will use an existing interdisciplinary curriculum in women’s health as an example to illustrate barriers to success along the way, how each barrier was approached, and how the curriculum was ultimately implemented and studied to “make it count twice.” Participants will have ample time for questions and sharing of ideas, and will leave the session with an over-arching understanding of curriculum development from both the 1,000-foot view and the day-to-day work of implementation. By the end of the session, participants will be able to apply skills and strategies learned to build and implement curricula of interest at their home institutions.

Learning Objectives:

1. Apply Kern’s six steps of curriculum development to advance a current project of their own that is at any stage of development
2. Formulate a personalized strategy to address program, departmental or institutional level challenges to curriculum implementation using skills learned

Session Methods and Format:

The first 20 minutes of this session will be a brief presentation by the discussants. Facilitators will begin by delineating the formal six steps of curriculum development, and will then drill down into each step for a closer look, taking additional note of the “in between” steps that exist, and describing successful solutions and lessons learned through their own interdisciplinary, longitudinal curriculum in women’s health. “Micro-steps” covered will include how to set up your needs assessment, how to obtain buy-in from stakeholders and negotiate with departmental leadership for support, and how to make publication feasible. The remaining 25 minutes will be reserved for questions and for discussion between attendees to promote exchange of ideas on barriers and successes from within the group.

Experience:

Adelaide McClintock, MD is the founding director of the Women’s Health Training pathway in Internal Medicine at the University of Washington. In addition to supporting early stages of identifying learning gaps and performing a needs assessment, she designed the later stages of the

curriculum including development of objectives, choice of educational methods as well as implementation and evaluation.

Meagan Williams, MD lead the early stages of pathway development including needs assessment and was the initial “pilot resident” for the pathway. As a medical student and then a resident, Dr. Williams supported development of women’s health pathways at both Baylor College of Medicine and the University of Washington. As pathway faculty, she has also lead evaluation and dissemination stages of this curriculum.

References:

Curriculum Development for Medical Education: A Six-Step Approach, David Kern. 3rd edition.

For more information about this abstract please contact: [ahearst@uw.edu]

Helping the Helpers: Empowering Families and Partners to Prevent Medical Student Burnout

Submission Type: Small Group Discussions

Accepted as: Small Group Discussion

Authors:

Anne Weisman, University of Nevada Las Vegas, School of Medicine
Eran Magen, Center for Supportive Relationships

Abstract Body:

Rationale:

Medical students are at high risk for burnout, isolation, depression and suicide, with a 2016 JAMA meta-analysis estimating the prevalence of depressive symptoms at 27.2% and suicidal ideation at 11.1%. Students' relationships with their loved ones are an important protective factor against suicide, and yet most training programs do not offer any resources to help families and loved ones maintain strong connections to students. In this interactive session, we share the experience of eight medical schools implementing "My MD-to-Be", an innovative program that helps support givers understand, empathize with, and better support medical students. Students select their support givers (typically parents, spouses/partners and friends), who receive emails every 1-2 weeks with educational resources about common medical student experiences, tailored to each school's curriculum. The program is extremely well-accepted by students, with over 90% recommending it for other students. In addition to informing personal support givers, our schools distribute these resources to faculty and staff, in order to improve their connection to the student experience, and consequently their ability to teach and advise effectively.

Following our presentation, we will invite participants to share how their schools include loved ones in providing ongoing support to their medical student. This small group discussion is geared toward medical educators and administrators who seek to learn and share strategies and approaches to preventing medical student burnout.

Learning Objectives:

Participants will (1) Analyze the challenges and importance of maintaining strong personal relationships while in medical school; (2) Compare approaches that different medical schools take to help students maintain strong personal relationships; (3) Identify possible approaches to "borrow" from peer institutions.

Session Methods and Format:

- 10 minutes: Review of medical student burnout, personal relationships as a protective factor against burnout, and the mechanisms that underlie social support
- 10 minutes: Review of My MD-to-Be, an innovative program that helps loved ones offer effective support to medical students
- 10 minutes: Breakout-group discussions (What are challenges associated with helping students stay connected with their loved ones? How does your institution help medical students stay connected with loved ones throughout their training?)
- 10 minutes: Q&A / Group discussion
- 5 minutes: Takeaways and closing

Experience:

Anne Weisman, PhD, is the Director of Wellness & Integrative Medicine at the UNLV School of Medicine.

Eran Magen, PhD, is the founder and CEO of Circles of Support, the former research director of the department of Counseling and Psychological Services at the University of Pennsylvania.

References:

Rotenstein LS, Ramos MA, Torre M, et al. Prevalence of Depression, Depressive Symptoms, and Suicidal Ideation Among Medical Students: A Systematic Review and Meta-Analysis. JAMA. 2016;316(21):2214-2236. doi:10.1001/jama.2016.17324.

Thompson G, McBride RB, Hosford CC, Halaas G. Resilience among medical students: The role of coping style and social support. Teach Learn Med. 2016;28(2):174–182.

For more information about this abstract please contact: [eran@supportiverelationships.org]

Preventing Trainee Crisis/Suicide through Early Identification of Distress

Submission Type: Small Group Discussions

Accepted as: Small Group Discussion

Authors:

Ana Vega, University of Nevada, Reno School of Medicine

Anne Weisman, University of Nevada Las Vegas, School of Medicine

Eran Magen, Center for Supportive Relationships

Abstract Body:

Rationale:

Administrators often learn of trainee distress only after trainees have already fallen behind academically, exhibited profoundly unprofessional behaviors, or tragically taken their lives. This reactive approach to identifying distress severely limits our ability to intervene effectively with trainees who are spiraling down. In this session, we present a novel proactive approach to suicide/crisis prevention, implemented at 6 medical training programs at the UME and GME level, that operates by identifying early signs of distress and offering immediate referrals to support resources. Early Alert is a third-party tool that proactively checks in with trainees once a week, using a confidential text messaging. With weekly response rates between 60%-80%, trainees reporting distress are immediately referred to on-campus and off-campus support resources, thereby facilitating very early intervention and preventing crisis among trainees. After reviewing Early Alert, we will facilitate a discussion about other methods of early identification and referral of trainees in distress, in order to exchange best practices and form action plans for participants' home institutions. This session is geared toward medical educators and administrators who seek to learn about and share their own approaches to identifying at-risk trainees as early as possible.

Learning Objectives:

Participants will (1) Compare the advantages and disadvantages of passive and proactive methods of monitoring trainee wellness; (2) Determine the appropriateness of implementing proactive monitoring systems in specific scenarios; (3) Identify new early-identification approaches to implement at their home institution.

Session Methods and Format:

- 5 minutes: Review of medical student and resident distress, burnout, substance abuse, and suicide
- 15 minutes: Review of passive and proactive approaches to early identification of at-risk trainees
- 5 minutes: Breakout group exercises (determining appropriateness of passive and proactive methods of identifying at-risk trainees).
- 10 minutes: Discussion: Current approaches of identifying at-risk trainees at participants' home institutions
- 10 minutes: Q&A / Group discussion

Experience:

Ana Vega is the Resident Affairs and Wellness Coordinator at the University of Nevada, Reno School of Medicine

Anne Weisman, PhD, is the Director of Wellness & Integrative Medicine at the UNLV School of Medicine.

Eran Magen, PhD, is the founder and CEO of Circles of Support, the former research director of the department of Counseling and Psychological Services at the University of Pennsylvania.

References:

Rotenstein LS, Ramos MA, Torre M, et al. Prevalence of Depression, Depressive Symptoms, and Suicidal Ideation Among Medical Students: A Systematic Review and Meta-Analysis. *JAMA*. 2016;316(21):2214-2236. doi:10.1001/jama.2016.17324.
Thompson G, McBride RB, Hosford CC, Halaas G. Resilience among medical students: The role of coping style and social support. *Teach Learn Med*. 2016;28(2):174–182.

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Professional Identity Development Reformed through the RealMD Program

Submission Type: Small Group Discussions

Accepted as: Oral Presentation

Authors:

Mercedes Robinson, University of Utah School of Medicine

Hank Shipman, University of Utah School of Medicine

Tom Hurtado, University of Utah School of Medicine

Megan Fix, University of Utah School of Medicine

Candace Chow, University of Utah School of Medicine

Tony Tsai, University of Utah School of Medicine

Abstract Body:

Rationale:

In light of the AAMC's charge for medical students entering residency to be equipped with "leadership skills that enhance team functioning, the learning environment, and/or the health care delivery system" and medical students' desire to have leadership training during undergraduate medical education, there is a need to create meaningful programming around professional development in academic medicine. In response to this need, RealMD is a student-run professional development program at the University of Utah School of Medicine (UUSOM) that highlights a unique collaboration between student affairs and curriculum. With faculty support, medical students created an opt-in program that incorporates unique interactions with physicians in workshop sessions and individual coaching meetings. Utilizing a workbook, students are encouraged to process their medical school experience with a series of prompts and activities grounded in self-authorship theory. The name, RealMD, is an acronym for the core principles this program aims to cultivate: Relationships, Excellence, Authenticity, and Leadership. The overarching goal of the program is to help students develop both personally and professionally while in medical school and in preparation for residency. The success of this program is evidenced, in part, by the significant growth in attendance in just three years. Despite being an opt-in program, with no grades or discussion of "high-yield" academic content, attendance has grown from 10-15 students from the MSI and MSII classes per session in 2017, to over a hundred students at the most recent sessions in 2019. In addition to the resoundingly positive feedback from student participants, the faculty members at UUSOM are becoming increasingly excited about RealMD because it enables them to be vulnerable and honest with students while engaging in authentic mentorship.

Learning Objectives:

- Explore a student-led professional development program and the resulting partnership between student affairs and curriculum.
- Identify strategies for building, implementing and sustaining a student professional development initiative.
- Expand network of colleagues who currently work with or are interested in creating student professional development initiatives.

Session Methods and Format:

- I. RealMD program history and highlights: 7 minutes

- II. Faculty Coaching overview: 7 minutes
- III. Lunch Series logistics and effects: 7 minutes
- IV. Workbook and future direction of the program: 7 minutes
- V. Q&A: 15 Minutes

This 45-minute session will introduce to participants a student-led professional development program and how a successful partnership between students, curriculum, and student affairs was created. Tom Hurtado will highlight the history of the program including challenges and successes. Dr. Megan Fix will discuss how the faculty coaching program was created. Hank Shipman will discuss the logistics and effects of the lunch series. Mercedes Robinson will talk about the development of the workbook and future directions of the program. The rest of the allotted time will be spent in open discussion with attendees to answer any questions they may have and brainstorm if aspects of RealMD could be adapted to initiatives at their medical schools.

Experience:

Mercedes Robinson: Co-President of RealMD, MSII
Hank Shipman: Co-President of RealMD, MSII
Megan Fix M.D.: RealMD Coach, Clinical Professor
Tom Hurtado: Director of Student Affairs

References:

N/A

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Re-examining Exams: NBME's Effort on Wellness (RENEW) Project

Submission Type: Small Group Discussions

Accepted as: Small Group Discussion

Authors:

Miguel Paniagua, National Board Of Medical Examiners (Nbme)

Steve Lieberman, University of Arizona College of Medicine - Phoenix

Rebecca Smith-Coggins, Stanford University School of Medicine

Abstract Body:

Rationale:

Taking a systems approach, various aspects of a physician's educational and professional development need to be examined to fully comprehend the issue's complexity and to appropriately target and implement long-term solutions to physician burnout. Part of this approach requires an examination of the high-stakes assessment systems that serve and regulate physicians across the continuum of their education, training, and practice. One such assessment is Step 1 of the United States Medical Licensing Examination (USMLE). Although there is rich anecdotal evidence about the unique pressures associated with this examination and a burgeoning body of literature dedicated to better understanding issues of well-being and burnout among medical students, little is known empirically about the association among medical students' stress and burnout and their experiences with and performance on Step 1.

In partnership with educators and scholars from various institutions, the National Board of Medical Examiners (NBME) is advancing a research agenda to better understand the role that the USMLE may play in medical student well-being. This important collaboration is called "Re-Examining Exams: NBME's Effort on Wellness" (RENEW). Results from four separate RENEW studies will be presented for discussion to help participants gain a multifaceted understanding of student's experiences surrounding the USMLE Step 1 exam. Two of the studies quantify the relationships between student well-being and subsequent performance on USMLE Step 1, accounting for both student and school factors and addressing potential influential effects of self-care activities and study behaviors. The other two studies use a qualitative approach to explore how medical students experience and manage stress within the context of studying for Step 1 and receiving their scores.

Learning Objectives:

We aim to collectively generate ideas for using the RENEW findings to inform: (1) possible school-based interventions; (2) future house of medicine research and development activities; and (3) multifactorial system-wide approaches to addressing the challenge of stress and burnout in medical education and practice. At the conclusion of this session, participants will be able to summarize key findings from the multifaceted RENEW research collaborative, evaluate these findings in relation to their own expertise and experiences, and apply an understanding of RENEW findings to their work as educators and scholars at their institutions.

Session Methods and Format:

The focused presentation will account for approximately 50% of the sessions 90 Minutes. After the presentation, we will engage in small-group activities for approximately 25% of the session and facilitate a large-group conversation for the remaining time (25%).

Experience:

Miguel Paniagua, MD, FACP, FAAHPM serves as Medical Advisor at the National Board of Medical Examiners and Adjunct Professor of Medicine at the Perelman School of Medicine of the University of Pennsylvania. He is the PI and project lead for the RENEW project.

Steven A. Lieberman, MD is the Senior Associate Dean of Academic Affairs; Professor, Department of Internal Medicine at The University of Arizona College of Medicine and a RENEW task force member.

Rebecca Smith-Coggins, MD is Professor of Emergency Medicine; Associate Dean Office of Medical Student Wellness at Stanford University School of Medicine and a RENEW task force member.

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Re-thinking approaches to professional learning for clerkship preceptors

Submission Type: Small Group Discussions

Accepted as: Poster

Authors:

Sara Lamb, University of Utah School of Medicine
Katie Lappe, University of Utah School of Medicine
Sonja Raaum, University of Utah School of Medicine
Kerri Shaffer, University of Utah
Candace Chow, University of Utah School of Medicine

Abstract Body:

Rationale:

There has been a push in recent years to move away from a professional development model in which development “happens to” educators¹ to a professional learning model where educators are engaged in active learning that is relevant to and embedded within their teaching environments.^{1,2} Effective faculty development hinges on the following principles: the use of experiential learning, participant feedback, peer mentorship and networking, grounding in teaching and learning frameworks, use of varied pedagogical strategies, longitudinal and sustained offerings, and coherence among activities.^{3,4} Professional learning communities are one way to achieve this: they are designed for educators by educators to address specific gaps in the learning environment, thereby engaging faculty in active learning within their teaching settings and providing opportunities for peer mentoring and networking.⁵

The practice of a professional learning community among clerkship preceptors is not well defined,⁶ but the clinical environment is a fertile environment for continual learning, especially for academic teams where faculty can improve their own skills as well as those of the learners they oversee. Ongoing professional learning in this environment is also essential for faculty who participate in competency based medical education.^{7,8}

We are interested in beginning a dialogue about how professional learning can be implemented in the clerkship setting and are especially interested in ways to encourage and sustain professional learning communities among clerkship preceptors who are often decentralized with multiple competing demands on their time.

Learning Objectives:

1. Articulate best practices for faculty development
2. Identify one approach to conducting faculty development in clinical settings

Session Methods and Format:

[5 minutes] Introductions

[20 minutes] Focused presentation: (1) Literature review on principles of professional development and professional learning; (2) Overview of professional learning opportunities at presenters' institution (e.g., journal clubs, writing sessions, retreats)

[18 minutes] Facilitated large group discussion: (1) What has been done at other institutions? What has worked? What has not worked? (2) What are participants interested in trying?

[2 minutes] Closing

Experience:

Sara Lamb, MD, is Associate Dean of Curriculum at the University of Utah School of Medicine and has been involved in leading medical education reform efforts for over a decade.

Candace Chow, PhD, is Associate Director of Education Scholarship at the University of Utah School of Medicine and has faculty development experience at the K-12 and medical school settings.

Kerri Shaffer, MLIS, MEd, is Director of Curriculum and Faculty Support at the University of Utah School of Medicine and has faculty development experience in undergraduate and medical school settings and is interested in embedded models of faculty development.

Sonja Raaum, MD, is course director for Advanced Internal Medicine at the University of Utah School of Medicine and has experience with implementing faculty development on direct observation and feedback within undergraduate and graduate medical education clinical settings.

Katie Lappé, MD, is director of the Internal Medicine Clerkship and Sub-Internship at the University of Utah School of Medicine and has faculty development experience focused on feedback and assessment within undergraduate and graduate medical education.

References:

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6. Leslie K, Baker L, Egan-Lee E, Esdaile M, Reeves S. Advancing Faculty Development in Medical Education: A Systematic Review. *Academic Medicine*. 2013;88(7):1038-1045.
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8. Dath D, Iobst W. The importance of faculty development in the transition to competency-based medical education. *Medical Teacher*. 2010;32(8):683-686.

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Simple Can Be Better: Creating a Technology Philosophy to Drive Educational Excellence

Submission Type: Small Group Discussions

Accepted as: Poster

Authors:

Sascha Cohen, UCSF School of Medicine

Abstract Body:

Rationale:

Making technology part of education makes it part of educational and learning practice, which makes it part of behavioral change toward more effective medical practice for better care. With this in mind, we need to do two things in medical education as it pertains to tech:

- 1: Enjoin our technology leaders and knowledge owners to be included as decision makers and drivers of what technologies most effectively support and enable the work of the 21st century physician, using hard data and clinical outcomes; and
- 2: incorporate the literacy with and use of those tools deeply into the curriculum as part of our basic professional training.

We are drawn toward complexity in medical education, and that is hyper-attenuated in educational technology. Unfortunately, this complexity does not correlate to better learning outcomes, nor to better patient care. In fact, we are faced with the reality that all too often we succeed not because of, but despite our complex technologies we implement and support. The preponderance of published information has a great deal of anecdotal discussion, lots of hypotheticals, and almost no data correlating to learning or clinical outcomes from the introduction of disruptive technologies, or business models.

Using auditable data, student feedback as part of CQI, and a rigorous questioning of novelty or innovation for its own sake, we propose that the simplest solution will most often provide the most measurable improvements in learning, teaching, or clinical outcomes, and allow the deep and profound excellence of the people our field and institutions attract and knowledge they bring to take the lead in driving choice and innovation.

By simplifying our tech choices rather than complicating them, we create an environment of streamlining for excellence.

Learning Objectives:

Participants will be given an overview of the state of educational technology in medicine, and the challenges faced by exponential increases in complexity. Following discussion, participants will be introduced to tools and processes allowing them to more effectively integrate necessary technology as part of the underlying literacy of all aspects of the organizations underlying academic medicine; and to make informed decisions to help govern the selection, adoption, and even reduction of technologies that provide the necessary tools to achieve educational outcomes desired.

Session Methods and Format:

50% presentation; 20% discussion and review of use cases; 30% free discussion and Q&A.

Experience:

Sascha is the Director of Technology Strategy & Development for Technology Enhanced Education at the UCSF School of Medicine, as well as the Director of the Ilios Project, a competency-based curriculum management tool designed for and used by schools around the world to help achieve excellence in medical and health education. Holding degrees in religion, comparative culture, and Middle Eastern history, arts and language, Sascha's research is currently focused on the development of sustainable models for technology-enhanced education and curriculum development.

References:

N/A

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Step 2 CS Failure: Now what? Whose job is it to help remediate?

Submission Type: Small Group Discussions

Accepted as: Poster

Authors:

Paul Gordon, College of Medicine-Tucson-University of Arizona

Lisa Calvo, University of Nevada, Reno School of Medicine

Kirk Bronander, University of Nevada, Reno School of Medicine

Tejal Parikh, University of Arizona College of Medicine

Abstract Body:

Rationale:

Failure can occur at any stage of medical education, and faculty play a key role in helping students through the process of remediation. Block, course and clerkship directors are generally the primary guide for students facing remediation with assistance from learning skills specialists. Remediation of USMLE Step 1 and Step 2CK failures often mirror block, course and clerkship failures in the knowledge domain and is familiar to remediation teams. Additionally, the data available to guide these remediation efforts are robust. Unfortunately, the report from USMLE Step 2CS is limited, only indicating CIS (communication and interpersonal skills), ICE (integrated clinical encounter) and SEP (spoken English proficiency). Remediation needs for these “skills-based” assessments are less clear and less familiar to faculty and remediation experts presenting a challenge to both the student and the school. The panelists will present two different approaches from their respective institutions and guide discussion by participants about additional approaches to discover potential best practices.

Learning Objectives:

1. Articulate the challenges associated with failure on USMLE Step 2CS
2. Identify individuals in home institutions to assist with remediation, and/or
3. Begin a discussion at home with colleagues to create a process for 2CS remediation

Session Methods and Format:

5 minutes – presentation of the problem: remediation of 2CS failure

10 minutes – UA will present its process using Societies mentors. These clinicians teach clinical skills in the pre-clerkship curriculum. For 2CS remediation, they review videotapes from the student’s end-of-clerkship year OSCE, identify clerkship weaknesses and review practice Standardized Patient (SP) cases with student before re-take of 2CS exam

10 minutes – UNR will present its approach with the course director of Clinical Reasoning in Medicine (CRiM) course. CRiM is a longitudinal clerkship year course that prepares students for Step 2CS exam. Its Director takes responsibility for remediation of students’ 2CS failures in collaboration with their learning skills specialists.

15 minutes – the audience will break up into small groups with authors facilitating discussions. The aim is for the groups to identify their current process for remediation and then brainstorm to create a best practice.

5 minutes - Each small group will report to the large group.

Detailed notes of presentations will be sent to participants after the meeting.

Experience:

Dr. Paul Gordon has been teaching clinical skills to medical students for over thirty years, is Director of the SP program and Director for the longitudinal block where students learn clinical skills, oral presentations and patient write-ups.

Dr. Timothy Baker, a general internist, former clinical skills course director and Senior Associate Dean for Academic Affairs at the University of Nevada, Reno School of Medicine.

Dr. Kirk Bronander, hospitalist, Medical Director of Simulation and Director of CRiM Course at the University of Nevada, Reno, School of Medicine.

Dr. Tejal Parikh, Director of the Life Cycle Block, a required second year course for medical students and Societies mentor, where students learn clinical skills, oral presentations and write-ups.

References:

Berg, K., Winward, M., Clauser, B. E., Veloski, J. A., Berg, D., Dillon, G. F., & Veloski, J. J. (2008). The relationship between performance on a medical school's clinical skills assessment and USMLE Step 2 CS. *Academic Medicine*, 83(10), S37-S40.

Dong, T., Swygert, K. A., Durning, S. J., Saguil, A., Gilliland, W. R., Cruess, D., ... & Artino Jr, A. R. (2014). Validity evidence for medical school OSCEs: associations with USMLE® step assessments. *Teaching and learning in medicine*, 26(4), 379-386.

For more information about this abstract please contact: [pgordon@u.arizona.edu]

The Anatomy of Humanism

Submission Type: Small Group Discussions

Accepted as: Poster

Authors:

Laura Lambert, Huntsman Cancer Institute, University of Utah

Abstract Body:

Rationale:

One of the most challenging aspects of transitioning from the classroom to the clinical setting is the dramatic change in the learning environment. Students are randomly and temporarily assigned to teams of tired, busy residents with varying levels of interest and skill in teaching. They are confronted by faculty with limited time and different agendas and are often faced with indifferent and even condescending staff. Armed with limited medical knowledge and no real experience, they find themselves responsible for sick patients and anxious families.

Mistreatment, perceived or real, is often not addressed out of fear of retribution. Under constant scrutiny, concern about the final evaluation permeates every interaction. Rather than inspiring a greater sense of humanism, this transition can feel like the death of humanism for many students, and can lead to burnout and loss of a sense of wellness and meaning.

This proposal is for a 45-minute small group discussion called “The Anatomy of Humanism” and is based upon a small group, experiential learning program originally designed for 3rd year medical students rotating on surgery. In the discussion, participants explore the meaning of humanism as it relates not only to the doctor-patient relationship but to all relationships. This is done by identifying and examining the two ways of seeing other people, either as people (I-You) or as objects (I-It) as described by the existential philosopher, Martin Buber and expand upon by C.T. Warner (1). Participants will discover how our way of being with or seeing others (as people or objects) profoundly impacts both our interaction with other people and how we see ourselves. By understanding this impact, participants will gain insight about their own role in every relationship and thereby find options for handling challenging relational situations that they could not otherwise consider. Ultimately, our ability to see others as people is both the foundation of humanism and the deeper meaning of the work of medicine. It is also a source of resilience in a challenging learning and working environment.

Learning Objectives:

1. Describe 2 ways of seeing others – either as people or as objects
2. Describe the impact of how we see others on others and ourselves
3. Recognize our way of being with others and its potential impact
4. Recognize humanism as a way of being, not as a behavior or skill

Session Methods and Format:

I. Seed talk by Laura Lambert, MD (10 min).

II. Guided discussion of the following topics:

- 1) the two ways of seeing other people (10 min)
- 2) the impact and importance of how we see others illustrated through true life examples (10 min)

- 3) ways of applying this insight to real life situations (10 min)
- III. Questions and discussion (10-15 min)
- The Anatomy of Humanism tends to unfold organically as participants absorb the material and the deeper meaning of the concepts, hence the format of a guided discussion.

Experience:

Dr. Laura Lambert has done this program many times with various audiences (medical and nurse practitioner students, residents, faculty). She is happy to provide evaluations from previous programs.

References:

1. Warner, CT. (2001) Bonds That Make Us Free. Salt Lake City: Shadow Mountain Publishing.

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What external factors contribute to student professional identity formation and how can they help us maximize student success?

Submission Type: Small Group Discussions

Accepted as: Oral Presentation

Authors:

Maya Sardesai, University of Washington School of Medicine

Marjorie Wenrich, University of Washington School of Medicine

Abstract Body:

Rationale:

There has been increasing focus on professional identity (PI) and its formation (PIF) as an important aim of medical education¹. Although recent literature offers theoretical constructs of PIF, there is limited information on how professional identity changes during medical training, what mechanisms students use to create and change their PI, and what factors influence this process²⁻⁴. Having a better understanding of these phenomena could enable medical curriculae and learning environments to be optimized to facilitate PI formation

Learning Objectives:

1. To discuss ways in which a student's professional identity (PI) changes during medical school
2. To describe external factors that influence PI formation
3. To discuss ways these factors can be leveraged to promote student success.
4. Participants will come away with a deeper understanding of what factors impact medical students and strategies to help students maximize positive influential factors.

Session Methods and Format:

Participants will initially complete a brief questionnaire ranking items they perceive may influence students' professional identity formation (PIF) during medical school (5 minutes). A brief introduction will cover definitions, existing PIF literature and several theoretical constructs (10 minutes). We will share preliminary findings from a national multi-institutional qualitative study of PIF among 54 medical students in four institutions obtained via semi-structured interview, transcribed and coded to identify key themes (10 minutes). For example, in these interviews, family members are a major, ongoing scaffolding factor for medical students. The subsequent small group discussion (15 minutes) will involve reflections on these findings and a comparison with participants' initial perceptions. We will introduce how variations in curriculum structure and learning community structure may influence PI formation. We will conclude by considering how these factors influence our efforts to nurture professional identity formation in the learning environment. (5 minutes)

Experience:

Marjorie Wenrich, PhD, MPH is Associate Dean for Education Strategies at the University of Washington School of Medicine with extensive research experience in medical education, notably in qualitative methods.

Maya G. Sardesai, MD, M.Ed. is a College Faculty member in the University of Washington School of Medicine and a Board member of the Learning Communities Institute Research Network.

References:

References

1. Cooke M, Irby DM, O'Brien BC, Shulman LS. Educating Physicians: A Call for Reform of Medical School and Residency. San Francisco, CA: Jossey-Bass, 2010.
2. Cruess RL, Cruess SR, Boudreau JD, Snell L, Steinert Y. A schematic representation of the professional identity formation and socialization of medical students and residents: A guide for medical educators. Acad. Med. 2015;90: 718-725.
3. Cruess RL, Cruess SR, Boudreau JD, Snell L, Steinert Y. Reframing medical education to support professional identity formation. Acad Med. 2014;89: 1446-1451.
4. Hafferty FW. Professionalism and the socialization of medical students. In Cruess RL, Cruess SR, Steinert Y. Eds. Teaching Medical Professionalism. New York: Cambridge University Press, 2009.

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Accreditation is Our Common Ground! A Collaborative Workshop to Advance your LCME Efforts

Submission Type: Workshops

Accepted as: Workshop

Authors:

Melissa Piasecki, University of Nevada, Reno School of Medicine
Sarah Ries, University of Nevada, Reno School of Medicine
Lisa Calvo, University of Nevada, Reno School of Medicine
Amy Smith, University of Nevada, Reno School of Medicine
Erin Griffin, University of California, Davis, School of Medicine
Kristin Olson, UC Davis School of Medicine

Abstract Body:

Rationale:

The LCME process provides individual institutions with a rich understanding of their medical education program's strengths and areas for improvement. However, the process itself can be complicated, confusing, and overwhelming. This workshop will provide attendees with the opportunity to discuss accreditation and obtain informal and confidential peer consultation and feedback. This discussion will provide an opportunity for open, honest dialogue regarding specific accreditation issues with the "Vegas rule" applied. What happens in this WGEA workshop, stays in this WGEA workshop.

Learning Objectives:

Workshop attendees will learn from accreditation experiences of other institutions, gaining new ideas and strategies that can be applied at their home institution. They will have the opportunity to ask questions and seek peer input on specific accreditation-related issues they are facing. Attendees will be able to receive feedback on written materials. Through networking, attendees will build relationships with faculty accreditation leads and accreditation coordinators from other institutions.

Session Methods and Format:

Presentation (30 minutes): As participants arrive, they will propose and select topics to discuss during the session using Slido, an online polling platform. The presentation portion of the session will then begin with a brief introduction (~5 minutes), introducing the speakers, where our institutions are in the LCME process, and background on why we are giving this presentation. Participants will be reminded of the importance of confidentiality during this introduction. This will be followed by a facilitated discussion (~25 minutes) guided by the data from Slido.

Breakout workgroups (40 minutes): Following the presentation, participants will breakout into workgroups to discuss specific issues and elements. Content area facilitators will be available to lead these workgroups. During this time, participants will also have the option of breaking off into dyads to provide specific feedback on written materials.

Close and Next Steps (20 minutes): The session will close with a conversation on next steps and brainstorming how we can stay in touch to continue a confidential peer-based process (~20 minutes).

Experience:

Melissa Piasecki, M.D. serves as the faculty accreditation lead for UNR Med's LCME self-study and has served as an LCME site survey team member.

Sarah Ries is the accreditation and academic business analyst at UNR Med and coordinates the LCME process.

Amy Smith, Ph.D. is the director of institutional assessment at UNR Med.

Timothy Baker, M.D. is the senior associate dean for academic affairs at UNR Med and has served as an LCME site survey team member.

Erin Griffin, Ph.D., leads the UC Davis School of Medicine Research, Evaluation and Analytics Unit.

Kristin Olson, M.D., is the Associate Dean of Curriculum at University of California, Davis, School of Medicine, serves as her institution's faculty accreditation lead, and has served as an LCME site survey team member.

References:

N/A

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Acting to Advance Change: Using Improv to Educate Standardized Patients about Implicit Bias

Submission Type: Workshops

Accepted as: Workshop

Authors:

Yvonne Caro Caro, University of California, Los Angeles David Geffen School of Medicine
Sharon Grambo, University of California, Los Angeles David Geffen School of Medicine
Ken Lay, University of California, Los Angeles David Geffen School of Medicine
Sam Wilkes, University of California, Los Angeles David Geffen School of Medicine
Yue Ming Huang, University of California, Los Angeles David Geffen School of Medicine
Valencia Walker, University of California, Los Angeles David Geffen School of Medicine

Abstract Body:

Rationale:

Medical schools commonly use Standardized Patients (SPs) in both formative and summative assessments of medical students' clinical skills. Despite use of objective evaluation tools, negative bias may affect SP performances and their assessment of students. Implicit biases can also impede SP program goals, which include establishing effective communication, fostering accurate perception of patient identity and needs, and building rapport to enhance clinical skills. Education about identifying and addressing implicit bias, however, remains a largely unexplored topic for SP programs. This highlights a critical need to establish best practices in this area and creates a timely opportunity to contribute content to the field. This workshop utilizes improv and other experiential activities for attendees to learn about ways to identify and interrupt individual implicit biases.

Learning Objectives:

1. Describe the cognitive processes that contribute to the formation of implicit biases
2. Identify common examples of implicit biases in the medical education and clinical learning environments
3. Develop tools for replicating implicit bias educational sessions for SP programs at other institutions

Session Methods and Format:

This highly interactive and experiential workshop fully engages participants in improvisational activities and reflection exercises.

1. Introductions, Goals and Identifying Volunteers (5 minutes)
2. Affirmation (10 minutes)
 - "Icebreaker" Exercise (to create a sense of shared community)
 - Agreement on Ground Rules for Respectful Interactions
3. Attunement (20 minutes)
 - "Personal Identifiers" Activity (allows participants to compare and contrast the impact of personal traits, values and beliefs within society and their respective SP programs)
4. Alignment (25 minutes)

- Dramatic Interpretation of “Intention versus Impact” with volunteer participants (decouples harmful outcomes from the presumption of intended behaviors)
 - Didactic Content on Implicit Bias utilizing audience response questions
5. Advancement (20 minutes)
- “Fish Bowl” Activity (expressions of personal and professional instances of harm caused by implicit biases followed by time to deeply reflect on the diverse perspectives and experiences shared by participants)
 - Didactic Content on strategies for identifying and interrupting implicit biases
6. Facilitated Question and Answer Session (10 minutes)

Experience:

1. Yvonne Caro Caro, MFA, C-IAYT is a Senior SP Educator for DGSOM UCLA and a professional actor in both Puerto Rico and the United States. ycaro@mednet.ucla.edu
2. Sharon Grambo is a professional actor and Senior SP Educator for DGSOM UCLA. sgrambo@mednet.ucla.edu
3. Ken Lay, MA is the Manager of the DGSOM UCLA Standardized Patient program with additional responsibilities for the teaching and evaluation of medical students. klay@mednet.ucla.edu
4. Sam Wilkes, BA serves in a dual role as SP Educator and Simulation Specialist for DGSOM UCLA with expertise in use of feedback and interpersonal communication. swilkes@mednet.ucla.edu
5. Yue Ming Huang, EdD, MHS is Adjunct Associate Professor of Anesthesiology and the Education Director for the DGSOM UCLA Simulation Center with expertise in communication skills, team building and the effectiveness of simulation training.
6. Valencia Walker, MD, MPH is Assistant Dean for Equity and Diversity Inclusion for DGSOM UCLA and a national expert on diversity and inclusion with a strong background in medical education, social justice and advocacy.

References:

- Chapman E et al. Physicians and Implicit Bias: How Doctors May Unwittingly Perpetuate Health Care Disparities. *J Gen Intern Med.* 2013; 28(11):1504-1510.
- Hall WJ et al. Implicit Racial/Ethnic Bias Among Health Care Professionals and Its Influence on Health Care Outcomes: A Systematic Review. *Am J Public Health.* 2015;105(12):e60-e76.
- Mayfield JJ et al. Beyond Men, Women, or Both: A Comprehensive, LGBTQ-Inclusive, Implicit-Bias-Aware, Standardized-Patient-Based Sexual History Taking Curriculum. *MedEdPortal.* 2017;13:10634.
- Boscardin CK. Reducing Implicit Bias Through Curricular Interventions. *J Gen Intern Med.* 2015;30(12):1726-1728.
- Van RM et al. Medical School Experiences Associated with Change in Implicit Racial Bias Among 3547 Students: A Medical Students CHANGES Study Report. *J Gen Intern Med.* 2015;30(12):1748–56.

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Adapting a Conceptual Model for Manuscript Writing for Peer-Review Journals

Submission Type: Workshops

Accepted as: Poster

Authors:

Shahrzad Bazargan-Hejazi, Charles Drew University of Medicine and Science

Magda Shaheen, Charles Drew University of Medicine and Science

Abstract Body:

Rationale:

Many of us know what research is; have reason(s) why we conduct research, experience a critical review of the research plan, its implementation, and the final report. However, it is always the next step, i.e., manuscript submission for peer-review publication, that interrupts the continuum of scientific investigation and prevents one to disseminate the products of a scientific investigation. The overall goal of this session is to enhance the audience readiness to engage in manuscript writing for peer-review journals.

Learning Objectives:

Learning Objective/Outcomes: By the end of this workshop the participating audience will be able to:

- Identify personal characteristics that facilitate or hinder scholarly productivity
- Identify institutional facilitators and barriers to scholarly productivity
- Assess networks of the collaborative relationship
- Align scholarly productivity with well-being
- Assess and evaluate readiness to draft a manuscript
- Draft a manuscript development plan

Session Methods and Format:

5 minutes: Introduction and overview of the session agenda

5 minutes: Instructions for small groups formation

45 minutes: Overview of a faculty development conceptual model to contextualize research engagement.

15 minutes: Small group exercise: Readiness assessment and evaluation

15 minutes: Small group exercise: Drafting a manuscript development plan

10 minutes: Q & A and take-home lessons

To be conscious of the “attention span” of an adult audience, we will provide a short break.

Experience:

Dr. Bazargan-Hejazi, is a full professor with over 130 publications and over a decade of experience in peer-review journal Editorial Boards.

Dr. Shaheen has an extensive experience in teaching and research as well research development and implementation.

Dr. Mohsen Bazargan, is a full professor and director of research in Dept. of family medicine at Charles Drew University of Medicine and Science.

References:

NA

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Be the Coach: Strategies for Creating and Leading Effective Active Learning

Submission Type: Workshops

Accepted as: Poster

Authors:

Laurie Leclair, University of Utah School of Medicine

David Morton, University of Utah School of Medicine

Andrew Smith, University of Utah School of Medicine

Abstract Body:

Rationale:

The definition of active learning is any instructional method that engages the learner in the learning process. Growing evidence supports it having superior educational outcomes¹.

Developing an active learning session from a traditional lecture is difficult, particularly for faculty with limited experience in these methods. The goal of this workshop is for participants to gain the skills necessary to create, implement and assess an active learning session.

Learning Objectives:

- 1) Write learning objectives targeted to pre-class and in-class work.
- 2) Develop the parameters for pre-class content including format, length and available resources.
- 3) Create a readiness quiz to assess the learner's knowledge of the pre-content.
- 4) Design authentic in-class activities that engage learners and promote peer teaching.
- 5) List approaches of assessing an active learning session.

Session Methods and Format:

The intent of this workshop is to provide a step-wise framework that can be used to create an active learning session. The workshop will use a case-based approach to accomplish the learning objectives thereby demonstrating learner engagement and peer teaching, both important components of active learning. The workshop participants will be divided into groups of 4-5. The session will begin with a brief overview of active learning followed by a series of challenges. Each challenge will focus on a key component of developing an active learning session (objectives, pre-class content etc.) The groups will have 10-15 minutes to work on each challenge followed by 5-10 minutes of larger group discussion and further instruction (as necessary). The moderators of the session will facilitate the large group discussion and circulate during small group work. Handouts will be provided at the completion of the session for future reference and to reinforce concepts.

Experience:

David Morton, PhD is a Professor of Neurobiology and Anatomy at the University of Utah and course director of a core pre-clinical course at the School of medicine where he has received multiple teaching awards for his innovative educational style and has served as a local and national consultant on curricular revision.

Andrew Smith, MD is an Associate Professor of Pediatrics at the University of Utah, course director of a core pre-clinical course and capstone critical care course at the School of medicine,

director the pediatric critical care fellowship program and recipient of multiple teaching awards for excellence in medical education.

Laurie Leclair, MD is a Professor of Medicine at the University of Utah and former pre-clinical course director at the University of Vermont where she helped transition the medical school curriculum to all active learning while receiving multiple teaching awards for her efforts.

References:

1. Freeman et al., PNAS, 2014.

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Building a Better Clinical Competency Committee

Submission Type: Workshops

Accepted as: Poster

Authors:

Lynnea Mills, University of California, San Francisco, School of Medicine

Duncan Henry, University of California, San Francisco, School of Medicine

Rebecca Berman, University of California, San Francisco, School of Medicine

Patricia Cornett, University of California, San Francisco, School of Medicine

Abstract Body:

Rationale:

The Accreditation Council for Graduate Medical Education requires post-graduate training programs to form clinical competency committees (CCCs) to review and report on house officer competence. Ideally, CCCs would also support resident development by synthesizing feedback across contexts, offering formative information for ongoing development, and advising residents on how they compare to standards¹. Authors have described best practices for CCC development or processes², but CCCs may have challenges operationalizing these, given limited time and resources; and issues such as bias in assessment or decision-making³ may present challenges not well-elucidated in the literature. This workshop gives participants hands-on experience applying theoretical best practices to CCC processes. Discussion will be framed in the context of CCC but applicable to all who use group discussions for learner assessment.

Learning Objectives:

- 1) Describe common tensions and concerns surrounding CCCs
- 2) Apply evidence-based techniques to develop or improve CCC processes

Session Methods and Format:

- 00:00-00:15: Introductions, overview, elicitation of participant challenges/concerns surrounding CCC processes.
- 00:15-00:35: Presentation of didactic content on five key areas of CCC development or processes: 1) committee goals and philosophy; 2) data-gathering; 3) committee discussion; 4) addressing bias; 5) reporting outcomes to residents.
- 00:35-1:00: Facilitated small-group discussions. Participants will choose the small group best aligned with their interests and use a hypothetical CCC to work through important questions and discuss challenges. For example, the group dedicated to addressing goals/philosophy will consider questions such as, “Does the committee spend its time addressing issues related only to struggling learners, or trying to advance each resident’s skills?” and “Does the committee make binding decisions, or does it make recommendations to leadership, who then makes decisions?” The group discussing bias will address such questions as “How can the committee examine and try to reduce the impact of bias in its discussions?” and “What should the committee do if it’s concerned that an assessment of a resident may contain inappropriate influence from bias?”
- 1:00-1:25: Large-group report-out/discussion
- 1:25-1:30: Questions, wrap-up

Experience:

Lynnea Mills is the UCSF Internal Medicine Residency CCC Chair and a medical education doctoral student, focusing on remediation.

Duncan Henry is the UCSF Pediatrics Residency Associate Program Director for Assessment and CCC Chair.

Rebecca Berman is the UCSF Internal Medicine Residency Program Director.

Patricia Cornett is the UCSF Department of Medicine Associate Chair for Education.

References:

1 Donato AA, Alweis R, Wenderoth S. Design of a clinical competency committee to maximize formative feedback. J Community Hosp Intern Med Perspect. 2016 Dec;6(6):335-33.

2 Kinnear B, Warm EJ, Hauer KE. Twelve tips to maximize the value of a clinical competency committee in postgraduate medical education. Med Teach. 2018 Nov;40(11):1110-1115.

3 Schumacher DJ et al. Influence of clinical competency review committee process on summative resident assessment Decisions. J Grad Med Educ. 2018 Aug;10(4):429-437.

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Building a Medical Student Coaching Program: from Concept to Cornerstone

Submission Type: Workshops

Accepted as: Poster

Authors:

Micaela Godzich, University of California, Davis, School of Medicine

Sharad Jain, University of California, Davis, School of Medicine

Denise Nelson, University of California, Davis, School of Medicine

Abstract Body:

Rationale:

The ability of medical students to adapt to the specific challenges of medical school can determine their academic success. Academic Coaching Programs are a novel form of personalized support for medical students. As trusted physician members of the academic community who do not play an evaluative role, Academic Coaches can form meaningful longitudinal relationships with individual learners in search of affirmation of their place in the medical community.

Learning Objectives:

Participants will:

- learn what coaching for medical students is and how it differs from advising or mentoring students
- learn the history and structure of the Academic Coaching Program at UC Davis
- determine areas in their curriculum where coaches might play a role
- conceptualize a pilot coaching program for their School of Medicine
- create the scaffolding for a faculty development curriculum for coaches at their school of medicine

Session Methods and Format:

The following presentations will be interactive and participants will be encouraged to ask questions throughout:

- The Director of the Academic Coaching program will describe the concept of coaching for medical students by reviewing core principles of coaching. (15minutes)
- The Dean of students will describe why UC Davis decided to institute an Academic Coaching program at UC Davis and the initial pilot program. He will describe why the institution decided to move forward with expanding the Coaching program and making it a Cornerstone of the student experience. (15 minutes)
- The Director of Academic Coaching will describe the variety of roles that coaches play at UC Davis, how they are integrated into the curriculum, and the content of faculty development for coaches. (10minutes)
- The Administrative Assistant to the Academic Coaching program will describe how the Coaching Program is integrated into the curriculum of the School of Medicine throughout student training. (10 minutes)

Participants will be grouped according to their home institution and will collaborate to (30 minutes):

- review their institution's need for a coaching program
- discuss where coaches might be integrated into their curriculum

- review what kind of institutional support might be needed for development of a coaching program
- conceptualize a pilot coaching program for their institution
- list elements of a faculty development curriculum for their pilot program
- list barriers to implementation of a coaching program

Participants will come back together to review what barriers to implementing a pilot program have been identified and discuss potential solutions with the group and presenters (20 minutes).

Experience:

Micaela Godzich is Director of the Academic Coaching Program at UCDavis; she works with medical students and residents as an assistant clinical professor in the Department of Family and Community Medicine at UC Davis.

Shared Jain is Dean of Students at UCDavis and is professor of medicine in the Department of Internal Medicine; he has over 20 years of experience working with learners in academic medicine.

Denise Nelson is the Administrative Assistant to the Academic Coaching Program at UC Davis and has a decade of experience working with medical students.

References:

Coaching: a new model for academic and career achievement

Nicole M. Deiorio, Patricia A. Carney, Leslie E. Kahl, Erin M. Bonura, Amy Miller Juve, Med Educ Online. 2016; 21: 10.3402/meo.v21.33480

American Medical Association Accelerating Change in Medical Education Coaching Handbook © 2017 American Medical Association

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Can I use that image? Copyright, Fair Use and Digital Education

Submission Type: Workshops

Accepted as: Poster

Authors:

Ben Harnke, University of Colorado Strauss Health Sciences Library

Abstract Body:

Rationale:

Copyright in digital and face-to-face education can be the source of much confusion, misinformation, frustration and anxiety. Instructors are often not sure which kinds of educational practices are allowed by copyright law and simply take a "beg for forgiveness later" tack or worse use less relevant, but "safer" resources for their instruction. While the flying-under-the-radar approach may have been a successful strategy in the days of paper-based, face-to-face instruction, today's digital/online pedagogical environment makes copyright infringement more detectable, potentially leading to threatening takedown notices or actual monetary damages. The same applies to scholarly work, as conference abstracts, paper presentations, etc. are often posted on publicly facing websites that are easily detectable by copyright trolling.

Learning Objectives:

- 1) Participants will understand the origins and basic contours of copyright law as it relates to teaching, learning and scholarship.
- 2) Students will learn and then apply the fair use doctrine to common education/scholarship/conference scenarios using a fair use checklist.
- 3) Students will learn about Creative Commons (CC) license types and how to locate CC images and videos on the Internet.

Session Methods and Format:

Introduction (10 minutes): I will introduce myself and then ask audience members to do the same and to briefly describe copyright scenarios they may be grappling with. I will note these issues on a flip chart. This serves to get folks thinking about their actual copyright environment and to show that we are all usually struggling with the same copyright problems.

Lecture/Discussion (50 minutes): In a basic lecture/discussion format, we will first look at the Constitutional origins of copyright law and its purpose and then move to some statutory language around what is copyrightable and the rights of copyright holders. The central focus will then be on introducing a fair use checklist designed to help faculty make fair use decisions around copyrighted material used for teaching, learning, and scholarship. Finally, I will introduce Creative Commons licensing as sort of copyright safe haven and then demonstrate how to search for these licenses on the open Internet. Though in a PowerPoint lecture-type format, when I teach this section we inevitably have interesting conversations and actually add to the initial list of brainstormed copyright issues.

Case Studies (30 minutes): in the remainder of the session, we will break into groups to examine either prebuilt copyright case studies or use scenarios from the initial brainstorming session.

Groups will discuss their scenario, make a fair use determination, and then bring that decision back to the larger group for discussion. The goal is to get practice using the fair use checklist so that participants can leave the session with confidence to make copyright judgments back at their home institutions.

Experience:

I teach a popular, monthly copyright and fair use class here at the University of Colorado's Strauss Health Sciences library.

References:

N/A

For more information about this abstract please contact: [ben.harnke@ucdenver.edu]

Co-Learning: an approach to make lifelong learning visible in clinical learning environments

Submission Type: Workshops

Accepted as: Workshop

Authors:

Josette Rivera, University of California, San Francisco, School of Medicine

Lindsey Haddock, University of California, San Francisco, School of Medicine

Bridget O'Brien, University of California, San Francisco, School of Medicine

Abstract Body:

Rationale:

Trainees recognize the importance of lifelong learning and are taught strategies and techniques that prepare them to be lifelong learners (e.g., mastery learning, self-regulated learning). Most of these approaches focus on formal processes employed outside of clinical practice (e.g., goal-setting). Consequently, trainees rarely see how faculty engage in lifelong learning during clinical practice. Furthermore, while the importance of keeping up with clinical knowledge is well-recognized by faculty and trainees, other competency domains such as communication skills, professionalism, and practice-based improvement may be less commonly recognized as areas for lifelong learning though these domains also require keeping up-to-date. Several factors may contribute to the invisibility of faculty members' lifelong learning during clinical practice, including structural factors like time pressure or lack of space, cultural norms against sharing uncertainty or vulnerability, and faculty reluctance to reveal their own need to learn for fear of losing credibility in the eyes of trainees. Recent attention to improving clinical learning environments underscores the importance of making lifelong learning more visible to trainees, which may help shift the structures, norms, and faculty values toward greater openness and transparency. These shifts will require effective and efficient ways to make lifelong learning visible across multiple competency domains. Based on research and review of the literature, we propose co-learning – a process in which teachers and trainees learn something together – as an approach by which teachers and trainees can transparently engage in lifelong learning. This workshop provides an opportunity for participants to discuss the concept of co-learning in relation to their own clinical learning environments, identify opportunities and barriers to engaging in co-learning, and develop a plan that includes specific strategies and skills for implementing co-learning.

Learning Objectives:

1. Define co-learning in clinical practice
2. Discuss barriers to and facilitators of successful co-learning
3. Apply a framework to practice co-learning in clinical scenarios
4. Identify strategies to use co-learning in your clinical learning environment

Session Methods and Format:

A. Participant and facilitator introductions (5 min)

B. Introduction to Co-Learning

- Presentation and interactive discussion of a definition and framework for co-learning (20 min)

C. Apply the Co-Learning Framework to scenarios

- Small group application activity and discussion (15 min)
 - Identify opportunities to use co-learning
 - Discuss barriers and facilitators to successful co-learning
- Large group discussion and debrief (10 min)
- D. Develop a plan to implement or improve Co-Learning in own clinical learning environment
 - Individual or small group work to create a plan (10 min)
 - Pair-share plans (15 min)
 - Large group report out to identify themes (10 min)
- E. Summarize and wrap up (5 min)

Experience:

Josette Rivera, MD is a clinician educator with expertise in faculty development.

Lindsey Haddock, MD is a clinician educator and education research fellow focusing on lifelong learning.

Bridget O'Brien, PhD is an education researcher who studies workplace learning.

All three speakers are currently working on a study of co-learning strategies among clinician educators from multiple specialties.

References:

Berkhout JJ, Helmich E, Teunissen PW, van der Vleuten CPM, Jaarsma ADC. Context matters when striving to promote active and lifelong learning in medical education. *Med Educ.* 2018; 52: 34-44.

van Houten-Schat MA, Berkhout JJ, van Dijk N, Endedijk MD, Jaarsma ADC, Diemers AD. Self-regulated learning in the clinical context: a systematic review. *Med Educ.* 2018; 52: 1008-1015.

Molloy E, Bearman M. Embracing the tension between vulnerability and credibility: 'intellectual candour' in health professions education. *Med Educ.* 2019; 53: 32-41.

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Constructing cognitive links – deliberate integration of basic science with clinical medicine in a learner’s mind: a practical approach

Submission Type: Workshops

Accepted as: Workshop

Authors:

Sharon Chen, Stanford University School of Medicine

Manuel Amieva, Stanford University School of Medicine

Mohamed Sow, Stanford University School of Medicine

Abstract Body:

Rationale:

Why are cognitive links important? Evidence shows that learners who can connect basic science mechanisms to patients’ clinical manifestations (i.e. cognitive links) are able to form more robust mental representations of clinical disease processes¹. Robust mental representations lead to better retention and improved abilities to solve novel complex patient cases². Integrating basic science and extended basic sciences is relevant for medical education as outlined in the “Call for Reform”³ and a recent study⁴. But recognizing that cognitive links are important for our learners does not solve the practical problem of teaching learners how to think and learn in this way.

Teachers have no resource that explicitly provides cognitive links. We encountered this problem when creating our new Microbiology & Infectious Diseases course at Stanford University SOM. All of our microbiology and infectious disease textbooks organize content in parallel- chapters on specific microbes, then chapters on clinical diseases – not integrated. We were left with constructing our own cognitive links, and we learned by reflecting and iterating.

For the last 4 years, we have created cognitive links to enable our students to learn in this manner. In addition, to implement this form of learning, we create in-class activities that enable students to discover these cognitive links for themselves (the “aha” moment). We also develop assessment tools to measure students’ growth in learning. This workshop shares our learned expertise in constructing cognitive links.

Learning Objectives:

1. Describe the concept of cognitive links
2. Examine examples of cognitive links
3. Construct a cognitive link

Session Methods and Format:

1. Cognitive Links concept and importance (5 minutes): Speakers (Dr. Chen & Dr. Amieva)
2. Cognitive Links example (10 minutes): Speakers and participant questions.
3. Activity 1 (10 minutes): Participants will work on a guided construction of a cognitive link in small groups.
4. Activity 1 Discussion (20 minutes): Share answers and challenges.
5. Activity 2 (10 minutes): Participants will construct their own new cognitive link, pairing up with a partner to share ideas. These will be collected and distributed after workshop.
6. Activity 2 Discussion (10 minutes): Share examples of cognitive links and construction challenges.
7. Cognitive Links in patient care (10 minutes): Speakers and participant questions
8. Open Q&A (5 minutes)

Experience:

Dr. Chen is a Pediatric Infectious Diseases physician with 15+ years as a clinician, a teacher for learners in medical school, clinical training and faculty development, and a scholar in both education research focused on assessment of “thinking” and adaptive expertise and in clinical research focused on preventing viral infections in immunocompromised hosts.

Dr. Amieva is a Pediatric Infectious Diseases physician with 15+ years as an active clinician, a teacher for learners in graduate school, medical school and clinical training, and a scientist with an active lab studying how bacteria colonize our bodies for long periods of time and how interactions between bacteria and the epithelial surfaces of the GI tract and skin may lead to disease.

References:

- 1 Lisk K, Agur AM, Woods NN. Exploring cognitive integration of basic science and its effect on diagnostic reasoning in novices. *Perspect Med Educ*. 2016 Jun;5(3):147-53. doi: 10.1007/s40037-016-0268-2. PMID: 27246965; PMCID: PMC4908035.
- 2 Bandiera G, Kuper A, Mylopoulos M, et al. Back from basics: integration of science and practice in medical education. *Medical Education*. 2018 Jan;52(1):78-85. DOI: 10.1111/medu.13386.
- 3 Cooke, Molly & Irby, David & O'Brien, Bridget. (2010). *Educating Physicians: A Call For Reform Of Medical School And Residency*.
- 4 Chaudhary ZK, Mylopoulos M, Barnett R, Sockalingam S, Hawkins M, O'Brien JD, Woods NN. Reconsidering Basic: Integrating Social and Behavioral Sciences to Support Learning. *Acad Med*. 2019 Nov;94(11S Association of American Medical Colleges Learn Serve Lead: Proceedings of the 58th Annual Research in Medical Education Sessions):S73-S78. doi: 10.1097/ACM.0000000000002907. PMID: 31365405.

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Continuing Professional Development (CPD): Promoting a New Paradigm for Continuing Medical Education and Faculty Development

Submission Type: Workshops

Accepted as: Poster

Authors:

Randa Kutob, University of Arizona College of Medicine-Tucson

Nels Carlson, Oregon Health & Sciences University

Abstract Body:

Rationale:

Faculty today face new and evolving challenges, not only in their own life-long learning journey, but also in their critical roles as trainers of medical students, residents, and other learners. Many faculty feel overwhelmed by an increasingly large and complex health care system and the realization that yesterday's teaching methodologies do not meet the educational needs of today's learners. How do we promote and integrate these changes into the existing healthcare system, and transform the educational curriculum across the continuum?

Continuing professional development (CPD) includes all of the learning activities that health professionals need to fulfill their dynamic and changing roles in the current healthcare environment. CPD represents a synthesis of continuing medical education (CME) and faculty development to prepare faculty to fulfill academic medicine's tripartite mission of patient care, education, and research.

The CPD section of the Group on Educational Affairs, as part of the Joint Working Group with the Society for Academic Continuing Medical Education (SACME), defined and visualized CPD for Academic Medicine's Last Page. This workshop will introduce this new CPD vision. Participants will explore this new paradigm; reflect on their own learning needs; assess CPD at their home institutions; share their best-practices; and craft goals to promote future CPD activities.

Learning Objectives:

1. Describe core concepts of CPD, specifically: a) the role of CPD in the continuum of medical education, b) the framing of CPD in the larger community of practice, and c) the role of faculty development and curricula to meet the needs of today's academic faculty.
2. Conduct an institutional CPD self-assessment to identify gaps and opportunities at their home institutions.
3. Share challenges, opportunities, and best practices in the CPD domains of patient outcomes, education, research/scholarship, and leadership.
4. Develop at least one specific and measurable goal relating to promoting CPD activities at their institutions.

Session Methods and Format:

- I. Session outline and learning objectives (5 minutes).
- II. Assess audience current understanding of CPD. For example: 1) inclusion of faculty development activities, 2) role in medical education continuum, 3) inclusion of concepts

- beyond medical knowledge, such as quality improvement and scholarship (15 minutes, written assessment questions or polling software).
- III. Reveal Last Page graphic and discussion of new CPD paradigm (20 minutes) including the role of faculty development within the greater domain of CPD.
 - IV. Institutional inventory of CPD activities (10 minutes, written assessment tool or polling software).
 - V. Based on inventory results, small groups identify/share experiences, best practices and learning needs regarding curricula and faculty development. Based on discussion, individuals draft a specific goal relevant to their educational setting (20 minutes).
 - VI. Wrap up, sharing of plans (20 minutes)

Experience:

Randa Kutob, MD, MPH, Associate Professor of Family & Community Medicine, serves as Director of the University of Arizona College of Medicine-Tucson of Office Continuing Medical Education and Chair of the WGEA CPD Section.

Nels Carlson, MD, Associate Professor of Orthopaedics, serves as Assistant Dean, Continuing Professional Development, Oregon Health & Sciences University and Chair-Elect of the WGEA CPD Section.

References:

Rayburn WF, Turco MG, Davis DA, eds. Continuing Professional Development in Medicine and Health Care. Better Education, Better Patient Outcomes. Philadelphia, PA: Wolters Kluwer; 2018.

Sachdeva AK. Continuing professional development in the twenty-first century. J Contin Educ Health Prof. 2016;36 Suppl 1: S8-S13.

Davis DA, Rayburn WF, Smith GA. Continuing Professional Development for Faculty: An Elephant in the House of Academic Medicine or the Key to Future Success? Acad Med. 2017;92(8):1078-81.

Sargeant J, Wong BM, Campbell CM. CPD of the future: a partnership between quality improvement and competency-based education. Med Educ. 2017.

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Creating A Comprehensive Career Advising Curriculum

Submission Type: Workshops

Accepted as: Workshop

Authors:

Heather Whelan, UCSF-VAMC

Brent Kobashi, UCSF

Abstract Body:

Rationale:

The timeline for making career decisions has grown shorter for medical students, particularly as the competitiveness of residency applications has increased. This creates an environment in which students must engage in research, community service and other extracurricular activities to maximize their chances of successfully matching in a residency of their choice. We know that career satisfaction is closely tied to overall well-being, making it even more important to support students in choosing the right career path for them. In addition, female students and those who are underrepresented in medicine are more likely to match in competitive fields if they have proactive mentors and sponsors. Finally, having physician career advisors provides an added layer of insight and experience in advising that can be very helpful to students. For all of these reasons, the UCSF School of Medicine has created a faculty-run longitudinal career advising curriculum, which is closely tied with a network of specialty advisors and other career support services.

Learning Objectives:

At the end of this workshop, learners will:

- Understand and apply the basic principles of designing a longitudinal career advising curriculum, using the AAMC Careers in Medicine program as a foundation
- Identify resources needed and strategies to develop them, including:
 - physician faculty to serve as general career advisors (can augment staff advisors)
 - physician faculty to serve as specialty advisors
 - physician faculty to serve as URM mentors and role models
 - other professional staff and services to support students in crafting CV's and personal statements, providing financial aid for applications and interviews if needed, maintaining mental health and well-being, preparing for important exams such as Step 1
- Understand the unique experience and skills physician advisors bring to the career advising role
- Develop an approach to addressing common student career advising challenges, including:
 - undecided on career path after completing core clerkships
 - applying to very competitive specialty without strong academic performance

Session Methods and Format:

- 30 mins intro with slides
- UCSF model for career advising
- general principles learned from our experience
- examples of our challenges and successes
- 50 mins: 2 paper cases in groups and discussion
- brainstorm how participants can apply these principles at their schools to develop a career advising program

- review and respond to paper student advising scenario
- 10 mins: slides and wrap-up

Experience:

Heather Whelan is a Clinical Professor of Medicine, Faculty Co-Director of Career Advising for the UCSF School of Medicine, a Coach in the UCSF Bridges curriculum, and a facilitator of diversity, equity and inclusion trainings for faculty and staff. Brent Kobashi is an Associate Clinical Professor of Medicine, Faculty Co-Director of Career Advising for the UCSF School of Medicine, and a Coach in the UCSF Bridges curriculum.

References:

N/A

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Curricular Evaluations: Are We Measuring What Matters?

Submission Type: Workshops

Accepted as: Poster

Authors:

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Anne Vo, Kaiser Permanente School of Medicine

Christine Crispen, University of Southern California (USC) Keck School of Medicine

Abstract Body:

Rationale:

Student evaluations of their teachers and courses are a core component of continuous quality improvement. Teaching evaluations are relied upon for teaching improvements and academic promotions, while course and programmatic evaluations are used to guide core curriculum and service improvements.¹ According to the Liaison Committee on Medical Education (LCME), “A medical school engages in ongoing planning and continuous quality improvement processes that establish short and long-term programmatic goals, result in the achievement of measurable outcomes used to improve programmatic quality, and ensure effective monitoring of the medical education program’s compliance with accreditation standards”. Inherent to the monitoring of programs and obtaining measurable outcomes is collecting rich evaluation data from broad representative groups of learners. This is particularly important as research has shown that surveys that are not representative of a broad base of student perspectives can be prone to bias.² Thus the contemporary expectations are higher for survey response rates when publishing program outcomes, with response rates approximating 60% for most research as the required goal of curriculum developers and researchers.³ Simultaneously, minimizing the evaluation workload helps maintain student well-being.

Members of three institutions will share their evaluation approaches, systems and processes with a focus on how evaluations are administered and the methods used for optimizing response rates. Speakers will cover the distribution of evaluations, methods of feedback, and how students are engaged in the evaluation process. The session will conclude with best practices, challenges, and lessons learned.

Learning Objectives:

1. Identify a variety of methods used by medical schools to assign evaluations
2. Recognize the strengths and drawbacks of the methods used to assign evaluations
3. Compare how their unique setting might benefit from the methods used to improve response rates

Session Methods and Format:

15-mins: Welcome and introduction

30-min: 3 presenters share their approach and philosophy toward evaluations at their institution

20-min: Small group discussions with a focus on:

1. Approach schools take toward evaluation?
2. How do schools engage students in comparing their learning experiences across a variety of settings? How are those data reported and used?
3. How do schools assign evaluations and achieve adequate response rates?

4. Success, challenges, and what changes are anticipated in the next 1-3 years?
25-mins: Report back to larger group with focus on proposal for best practices

Experience:

Allison Chen has managed the implementation of evaluations and completion compliance across the continuum of medical student education at UCSF School of Medicine over the past decade.

Anne Vo, PhD contributes to the development and execution of KPSOM's educational assessment, evaluation, and research strategies and policies.

Christine Crispen Ed.D. oversees and manages all assessments, program evaluations, and institutional reporting for the Keck School of Medicine of USC. Prior to this role, she was the Director for the Office of Curriculum at KSOM.

References:

1. Spooren P, Brockx B, Mortelmans D. On the Validity of Student Evaluation of Teaching: The State of the Art. Vol. 83, Review of Educational Research. 2013. 598–642 p.
2. Hodgson CS, Teherani A, Guiton G, Wilkerson L. The relationship between student anonymity and responses from two medical schools on the Association of American Medical Colleges' Graduation Questionnaire. Acad Med. 2002;77(10 SUPPL.).
3. Fincham JE. Response rates and responsiveness for surveys, standards, and the Journal. Am J Pharm Educ. 2008;72(2):43.

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Demystifying the Data Life Cycle: The Evolution of Bits and Bytes to Evidence and Outcomes

Submission Type: Workshops

Accepted as: Workshop

Authors:

Julie Youm, University of California, Irvine School of Medicine
Zahra Dabzadeh, University of California, Irvine School of Medicine
Erin Griffin, University of California, Davis, School of Medicine
Christen White, University of Washington School of Medicine

Abstract Body:

Rationale:

Data is essential for robust continuous quality improvement in medical education. The success of a medical education program is a moving target as the needs of students and patient populations are dynamic. There is continual need to monitor the quality and impact of a medical education program for accreditation purposes. The process of obtaining, analyzing, interpreting and sharing data needed to drive program monitoring and improvement is complex and can be an intimidating proposition. This presentation will demystify the challenges of working with and communicating data. The presenters will use a familiar case scenario for medical educators, i.e., evaluating course/clerkship quality (LCME Element 8.3), and walk through the life cycle of the data involved in the evaluation process.

Learning Objectives:

The objectives of this workshop presentation are as follows:

1. Describe techniques for preparing data for analysis from data sources such as evaluation systems, survey tools and spreadsheets
2. Introduce data analysis approaches and guidelines
3. Present data reporting and visualization best practices

Session Methods and Format:

This session will begin with an overview of the challenges around working with and understanding data for assessment and evaluation purposes. This overview will be followed by the presentation of a case scenario, e.g., “You are a CQI office asked to evaluate the quality of the Anatomy course,” that will serve as the basis for a problem-based approach to conducting the workshop (15 minutes). This case scenario will continue with a description of the common data sources for evaluating a course, i.e., course and faculty evaluations, and some basic techniques to prepare or “clean” the data for analysis (20 minutes). This will be followed by an introduction to relevant data analysis approaches and guidelines for interpreting results (20 minutes). Finally, recommendations and best practices for presenting data as reports and/or through the use of visualization tools to effectively share outcomes with a broad range of stakeholders will be discussed (20 minutes). Participation in the workshop will be encouraged through small-group discussion and the use of audience response tools.

This presentation will be followed by a question and answer period with workshop attendees (15 minutes).

Experience:

Julie Youm is the Assistant Dean of Education Compliance and Quality and the Director of Educational Technology at the UC Irvine School of Medicine with experience in technology systems to support the data life cycle with a focus on continuous quality improvement.

Zahra Dabzadeh serves as the Quality Data Analyst on the UC Irvine School of Medicine's Education Compliance and Quality team with experience developing compliance dashboards and reports.

Erin Griffin leads the UC Davis School of Medicine Research, Evaluation and Analytics Unit. She has extensive background in epidemiology public health, and education, and expertise with data science, statistical modeling, research design, and program evaluation.

Christen White is the Project Manager and Business Analyst for the Academic Affairs Data Mart at University of Washington School of Medicine. Her role is to work across units to provide data infrastructure and support from beginning to end of the data lifecycle.

References:

N/A

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Developing Effective Narrative Evaluations for the MSPE

Submission Type: Workshops

Accepted as: Workshop

Authors:

Lee Jones, UCSF

Abstract Body:

Rationale:

A GSA/GEA Constituent Collaborative Project: Writing Narrative Feedback for the MSPE convened a working group in early 2019 to consider the current state of narrative feedback used to compose the MSPE. The intent of the working group is to build upon the work done by the MSPE Task Force that developed the MSPE Guidelines furthering their work to enhance the transmission of useful information from UME to GME in the residency application process.¹ This work will contribute to move the focus from primarily quantitative measures to more qualitative measure of student performance and to find ways to explicate student's professional characteristics. This interactive workshop will provide foundational information on writing a high quality narrative evaluation, showcase the work product of the working group - a faculty development module to assist clerkship directors in supporting the work of the clinical faculty and residents, and provide resources for the clerkship directors or student affairs deans in assisting clerkship directors complete effective narrative evaluations for the MSPE that follow the AAMC MSPE Guidelines. This is an early presentation of the information and feedback from the group in attendance is anticipated and will be appreciated.

Learning Objectives:

1. Describe the core components of an effective narrative evaluation
2. Compose a faculty development session for clinical faculty and residents using the module developed by the working group
3. Construct a summative narrative evaluation for the MSPE that is consistent with the MSPE Guidelines

Session Methods and Format:

Participants will be actively engaged in assessing and drafting narrative evaluations and will receive feedback throughout the process. At the of the session they will receive the products of the working group which will include a PowerPoint for the faculty development module accompanied by a facilitator's guide and instructions for completing the final clerkship narrative.

Detailed Session Description:

- 00:00 – 00:10 Introduction of workshop facilitators and participants
- 00:10 – 00:30 Brief review of the MSPE Guidelines; description of the components of effective narrative evaluation and presentation of the faculty development module
- 00:30 – 00:55 Workshop participants will evaluate narrative evaluations (as part of a faculty development session) and then draft an evaluation based on a case scenario; participants will review and critique each other's evaluations
- 00:55- 00:65 Presentation on the development of summative clerkship evaluations
- 00:65 – 00:75 Wrap up discussion and next steps; the materials developed by the working group will be disseminated at the end of the workshop

Experience:

Dr. Veesenmeyer is a fellowship trained pediatrician teaching and working across the spectrum of UME, GME, and CME.

Dr Jones is a fellowship trained psychiatrist, with experience in UME, GME, and CME, who chaired the AAMC Task MSPE Task Force.

References:

1. https://www.aamc.org/members/gsa/54686/gsa_mspeguide.html
2. Dudek, N. L., Marks, M. B., Wood, T. J., et al. (2012). Quality evaluation reports: Can a faculty development program make a difference? *Med Teach*, 34(11), e725-731.
3. Newton, P. M., Wallace, M. J., & McKimm, J. (2012). Improved quality and quantity of written feedback is associated with a structured feedback proforma. *J Educ Eval Health Prof*, 9(0), 10-10.

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Do You Have a Minute? Best Practices for Taking Your CCC Out of the Hallway

Submission Type: Workshops

Accepted as: Workshop

Authors:

Holly Caretta-Weyer, Stanford University School of Medicine

Stefanie Sebok-Seyer, Stanford University School of Medicine

Abstract Body:

Rationale:

The adoption of a competency-based framework of assessment has necessitated a change in how we approach the purpose of our Clinical Competency Committee (CCC) and the assessment data required to make decisions regarding entrustment, promotion, and remediation. This includes gathering multimodal assessment data across time and context from multiple assessors.

Competency-based medical education systems have recommended guiding principles for rendering summative entrustment decisions in undergraduate medical education, which include: (1) training a specific group of administrators and faculty for this purpose; (2) basing entrustment decisions on a longitudinal view of a learner's performance; (3) emphasizing the use of daily ad hoc workplace-based supervisory and entrustment decisions; (4) explicitly measuring attributes of trustworthiness; (5) gathering evidence from multiple assessors; (6) ensuring a process for formative feedback; and (7) giving the learner an active voice in the entrustment process. Many in graduate medical education have begun to adopt similar processes of holistic review in their CCC proceedings and increased their emphasis on workplace-based assessment and supervisory data. There has also been a call for the use of qualitative data in addition to the typical checklists and daily milestone assessments to add richness to the data reviewed by the CCC to better inform decisions regarding progression and eventual promotion. As we transition to a competency-based paradigm, true programmatic assessment will be required in order to provide the data necessary to render meaningful and valid summative entrustment decisions for each learner and further tailor their learning moving forward. In this session, we will discuss the development of programs of assessment, data visualization and analytics, and best practices in summative group decision-making processes to better inform the core functions of the CCC and subsequent individualization of learning for our trainees.

Learning Objectives:

- Describe the core principles for rendering summative entrustment decisions using the framework of EPAs.
- Interpret various forms of assessment data and utilize it in making summative entrustment and promotion decisions.
- Defend summative entrustment decisions in light of the various challenges posed by those decisions.

Session Methods and Format:

In this workshop, we will discuss the multiple methods of assessment used in GME, current models of programmatic assessment as defined in a competency-based framework, and published best practices for operationalizing and running a CCC. We will then facilitate a small group discussion using resident cases and e-learning portfolios or dashboards to allow participants to

form a mock CCC. Participants will review workplace-based assessment and supervisory data, determine how to utilize qualitative data in their mock CCC deliberations, and use group decision-making principles to formulate summative decisions regarding each resident. They will then report out on their decisions. Finally, the groups will have to defend their decisions to one another in light of complications.

Experience:

Holly Caretta-Weyer is an international expert in competency-based education and assessment. She has spoken on these topics at conferences such as AMEE, ICRE, ICBME, AAMC, ACGME, AMA, and others.

Stefanie Sebok-Syer is an international expert in competency-based education, assessment, and measurement. She has spoken on these topics such as AMEE, ICRE, ICBME, AAMC, ACGME, CCME, and others.

References:

N/A

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Doves versus Hawks—How do you know you can trust your trainee to do that?

Submission Type: Workshops

Accepted as: Workshop

Authors:

Carrie Phillipi, Oregon Health & Science University School of Medicine

Abstract Body:

Rationale:

The level of independence trainees are allowed in clinical settings is often based on limited information. The characteristics of the supervisor may affect the level of supervision. Some supervisors, the “doves” are inherently trusting, whereas the “hawks” may require proof to reduce their level of supervision. The Core Entrustable Professional Activities (EPA) for Entering Residency provide a framework for competence in undergraduate medical education. In order to allow for safe, independent practice, direct observation and a method for capturing, assimilating, and interpreting these data is needed to inform a robust assessment of a student’s abilities. Workplace-Based Assessments (WBAs) offer the ability to assess what a trainee “does” in an authentic workplace, rather than what the trainee “can do” in a controlled setting such as an OCSE. WBA is typically described as formative and most effective when paired with feedback to help the learner grow and develop related to the competency being assessed. Several schools participating in the Core EPA pilot have implemented Core EPA-based WBAs at their institutions. By practicing workplace-based assessments in real time, participants will understand how direct observation provides a rich source of information to allow independence based on competence. Lessons learned from the pilot will be shared to help participants solve practical problems and overcome barriers to using the Core EPA framework and implementing WBA. The session is designed to be practical, flexible, and interactive so that common challenges are optimally addressed.

Learning Objectives:

After completing the session participants will be able to:

1. Describe an EPA as a framework for competence
2. Outline the importance of direct observation for WBA, whether a “dove or a “hawk”
3. Utilize commonly implemented competency-based rating scales
4. Develop a plan to implement WBA as a practical method for direct observation

Session Methods and Format:

The session begins with a 15-minute didactic presentation describing the EPAs as a framework for competency-based medical education, elements of trustworthiness, and widely used rating scales for assessment. Videos of students performing common clinical tasks will then be viewed by the group and individuals will rate student competency using an audience response system (30 minutes). Small groups will then come to consensus, offering an assigned level of supervision after group discussion (15 minute facilitated discussion). Data from WBAs at Oregon Health & Science University and other Core EPA Pilot schools will be presented didactically (10 minutes). Participants will then share barriers and facilitators to direct observation and completing WBAs in their clinical settings and institutions (20 minute facilitated discussion).

Experience:

Dr. Phillipi is an experienced presenter and has successfully facilitated this workshop at national meetings; she has also used this workshop for faculty development at her own institution.

References:

- Norcini, J., & Burch, V. (2007). Workplace-based assessment as an educational tool: AMEE Guide No. 31. *Medical Teacher*, 29(9), 855–871.
- Massie, J., & Ali, J. M. (2016). Workplace-based assessment: a review of user perceptions and strategies to address the identified shortcomings. *Advances in Health Sciences Education*, 21(2), 455–473.
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<https://www.aamc.org/initiatives/coreepas/publicationsandpresentations/>
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Evidence-Based Pedagogies for Medical Education: Dispelling Myths and Reinforcing Teaching Practices Backed by Data

Submission Type: Workshops

Accepted as: Workshop

Authors:

Andre Kumar, Stanford University School of Medicine

Abstract Body:

Rationale:

Which teaching practices are supported by evidence and which are propagated by myths? Today's medical educators are inundated with a variety of terminologies or best practices that have been conflated with effective teaching. Yet, the evidence for many of these practices is at best lacking, and at worst, entirely false. This workshop aims to put the data back in medical education by addressing common myths of adult learning and reinforcing well-established pedagogies that are supported by evidence. This workshop is open to medical educators from a variety of clinical backgrounds. It is designed to be informative to both junior and experienced medical educators who have an interest in teaching, learning theory, and curriculum development.

Learning Objectives:

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

1. Understand several key theories of adult learning (e.g. cognitive load, working memory, knowledge representation, and transfer).
2. Apply these learning theories toward the participant's individual teaching and curricular endeavors.
3. Recognize several myths of adult learning (learning styles, technocentrism, passive learning, and multi-tasking) and review relevant studies that challenge these assertions.
4. Experience well-evidenced teaching practices (just-in-time telling, generation/elaboration, formative assessment) and reflect on how these practices can be applied at their own institution.

Session Methods and Format:

The workshop will begin with an overview of the session objectives (5 minutes). The participants will then be guided through several case studies of common "myths" in education as well as supportive studies that challenge such misconceptions of learning (10-15 minutes per topic). These studies will serve as a focal point for workshop activities, including small group discussions, informal polling, and the use of advanced organizers. Following these interactive exercises, the participants will be exposed to relevant learning theories that apply to each study, and they will be challenged to consider how these lessons apply to their own teaching endeavors (10 minutes). The contents of this workshop are modular, meaning that additional myths and theories can be added or subtracted as time allows by the conference organizers. Currently, this workshop can be completed between 60-90 minutes.

Experience:

Andre Kumar, MD, MEd is a Clinical Assistant Professor at Stanford University and holds a Master of Education Degree from Stanford University.

References:

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Fostering medical education research and scholarship: Strategies and answers for mentors and mentees

Submission Type: Workshops

Accepted as: Workshop

Authors:

Patricia O'Sullivan, University of California, San Francisco, School of Medicine
Cha-Chi Fung, Keck School of Medicine of USC

Abstract Body:

Rationale:

Mentorship is considered crucial to medical educators' academic success and career enhancement. Within academia, mentorship traditionally involves assistance in teaching skills, research, and career advancement, as well as help with learning to navigate institutional and academic culture. Benefits of mentoring include higher career satisfaction; increased self-confidence in professional development, education and administration; improved sense of community; and greater productivity and success. However, only one third to one half of faculty report having a mentor in academia and this percentage may be lower in medical education. In this interactive session, we will explore the characteristics of an effective mentor and effective mentee. Attendees will have the opportunity to ask questions of mentors from different perspectives on being an educational researcher.

Learning Objectives:

1. Explore the role of a mentor.
2. Discuss characteristics of an effective mentor.
3. Address specific challenges a faculty member has in educational research from the perspective of (1) leaders, (2) educational researchers, (3) overall career development, and (d) mid-career professionals.

Session Methods and Format:

PART 1: Overview and Introductions (15 MIN)

This section begins by introducing the session objectives, presenters, and format, as well as a discussion of the role of the mentor.

PART 2: Identification of Exemplars (10 MIN)

Participants are divided into "buzz groups" where they will be provided with instructions to the activity, which is to identify exemplars of effective mentors/mentees. Presenters serve as "buzz group facilitators" who monitor discussion and record the groups' exemplars.

PART 3: Stations for Answering Questions (30 MIN)

The four stations are introduced and participants have the opportunity to participate in two of the four stations (15 min/each station). These stations are designed to be informal, small group discussions where participants can discuss station topics, as well as ask questions of experienced mentors. Facilitators will rotate through each of the four groups as needed.

1. Mentorship for leaders

- What kind of mentorship do leaders need? How do they mentor researchers? How can I make the most of my mentoring experiences (as a mentor)?
- 2. Mentorship for educational researchers
 - How can I get mentored in educational research when it is so skills based? How can I turn the work that I am doing into educational scholarship?
- 3. Mentorship for career development
 - Can I get promoted based on education-related work?
- 4. Mentorship for mid-career
 - What are the mentoring needs of mid-career faculty members? How does this compare to early-career faculty members? To what kinds of opportunities is it important to say “yes” when asked?

PART 4: Summary/Closing (20 MIN)

A large group report out will follow. Station mentors will respond to questions and summarize highpoints. Participants engage in a large group discussion where they generate ideas for actionable items to take to their home organization.

Experience:

Each speaker is a member of the Society of the Directors of Research in Medical Education and has much expertise in leadership as it relates to the development of medical education researchers.

References:

n/a

For more information about this abstract please contact: [susan.sawning@louisville.edu]

Identifying, affirming, and recognizing acts of exemplary professionalism: the importance of peer recognition in professional identity development

Submission Type: Workshops

Accepted as: Poster

Authors:

Hannah Dischinger, Oregon Health & Science University School of Medicine

Nicole Santucci, Oregon Health & Science University School of Medicine

Malika Waschmann, Oregon Health & Science University School of Medicine

Megan Furnari, Oregon Health & Science University School of Medicine

Abstract Body:

Rationale:

Burnout is a well-documented and often-discussed phenomenon in medical training. "Effort-reward imbalance" (ERI) is a previously studied source of burnout and mental illness in the workplace. Stansfeld's 2006 meta-analysis identified "effort-reward imbalance" to be "strongly associated with an increased risk of common mental disorders", a primary cause of job stress^{1,2}, and correlated with increased risk of suicidality.³ Another systematic review identified "loss of support from colleagues" to be one of the "central factors contributing to physician burnout".⁴ Meaningful recognition is a critical component of a healthy workplace.⁵ Many students and physicians are familiar with authoring letters of recommendation for their junior colleagues in the context of job applications and tenure portfolios, but may be less familiar with the formal recognition of isolated acts of professionalism. Training students and physicians to identify acts of meaningful professionalism can be implemented to both increase the emotional "reward" of labor and bolster gratitude practices in the workplace to protect against burnout. Furthermore, recognition of success is an important approach to reduce negativity bias, as well as gender bias in medicine.⁶⁻⁹

Learning Objectives:

1. Define and discuss Effort-reward imbalance (ERI) and its potential impact on burnout; identify recognition as a tool to improve ERI.
2. Review the traditional format of institutional recognition and analyze its merits and pitfalls.
3. Discuss implicit bias in language choice in letters of recommendation and recognition.
4. Refine each participant's definition of professionalism and establish a practice to help participants identify acts of exemplary peer professionalism.
5. Write a letter of recognition for a peer.

Session Methods and Format:

The workshop will be a mix of didactic learning, small group discussions, narrative writing and reflection, and large-group discussion. Participants will leave the workshop with a letter of recognition written for one of their peers.

Brief outline of the proposed workshop:

- Introduction & review of learning objectives (10 minutes)
- What is the value of institutional recognition and who gets recognized? (10 minutes)
- Defining professionalism (30 minutes)
- Writing letters of recognition: example, reflect, and write (30 minutes)

- Conclusion: review of objectives and future goals (10 minutes)

Experience:

- Dr. Megan Furnari is the Director of Medical Student Wellness and Leadership Development and the Faculty Director of the Women's Leadership Development Program (WLDP) at Oregon Health and Science University (OHSU).
- Hannah Dischinger is a 4th year medical student and senior leader in the WLDP who has led workshops on peer recognition for medical students at OHSU.
- Nicole Santucci is a 2nd year medical student and senior leader in the WLDP and has a Master's degree in Urban Education.
- Malika Waschmann is a 2nd year medical student and senior leader in the WLDP.

References:

1. Stansfeld S, Candy B. Psychosocial work environment and mental health--a meta-analytic review. *Scand J Work Environ Health* 2006;32:443-62.
2. Lases SS, Slootweg IA, Pierik E, Heineman E, Lombarts M. Efforts, rewards and professional autonomy determine residents' experienced well-being. *Adv Health Sci Educ Theory Pract* 2018;23:977-93.
3. Zhuo LB, Yao W, Yan Z, Giron MST, Pei JJ, Wang HX. Impact of effort reward imbalance at work on suicidal ideation in ten European countries: The role of depressive symptoms. *J Affect Disord* 2019;260:214-21.
4. Patel RS, Bachu R, Adikey A, Malik M, Shah M. Factors Related to Physician Burnout and Its Consequences: A Review. *Behav Sci (Basel)* 2018;8.
5. Nayback-Beebe AM, Forsythe T, Funari T, et al. Using evidence-based leadership initiatives to create a healthy nursing work environment. *Dimens Crit Care Nurs* 2013;32:166-73.
6. Haizlip J, May N, Schorling J, Williams A, Plews-Ogan M. Perspective: the negativity bias, medical education, and the culture of academic medicine: why culture change is hard. *Acad Med* 2012;87:1205-9.
7. Choo EK. Damned If You Do, Damned If You Don't: Bias in Evaluations of Female Resident Physicians. *Journal of graduate medical education* 2017;9:586-7.
8. Choo EK, Kass D, Westergaard M, et al. The Development of Best Practice Recommendations to Support the Hiring, Recruitment, and Advancement of Women Physicians in Emergency Medicine. *Academic Emergency Med* 2016;23:1203-9.
9. Ross DA, Boatright D, Nunez-Smith M, Jordan A, Chekroud A, Moore EZ. Differences in words used to describe racial and gender groups in Medical Student Performance Evaluations. *PloS One* 2017;12:e0181659.

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Knowing the Tools in your Assessment Tool Kit

Submission Type: Workshops

Accepted as: Poster

Authors:

Danielle Miller, Stanford University School of Medicine

Stefanie Sebok-Seyer, Stanford University School of Medicine

Holly Caretta-Weyer, Stanford University School of Medicine

Abstract Body:

Rationale:

Physicians are often called upon to develop assessment methods for evaluating their residents and medical students. Despite the frequency in which physicians are creating curricula and assessing learners, very few clinicians receive formal training on the types of assessment tools. This session will describe the educational theory behind assessment tools and how to select tools tailored to learners' developmental stage using Miller's Pyramid of Competence. This session will include a small group practical exercise in which examples of assessment tools will be handed to various small groups. The groups will have to identify the assessment tool, place the assessment tool on Miller's Pyramid of Competence, and discuss advantages and disadvantages to using the assessment tool for evaluating learners. Once each group has identified their respective assessment tools, the groups will come back together in a large group discussion. Each group will present their findings with a facilitator-guided discussion on the use of the assessment tool in developing curricula. All groups will have hard copies of all of the assessment tools so that every participant will have practical experience identifying and evaluating each assessment tool.

Tools that will be included in this session are: case based learning, case based discussions, Directly Observed Procedures (DOPs), logbooks, the mini Clinical Evaluation Exercise (mini-CEX), multiple choice questions, Objective Structured Clinical Evaluations (OSCE), patient surveys, 360 degree feedback or the mini Peer Assessment Tool (mini-PAT), portfolios, Problem Based Learning (PBL), and Simulation Cases.

The target audience will include those with an interest in assessment or those who have ever been tasked to create a curriculum.

Learning Objectives:

At the end of this educational session, attendees will be able to:

1. Describe the educational theory behind assessment methods ,including Miller's Pyramid of Competence.
2. Identify real examples of assessment tools.
3. Describe the advantages and disadvantages of each assessment tool.
4. Demonstrate how to select assessment tools that are tailored to the learner using Miller's Pyramid.

Session Methods and Format:

The proposed time of this workshop is a total of 60 minutes: 10 minutes of didactic, followed by

20 minutes of a small group exercise, followed by 30 minutes of groups presenting their findings and discussion. The round-table discussion format will allow for an atmosphere that encourages discussion and collaboration, in addition to sharing of experiences.

Experience:

Danielle T. Miller MD is the Medical Education Fellow at Stanford Department of Emergency Medicine and has published on the topics of curriculum design in simulation based mastery learning.

Stefanie Sebok-Seyer PhD is an Instructor in the Department of Emergency Medicine at Stanford, having received her PhD in Measurement, Assessment, and Evaluation; she has been extensively published in medical education and is internationally recognized as a leading researcher in competency-based medical education and assessment.

Holly Caretta-Weyer MD is a Clinical Assistant Professor, Assistant Residency Program Director, and Director of Evaluation and Assessment for Stanford Emergency Medicine; she brings expertise in the core EPAs as the Chair of the Entrustment Committee at the Stanford School of Medicine.

References:

Bok H, Teunissen P, Favier R, et al. Programmatic assessment of competency-based workplace learning: when theory meets practice. *BMC Med Educ.* 2013;13(1):123.

Gofton, W., Dudek, N., Barton, G., et al. (2017). Workplace-Based assessment implementation guide: formative tips for medical teaching practice. 1st ed. (2017) Ottawa: The Royal College of Physicians and Surgeons of Canada, 1-12.

Liu C. An introduction to workplace-based assessments. *Gastroenterol Hepatol.* 2012;5(1):24–28.

Ponnamperuma G. Workplace based assessment. In: *Oxford Textbook of Medical Education*. Oxford, UK: Oxford University Press; 2013. <https://oxfordmedicine.com/view/10.1093/med/9780199652679.001.0001/med-9780199652679-chapter-46>. Accessed September 13, 2019.

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Loneliness in Medicine: A workshop on overcoming shame, self-judgment and isolation in Medicine

Submission Type: Workshops

Accepted as: Poster

Authors:

Al'ai Alvarez, Stanford University School of Medicine

Abstract Body:

Rationale:

Loneliness in medicine is prevalent and has severe complications including burnout, depression and even suicide. Loneliness in medicine is driven by shame and self-judgment. Individuals and the health system may be empowered to activate change to address isolation, promote self compassion, belonging, and ultimately prevent burnout and promote physician well-being.

Learning Objectives:

- Identify the prevalence and role of the imposter syndrome and shame in medicine through facilitated small group discussions
- Recognize the role of loneliness in medicine to physician burnout
- Organize a toolkit of strategies to address imposter syndrome, shame and loneliness in medicine in order to develop belonging.

Session Methods and Format:

Introduction on the topic of the imposter syndrome in Medicine through a case presentation. 10 minutes.

Facilitated discussion on the audience experience on how loneliness manifests in Medicine. This will normalize the feelings of loneliness and the imposter syndrome. 15 minute think/pair/share.

Debrief. 10 minutes

Share narratives from online-crowdsourcing. 10 minutes.

Summarize possible causes of loneliness in medicine. 10 minutes.

Facilitated discussion on ways to overcome loneliness in medicine. 15 minute think/pair/share

Debrief. Summarize list of ways to overcome loneliness from an individual's perspective as well as organization/systems perspective. 10 minutes.

Take away points/Q&A. 10 minutes.

Total: 90 minutes

Experience:

Al'ai Alvarez, MD, FACEP, FAAEM focuses on the interdependence of residency wellbeing with performance improvement in patient experience, quality and patient safety and serves on national committees on physician wellbeing, diversity and inclusion in medical education, has given several grand rounds and national conference lectures and workshops on relevant topics in gratitude, physician wellbeing, burnout, the imposter syndrome, as well as increasing leadership capacity and mentorship to enhance diversity and inclusion in medicine.

References:

Gold JA, Bentzley JP, Franciscus AM, Forte C, De Golia SG. An Intervention in Social Connection: Medical Student Reflection Groups. *Acad Psychiatry*. April 2019. doi:10.1007/s40596-019-01058-2

Brunsborg KA, Landrigan CP, Garcia BM, et al. Association of Pediatric Resident Physician Depression and Burnout With Harmful Medical Errors on Inpatient Services. *Acad Med*. April 2019. doi:10.1097/ACM.0000000000002778

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<https://www.medpagetoday.com/publichealthpolicy/generalprofessionalissues/77476>. Accessed October 31, 2019.
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 Berger L, Waidyaratne-Wijeratne N. Where does resiliency fit into the residency training experience: a framework for understanding the relationship between wellness, burnout, and resiliency during residency training. *Can Med Educ J*. 2019;10(1):e20-e27.

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Mentoring Across Differences

Submission Type: Workshops

Accepted as: Workshop

Authors:

Catherine Lomen-Hoerth, UCSF School of Medicine

Heather Whelan, UCSF-VAMC

Brent Kobashi, UCSF

Ugomma Eze, UCSF

Abstract Body:

Rationale:

The demographics of our larger society are rapidly evolving and the makeup of our medical school student bodies reflects this, with increasing diversity of ethnicity, race, socioeconomic status, abilities, sexual orientation and gender identity. Nationwide, medical school faculty are generally a much less diverse group. Data show that outcomes for patients are better when working with physicians from similar racial, cultural and linguistic backgrounds. If our goal is to retain a cadre of bright, innovative, diverse students to become faculty and physicians in all specialties, and who reflect the makeup of the populations they serve, we need to reach out across differences to mentor, sponsor and advocate for these students.

Learning Objectives:

- Understand the importance of diversity, equity, and inclusion in healthcare
- Recognize oppression, implicit bias, and micro-aggressions and how they lead to less diverse representation amongst physicians
- Develop skills of deep listening, empathy, perspective taking, and allyship that will help support diverse students to succeed
- Synthesize and apply the above knowledge and skills by working through challenging mentoring cases of difference through role playing and small group discussion
- Develop a goal specific to advancing diversity, equity and inclusion that can be presented to home institution leadership.

Session Methods and Format:

5 minutes to take a brief survey to understand the participants baseline knowledge of diversity, equity, and inclusion

30 minutes of didactics using poll everywhere to ensure the audience understands the concepts around diversity, equity, and inclusion

10 minutes of a demonstrating a role play using a challenging mentoring case involving difference

30 minutes of role play in groups of 3, acting out 3 different cases using role play. One participant will act as mentor, one as student, and one as observer. Participants will switch after each case so everyone has an opportunity to play each role.

10 minutes of large group debrief of the cases

5 minutes to fill out the same survey completed at the beginning of the session to determine what was learned in the session and articulate their goal to bring home

Experience:

Catherine Lomen-Hoerth is a Professor of Neurology at UCSF, mentor of medical students for 20 years, and facilitates trainings in diversity, equity and inclusion.

Heather Whelan is a Professor of Medicine at UCSF, student coach, co-director of the career advising program for medical students, and facilitates trainings in diversity, equity and inclusion, Brent Kobashi is an Associate Professor of Medicine at UCSF, student coach, and co-director of the career advising program for medical students.

Ugomma Eze is an MSTP student at UCSF and very active in mentoring students at all levels of training and in promoting DEI awareness throughout UCSF

References:

Mentoring Underrepresented Minority in Medicine (URMM) Students Across Racial, Ethnic and Institutional Differences.

Campbell KM, Rodríguez JE.

J Natl Med Assoc. 2018 Oct;110(5):421-423. doi: 10.1016/j.jnma.2017.09.004. Epub 2017 Nov 6.

For more information about this abstract please contact: [catherine.lomen-hoerth@ucsf.edu]

Navigating Institutional Headwinds: Crossing the Continuous Quality Improvement (CQI) Ocean

Submission Type: Workshops

Accepted as: Poster

Authors:

Jorie Colbert-Getz, University of Utah School of Medicine
Julie Youm, University of California, Irvine School of Medicine
Marilyn Cope, University of Washington School of Medicine
Sara Kim, University of Washington School of Medicine

Abstract Body:

Rationale:

In 2015, the LCME (Liaison Committee on Medical Education) introduced a new element (1.1 Strategic Planning and Continuous Quality Improvement) to ensure “effective monitoring of the medical education program’s compliance with accreditation standards”.¹ Medical schools preparing for the LCME accreditation cycle have created new units or offices with positions, such as Associate/Assistant Deans and Directors, with authority and responsibilities to lead and oversee the Continuous Quality Improvement (CQI) effort. Each school must describe a CQI process and devote personnel and resources for monitoring accreditation elements. However, there is no guidance or consensus from experts on how much financial resources to devote to CQI, what type of positions to hire for a CQI office, and where to place a CQI office in the organizational structure of a medical school. The goals of this session are to introduce the CQI process and use gamification to illustrate key features needed to build and sustain a CQI office. Although the session is focused on a CQI office, participants representing other medical education operations will gain an organizational lens for conceiving new offices/units and/or expanding the current infrastructure.

Learning Objectives:

1. List key features to support the CQI process
2. Evaluate the tradeoffs of resources for a new office
3. Prioritize resources for CQI based on institutional culture

Session Methods and Format:

10 minutes: Large group presentation to address: (1) What is CQI? (2) What are 5 key features to support a CQI process?

65 minutes: The CQI game. Participants will break into small groups (3-5 people) with the following instruction: You are members of a task force that was charged by the Dean to develop a CQI office and recommendations regarding the scope and key functions of the office. The game is mirrored, traveling from point A to point B, off of a board game. Each group will start with the same amount of “CQI funds” and must first decide which resources (staff types, software, IT systems etc.) to acquire for their office. The game will then proceed with each group moving along the board and encountering headway (e.g., An alumnus, who is sold on CQI, donates money to the CQI office) and challenges/setbacks (e.g., The Dean, who was an ardent supporter of CQI, leaves the school), which mirror the realities of sustaining any office in a School of Medicine. The goal of the game will be to reach successful accreditation before running out of CQI funds.

15 minutes: Large Group Debrief. Each group will present what their office looks like at the end of the game and discuss the following: (1) Since organizational culture varies across schools, which 1-2 salient features must be included in a CQI office at your medical school? (2) How did you make decisions about which resources to preserve vs. give up during the game? (3) What are key messages/points you will take away from the game?

Experience:

JCG-CQI, program evaluation.

JY-Technology, compliance

MC-policy/procedure analysis

SK-CQI, program evaluation

References:

1. LCME. Implementing a System for Monitoring Performance in LCME Accreditation Standards. http://lcme.org/wp-content/uploads/filebase/white_papers/CQI-Guidance-Document-10-16.docx. Published October 16, 2016. Accessed September 23, 2019.

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Nuts-and-Bolts: Turning Educational Projects into Successful Submissions to MedEdPORTAL

Submission Type: Workshops

Accepted as: Workshop

Authors:

Janet Corral, University of Colorado School of Medicine.

Wendy Hobson-Rohrer, University of Utah

Sara Hunt, Association of American Medical Colleges,

Abstract Body:

Rationale:

MedEdPORTAL, the Journal for Teaching and Learning Resources of the Association of American Medical Colleges, peer reviews and publishes educational resources. Its recent acceptance into MEDLINE for indexing solidified its position as a premier venue for health science educators who teach medical and dental learners and wish to publish and disseminate their educational projects.

Because MedEdPORTAL's publications count toward promotion processes, helping WGEA members understand how to present their educational innovations as scholarship is critical to their career development. The process of submitting to MedEdPORTAL requires an Educational Summary Report (ESR), which is structured like a traditional research manuscript. However, developing a manuscript through the lens of educational scholarship may require more guidance in how the work is presented.

This workshop is designed to provide hands-on experience with evaluating and revising a draft of an ESR to submit to MedEdPORTAL. Participants will be asked to identify a teaching/learning resource potentially submittable to MedEdPORTAL and bring related materials to the conference.

Learning Objectives:

1. Articulate the ways in which the Educational Summary Report (ESR) is similar to a traditional manuscript.
2. Describe each part of the ESR and how well-written components adhere to standards for scholarship.
3. Identify strategies to refine each component of the ESR for a more scholarly product.
4. Develop a personal "to-do" list to prepare a MedEdPORTAL submission.

Session Methods and Format:

Review of the aspects of the ESR and how they are comparable to and differ from traditional research manuscripts. – 15 minutes

Introduce the ESR worksheet (prompting questions that provide guidance for preparing an ESR). Participants will have the opportunity to use the ESR worksheet for an educational project they envision submitting to MedEdPORTAL – 15 minutes

Divide the room into groups to review a pre-workshop ESR solicited in advance. Small groups will assess the quality of each section and identify what could be improved. Workshop facilitators will circulate to answer questions. – 30 minutes

Moderate a large group report-out of feedback on the ESR while a facilitator documents effective principles in writing the ESR. – 15 minutes
Conclude workshop by discussing 1) What is hardest to write? 2) What other resources would be helpful? 3) Other questions?

Experience:

Janet Corral, PhD, is an Associate Professor in the Department of Medicine at the University of Colorado School of Medicine, and she is a faculty mentor for MedEdPORTAL, specifically advising junior faculty and trainees on academic scholarship.

Wendy Hobson Rohrer, MD, MSPH, is an Associate Vice President in the Health Science Education Department at the University of Utah Health, a Professor in the Department of Pediatrics at the University of Utah School of Medicine, and she is one of MedEdPORTAL's associate editors for pediatrics and a longtime member of the MedEdPORTAL Faculty Mentor Program.

Sara Hunt is the Managing Editor of MedEdPORTAL, the open-access journal of teaching and learning resources published by the Association of American Medical Colleges.

References:

N/A

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Optimizing the Learning Environment: Innovative Strategies to Responding to Discriminatory or Excluding Comments in Medical Settings

Submission Type: Workshops

Accepted as: Workshop

Authors:

Daniel Cabrera, University of Washington School of Medicine

Roberto Montenegro, University of Washington School of Medicine/Seattle Children's Hospital

Kali Hobson, Seattle Children's Hospital

Abstract Body:

Rationale:

Medical trainees from underrepresented groups often experience excluding attitudes in academic settings. Discriminatory comments may come from attendings, fellows, residents, medical students, other staff members and patients alike. They can range from less overt statements, like microaggressions, to more overt such as racism, sexism, homophobia, transphobia. There is an abundance of literature describing the impact of this mistreatment on a trainee's learning environment, as well as on their personal and professional wellbeing. However, there is minimal literature on advising trainees on how to respond, particularly when the comments are made by supervising physicians, where power dynamics often prevail. How can educators help their trainees both cope with, and communicate well in response to mistreatment in the workplace? This workshop will introduce strategies borrowed from Dialectical Behavior Therapy, a manualized, evidence-based psychotherapy which operationalizes its coping and communication techniques in a concrete, specific way. Removing the strategies from a psychotherapy context gives educators and trainees a framework to discuss coping and communicating without “doing therapy” or requiring formal training in the modality. This workshop is geared both toward trainees themselves, as well as attendings who want to actively support underrepresented learners and promote inclusion and equity in their home institutions. Facilitators will interweave role-play, large group discussion and skills practice exercises, to present strategies to both respond to excluding remarks/mistreatment and accepting feedback about the excluding remarks/mistreatment one may commit. This workshop will have a specific focus on helping individuals structure a clear and non-defensive conversation with their colleagues, supervisors and patients alike.

Learning Objectives:

1. Define and give examples of microaggressions and potential impacts
2. Develop skills to respond to microaggressions
3. Develop skills to respond to feedback when you commit a microaggression

Session Methods and Format:

The workshop will open with an interactive 20-minute review of key terms and examples critical for fostering a productive conversation about interpersonal discrimination, bias, and racism in medical institutions. Communication strategies will then be taught and practiced for 60 minutes: there will be 10 minutes of didactics with examples followed by 50 minutes of small group role playing and feedback. Individuals will break into small groups and will have seven minutes to practice responding to differing cases of microaggressions. Each case will be discussed and

processed for five minutes each through a large-group reflection. We will wrap up with 10 minutes of summarizing and Q&A.

Experience:

All three facilitators have extensive experience teaching this workshop either locally at The UW SOM and nationally.

References:

N/A

For more information about this abstract please contact: [dancab@uw.edu]

Peer tutoring: A workshop on why, when and how to integrate peer tutoring into your medical school curriculum

Submission Type: Workshops

Accepted as: Workshop

Authors:

Abigail Phillips, UCSF
Sara-Megumi Rumrill, UCSF
Amy Ransohoff, UCSF
Damond Ng, UCLA
Ryan Pedigo, UCLA
Tara Vijayan, UCLA

Abstract Body:

Rationale:

Peer tutoring is defined as teaching and coaching provided by one medical student to another to facilitate learning in domains including medical knowledge, clinical skills, and professional attitudes. This method of teaching is supported by cognitive congruence, a learning theory which proposes that student tutors and tutees share a similar knowledge framework, share similar social roles, and use a similar language, allowing for more effective communication (Loda, Lockspieser and colleagues).

Peer tutoring also expands teaching capacity in medical student education. Peer tutors can serve all students or focus effort on struggling learners. Here, the psychological safety of a peer tutor may be particularly advantageous.

Moreover, peer tutoring benefits students who participate as tutors. Student tutors gain professional relationships with faculty in medical education, receive feedback on their teaching, and gain enhanced understanding of the material.

There is limited guidance on best practices in medical student peer tutoring. Our goal is to share the lessons learned from two institutions that designed and implemented peer tutoring programs. The target audience for this workshop is student and faculty medical educators interested in creating or improving a peer tutoring program at their own institution.

Learning Objectives:

- Recognize the benefits of peer tutoring in medical education
- Discuss best practices for designing and implementing a successful peer tutoring program
- Propose one course or topic area (e.g., physical exam skills) where peer tutoring could be used at your own medical school
- Compose an outline of a peer tutoring program proposal for your own medical school by applying at least 3 best practices from this workshop
- Evaluate your own peer tutoring program proposal for anticipated barriers and start planning how you will overcome these challenges.

Session Methods and Format:

Session outline: 90 minutes

- 10 minutes: Introductions and ice-breaker question: What inspired you to attend this workshop?
- 5 minutes: Benefits of peer tutoring in medical education: literature review
- 15 minutes: Describe the design and implementation of two successful peer tutoring programs at UCSF and UCLA and share best practices. Use 2 case examples to highlight the benefits, challenges, and curricular structure of peer tutoring programs with real-time audience response using PollEverywhere
- 10 minutes: Identify one course or topic area where peer tutoring could benefit your institution and why. Pair-share and start filling out the Peer Tutoring Program Proposal worksheet.
- 30 minutes: Table activity with 1-2 facilitator(s) per table: Work through the Peer Tutoring Program Proposal worksheet. Identify components for success, anticipated barriers, and apply best practices. Outline next steps to take home to your institution.
- 10 minutes: Report out: key learning points
- 10 minutes: Evaluations, wrap-up

Experience:

Damond Ng served as a peer tutor in UCLA's Medical Student Teaching Fellowship.

Abigail Phillips is the Principal Investigator for UCSF's Clinical Skills Peer Tutoring Program.

Ryan Pedigo is co-chair of UCLA's Medical Student Teaching Fellowship.

Sara-Megumi Rumrill was co-chair of UCLA's Medical Student Teaching Fellowship and co-directs UCSF's Clinical Skills Peer Tutoring Program.

Amy Ransohoff is a leader for UCSF's Peer Teaching Program.

Tara Vijayan is co-chair of UCLA's Medical Student Teaching Fellowship.

References:

N/A

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Promoting first generation college graduate success in medical school: An online toolkit of resources

Submission Type: Workshops

Accepted as: Workshop

Authors:

Fermin Prieto, University of New Mexico School of Medicine
Sharon Younkin, University of California, Los Angeles David Geffen School of Medicine
Stephanie Clavijo, University of California, Los Angeles David Geffen School of Medicine
Margarita Loeza, University of California, Los Angeles David Geffen School of Medicine,

Abstract Body:

Rationale:

Medical students who were the first in their families to graduate from college bring unique strengths to medical school. First generation college graduates (FGCG) and others who come from backgrounds with limited exposure to medicine may also have unique needs and face challenges that are not always recognized by their schools. The Undergraduate Medical Education (UME) Section of the Group on Educational Affairs (GEA) has convened a working group which is developing an online toolkit of resources for medical schools to support and celebrate their FGCG students. The purpose of this workshop will be to share resources from the toolkit and to help participants develop a strategy for supporting FGCG medical students at their own institutions.

Learning Objectives:

- Identify challenges FGCG medical students may face during medical school.
- List a 5-part framework for supporting FGCG medical students.
- State program changes that can be implemented at their own institution to support FGCG medical students.

Session Methods and Format:

5 minutes: Introductions of presenters and review of UME section's online toolkit of resources for FGCG students.

5 minutes: Discuss definition(s) of "first gen" students.

10 minutes: Small groups brainstorm challenges FGCG students face and record identified challenges on sticky notes.

5 minutes: Introduce toolkit resources categorized into 5 areas of support that may be needed by FGCG students and place sticky notes into categories.

- Academic support.
- Institutional climate.
- Professional development and career mentoring.
- Emotional support.
- Financial resources.

20 minutes: Five small groups work through case studies focusing on each of the 5 areas of support. Attendees will be asked to develop a plan to assist FGCG students in these scenarios.

20 minutes: Each group reports out on their plans for supporting the FGCG students in the case studies.

5 minutes: Participants pair and share plans for implementing changes at their own institutions.
5 minutes: Whole group wraps up and reviews session. Participants will be encouraged to continue the discussion beyond the workshop.
5 minutes: Participants complete workshop evaluation.

Experience:

Fermin Prieto is a third-year medical student at the University of New Mexico School of Medicine. He is a reviewer for the AAMC UME online toolkit of resources for medical schools to support FGCG students and supports first-gen efforts at his institution through the Office of Diversity and Inclusion.

Sharon Younkin, Ph.D., is Chief of Staff for Medical Education at the David Geffen School of Medicine (DGSOM) at UCLA. Dr. Younkin is a first-generation college student and participates as a mentor in the First Gen Program at DGSOM.

Margarita Loeza, MD is the Chief Medical Information Officer and a Family Physician at the Venice Family Clinic. Dr. Loeza is a first-generation high school, college and medical student. She is the Interim Faculty Advisor for First Gen Program at DGSOM.

Stephanie Clavijo is a first gen student herself, and a 4th year medical student at the David Geffen School of Medicine at UCLA and Charles R Drew combined medical education program. She is actively involved with the First Gen Student organization at DGSOM.

References:

N/A

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Replacing anxiety and clumsiness with trust and credibility: steps to improve feedback for coaches and learners

Submission Type: Workshops

Accepted as: Workshop

Authors:

Tyra Fainstad, University of Washington School of Medicine

Adelaide McClintock, University of Washington School of Medicine

Renata Thronson, University of Washington School of Medicine

Abstract Body:

Rationale:

Feedback is critical to learner growth and improving patient care, yet ACGME surveys continue to demonstrate trainee dissatisfaction with feedback they receive. Despite wanting an improved feedback experience, learners report anxiety and even avoidance of direct observation and feedback. Traditionally, feedback has been a top-down, one-sided information delivery system, with learner inputs often viewed as “defensiveness.” In this workshop, participants will apply mindset theory re-frame defensiveness as a normal human response to threat and practice using two different feedback frameworks designed to “attune” coaches to their learners needs, “affirm” learners by validating emerging reactions and ultimately “advance” improvement plans. Participants will come away with credible coaching skills to directly apply with their learners through the development of a feedback alliance. The strategies learned in this workshop will reduce feedback stress for both learners and faculty.

Learning Objectives:

1. Identify underlying causes of feedback avoidance in learners and apply an evidence-based toolkit to promote a growth mindset
2. Use two different feedback frameworks to engage learners and build a bi-directional “feedback alliance”
3. Implement strategies to foster growth mindset in learners and credible coaching in faculty at your institution

Session Methods and Format:

Intro/objectives (minute 0-2, all). Icebreaker: Practicing discomfort. Pair-Share: quick mindfulness activity around finding safety in discomfort (minute 2-7 Tyra). Is your learner defensive or just scared? Case-based reflection to generate a shared mental model of learner barriers to seeking feedback (minute 7-10, Tyra). Mindsets: Why the fear? Carol Dweck animated video (minute 10-14, Tyra). Fainstad Feedback Formula: Illustration (visual) of learner routes to growth with respect to mindset (minute 14-22, Tyra). Increasing psychological safety and learner growth mindset in your learning environment. Facilitator modeling to examine evidence-based tools to increase feedback seeking (minute 22-28, all). Prepare to ADAPT: Support learner self-reflection and decrease feedback anxiety: chalk talk introducing the first framework (minute 28-35, Addie). “Use your words!” Best Practices for Feedback Delivery. Facilitator modeling of “best practice” scripts (minute 35-42, Addie). From Educational Alliance to Feedback Alliance- Why we focus on the wrong area: chalk talk, storytelling (minute 42-50, Renata). Creating a Credible Coach: Why learners don’t always feel open to feedback from coaches. Large Group Activity (minute 50-57, Renata). Brainwriting: Bolster credible coaching

at your own institution. Individual idea generation and group feedback activity (minute 57-64, Renata). Triple I: In-the-moment feedback for when something goes “wrong”. Chalk talk introducing second framework (minute 64-69, Renata). Practice Frameworks: case-based small group break out sessions (minute 70-85, all). Summary and questions (minute 85-90, Addie).

Experience:

Tyra Fainstad, MD is a primary care internist, a Multidisciplinary Faculty Remediation Coach, and Clinical Teaching Champion with a passion for learner-centered feedback and innovative culture change.

Adelaide McClintock, MD is a primary care internist, director of the Women’s Health Training Pathway in internal medicine, and has delivered workshops regionally and nationally for faculty development on feedback.

Renata Thronson, MD is a primary care internist, an associate program director of education for the IM residency program, and the director of a student evening clinic.

References:

Dweck CS. Mindset. Kennett Square, PA: Soundview Executive Book Summaries; 2012.

Telio S, Ajjawi R, Regehr G. The "educational alliance" as a framework for reconceptualizing feedback in medical education. Academic medicine. 2015;90(5):609.

Watling C. Cognition, culture, and credibility: Deconstructing feedback in medical education. Perspect Med Educ. 2014;3(2):124-128.

Teunissen PW, Stapel DA, van der Vleuten C, Scherpbier A, Boor K, Scheele F. Who wants feedback? an investigation of the variables influencing residents' feedback-seeking behavior in relation to night shifts. Academic medicine. 2009;84(7):910

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Rethinking Language Usage to Build Trust as the Basis for Successful Interprofessional Clinical Teams

Submission Type: Workshops

Accepted as: Poster

Authors:

Susan Farrell, MGH Institute of Health Professions

Sara Kim, University of Washington School of Medicine

Abstract Body:

Rationale:

This workshop explores the interaction between language and the development of trust in interprofessional teams. Word usage and language are social constructs; how words are perceived and understood is contextual. We will use case analysis, illustrative literature and activities to examine words as building blocks that support or hinder the fundamental principle of team trust, a hallmark of high functioning interprofessional teams.

This topic is important and timely because, as we increasingly incorporate interprofessional learning in medical education, our focus on observable and measurable interprofessional competencies may inadequately emphasize the necessity of trust building skills, including inclusive word use and trans-professional language.

As health care delivery transitions from episodic care to value-based and team-based care, health professionals must co-create interprofessional teams that simultaneously bring together uni-professional expertise and information, while respectfully managing different opinions in the pursuit of patient-inclusive decision-making. Optimal team-based care requires organizational and cultural changes that allow for efficient, coordinated and effective interaction among providers, patients and their families. Much education and professional development has focused on teaching interprofessional competencies in practice; however, there is a paucity of exploration and learning about the intangible supporting structures that underpin observable and authentic interprofessional competence. While literature suggests that interprofessional teams that develop trust are resilient in the face of challenges, professional language, learned and incorporated through uni-professional training can inadvertently threaten cooperative and resilient interprofessional team function.

Learning Objectives:

- Analyze experiences of interprofessional team effectiveness, determined by the degree of trust between members
- Describe how trust is a contributing component of theoretical frameworks for interprofessional collaboration
- Compare and contrast calculus-based (transactional) and identification-based (relational) trust models
- Compare word usage and language structures that support or hinder relational trust
- Strategize educational activities to foster language use that enhances trust development

Session Methods and Format:

15 minutes: introduce language usage through a discussion of word phrases that will be placed in the audience seats

20 minutes: analyze and discuss an interprofessional team case: participants identify word usages and behaviors that impact trust

20 minutes: participant activity (back-to-back drawing) to illustrate transactional and relational trust

15 minutes: introduce Lewicki and Wiethoff's models of trust, and how calculus-based and identification-based trust, apply to interprofessional team function. Introduce illustrative literature:

1. word usage in interprofessional teams and as evidence of students' learning
2. analysis of interprofessional teams that exhibit trust and the means by which trust was created

15 minutes: strategize 2 educational activities that incorporate awareness of words and language that support interprofessional trust in student and practitioner teams.

Experience:

Dr. Farrell is the Director of Continuing and Professional Development at the MGH Institute of Health Professions, where she is responsible for the design and support of interprofessional faculty development for academic and clinical health professionals, and the co-director for the interprofessional thread at Harvard Medical School.

Dr. Kim serves as Associate Dean for Educational Quality Improvement and Research Professor in Surgery at the University of Washington School of Medicine, where she actively teaches and conducts research programs in healthcare conflict management and negotiation.

References:

RJ Lewicki, C Wiethoff: Trust, Trust Development, and Trust Repair, In: The Handbook of Conflict Resolution, Theory and Practice; 2000

Pullon S: Competence, respect and trust: key features of successful interprofessional nurse-doctor relationships. J Interprof Care;2008;22(2):133-47.

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Sheehan D, Robertson L, Ormond T: Comparison of language used and patterns of communication in interprofessional and multidisciplinary teams. J Interprof Care; 2007;21(1):17-30.

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Cahn PS: Seven dirty words: hot-button language that undermines interprofessional education and practice. Acad Med.2017;92(8):1086-90.

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Reviewing Manuscripts Submitted For Publication as a Group: A Service-Learning Approach to Developing Skills in Education Scholarship

Submission Type: Workshops

Accepted as: Poster

Authors:

Kathryn Moore, University of Utah School of Medicine

Sara Hart, University of Utah

Candace Chow, University of Utah School of Medicine

Elizabeth Cardell, University of Utah College of Health

Boyd Richards, University of Utah School of Medicine

Abstract Body:

Rationale:

In recent years editors of a few health science education journals have encouraged reviewers to consider completing their manuscript reviews with a group of colleagues. For example, the editor of Teaching and Learning in Medicine includes this information in the invitation to reviewers: “Mentored and group peer reviews...can help serve both a community and a self-development purposes.” We embraced this group peer review (GPR) approach as an opportunity for service learning and faculty development within our Academy of Health Sciences Educators.¹ Benefits to participants of GPR include engagement in active learning, exposure to varying perspectives on methodology and application, and opportunities for peer mentorship.²⁻⁴ Manuscript authors may also benefit by receiving “a more rigorous and comprehensive final review product.”³ Participants in this session will engage in a GPR of a manuscript submitted for publication in a health science education journal, with the permission of the journal’s editor. The format of the review will include examining the review criteria as a group, reading the manuscript abstract and discussing initial impressions, and critiquing assigned subsections individually and in small groups. The full group will then contribute to a criteria-based discussion of the full manuscript. After completing the review, participants will evaluate the experience and discuss ways in which they could use group peer review for service learning and faculty development at their own institutions.

Learning Objectives:

1. Describe the methods of conducting group peer review.
2. Evaluate their experience
3. Discuss the utility of group peer review as a tool for service learning and faculty development at their own institutions

Session Methods and Format:

[10 min] Welcome and overview of group peer review

[10 min] Consideration of the manuscript review criteria

[10 min] Group review and discussion of the manuscript abstract

[15 min] Individual review of assigned section(s) of manuscript

[15 min] Small group discussion of assigned section(s)

[15 min] Large group discussion of overall manuscript’s strength and weaknesses using review criteria with input from each subgroup

[15 min] Evaluation of experience and discussion about using group peer review at own institutions

Experience:

Kathryn B. Moore, PhD is Professor in the Department of Neurobiology and Anatomy in the University of Utah School of Medicine, Elizabeth M. Cardell, PhD is Associate Professor in the Department of Occupational & Recreational Therapies in the University of Utah College of Health, and Sara Hart, PhD, RN is Associate Professor at the University of Utah College of Nursing. Drs. Moore and Cardell served on the leadership team of an education scholarship course and Dr. Hart served as codirector of an education scholarship course.

and served on the leadership team of an education scholarship course. Candace J. Chow, PhD is Associate Director of Education Research at the University of Utah School of Medicine and has participated in and facilitated group peer review sessions. Boyd F. Richards, PhD is Professor in the Department of Pediatrics in the University of Utah School of Medicine and served as director of an education scholarship course which uses group peer review.

References:

1. Richards BF, Cardell EM, Chow CJ, et al. Discovering the Benefits of Group Peer Review of Submitted Manuscripts. *Teaching and Learning in Medicine*. 2019:1-6.
2. Artino AR, Jr., Simpson D, Sklar D. Unpacking Peer Review Together: Using Group Peer Review to Improve Scholarship and Foster Community. Paper presented at: Association of American Medical Colleges Learn Serve Lead Annual Meeting 2017; Boston, Massachusetts.
3. Ilgen JS, Artino AR, Jr., Simpson D, Yarris LM, Chretien KC, Sullivan GM. Group Peer Review: The Breakfast of Champions. *J Grad Med Educ*. 2016;8(5):646-649.
4. Dumenco L, Engle DL, Goodell K, Nagler A, Ovitsh RK, Whicker SA. Expanding Group Peer Review: A Proposal for Medical Education Scholarship. *Academic Medicine*. 2017;92(2):147-149.

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Supporting Educational Excellence in Diversity (SEED): Faculty Development Inspiring and Developing the best in us for Diversity and Inclusion as Educators

Submission Type: Workshops

Accepted as: Workshop

Authors:

Puja Chadha, University of California, Davis, School of Medicine

Hendry Ton, University of California, Davis, School of Medicine

Abstract Body:

Rationale:

The learning environment strongly influences students' learning, professional development, wellness, and identity. Despite policies and programs developed to improve the learning environment, medical mistreatment, particularly as it relates to race, ethnicity, gender, and sexual orientation continues to be a significant problem across all medical schools. The Supporting Educational Excellence in Diversity (SEED) program is an 8-hour flipped classroom faculty development curriculum developed in collaboration with students, staff, and faculty in response to student-driven concerns about microaggressions and bias in the learning environment. The overarching goal of the 4-session series is to facilitate enhanced knowledge and understanding of culture and bias, privilege, and harmful outcome statistics within healthcare education. Using that fundamental knowledge with new techniques and practical application. We aim for each participant to improve knowledge and comfort navigating challenging topics and help each participant become an active agent of change for the healthcare education system to improve the educational experience for students. In a pilot run, the curriculum was shown to significantly improve faculty skills and knowledge to identify and address sources of bias in the curriculum and addressing bias with themselves and faculty peers (effect size = 1.2). Participants in this workshop will take part in an abbreviated workshop to develop a subset of those skills and knowledge.

Learning Objectives:

1. Describe elements of a culturally inclusive learning environment and how it is linked to excellence in teaching.
2. Identify curricular material that contributes to bias and microaggressions in the learning environment
3. Demonstrate use of the PAUSE model to self-manage when receiving feedback about bias and microaggressions.
4. Demonstrate the use of the Triangulating Conflict model to give feedback about bias and microaggressions.

Session Methods and Format:

This workshop will demonstrate an abbreviated excerpt from the novel 4-part curriculum. Participants will receive a brief introduction to the development and history of the SEED curriculum. They will then participate in an online learning module followed by interactive case discussions and roleplays in small groups. These interactives are designed to focus on the application of concepts and techniques taught in the online module. Timeline: Introduction to

SEED (15 min); Online module Experience (20 min); Interactive Role Play with Discussion (40 min); Wrap-up Q&A Session (15 min).

Experience:

Puja Chadha, MD, the Director of Diversity Education within the Office Faculty Development & Diversity, and the Assistant Training Director at the Center For Reducing Health Disparities, is an emerging education leader who has developed and taught cultural humility and health equity curricula for health care organizations, medical students, and faculty.

Hendry Ton, MD MS, Interim Associate Vice Chancellor for the Diversity, Equity and Inclusion office, Associate Dean for Faculty Development and Diversity and Director of Education at the Center for Reducing Health Disparities, leads development of comprehensive curricula for medical students, faculty, and health system leaders to advance cultural humility and health equity at multiple institutions.

References:

Johnson DR1. Emotional intelligence as a crucial component to medical education. *Int J Med Educ.* 2015 Dec 6;6:179-83
Orom H1, Semalulu T, Underwood W 3rd. The social and learning environments experienced by underrepresented minority medical students: a narrative review. *Acad Med.* 2013 Nov;88(11):1765-77.

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The use of comprehensive assessments to drive the creation of a coordinated medical student remediation program

Submission Type: Workshops

Accepted as: Poster

Authors:

Danit Ariel, Stanford University School of Medicine

Andrew Nevins, Stanford University School of Medicine

Abstract Body:

Rationale:

Student learners may face challenges in different areas of clinical skills development throughout the preclinical years of medical school. Early identification of student underperformance, followed by tailored and individualized support, is critical to ensuring that all medical students have the requisite skills prior to entering clerkships and to ultimately becoming competent clinicians. Using a clear system of identification, followed by a thorough assessment of root causes, can lead to the development and implementation of an effective, supportive, and affirming remediation plan that can support these students with targeted clinical skills training needs prior to entering clinical clerkships.

Learning Objectives:

- 1) Describe various domains of clinical skills in which students should be proficient prior to starting clinical clerkships.
- 2) Recognize the importance of robust comprehensive early clinical skills assessments as a vehicle to identify students who require additional guidance.
- 3) Interpret data from multiple sources to develop and implement an effective individualized and tailored remediation plan.
- 4) Apply knowledge gained in this session to develop a centralized remediation program to optimally support medical students with increased clinical skills training needs.

Session Methods and Format:

Our session will be interactive and focused on shared inquiry and active participation to foster an environment that utilizes several aspects of adult learning principles. Audience members will be encouraged to share their experiences and ask questions throughout the session. We will also encourage participants to share how they will apply what they have learned in the session to their own institution.

20 minutes: The session will begin with a presentation about the Stanford Mini-Clinical Performance Exam, a comprehensive early clinical skills assessment that has been shown to predict performance on clinical clerkships¹. This will be followed by a discussion of the development and implementation of the Student Guidance Program, Stanford's medical student remediation program designed to address the needs of struggling medical students.

5 minutes: Using a guided worksheet, participants will be invited to reflect on their respective institution's organized remediation efforts – the current state, ideal state, and gaps to be addressed. They will be asked to consider strategies to identify students, means to acquire data, and available and needed resources to implement such efforts.

10 minutes: After individual reflection, participants will share their insights and conclusions within small groups thereby promoting a rich exchange of experiences and perspectives.

10 minutes: The session will conclude with a large group discussion moderated by the presenters, with active audience participation involving questions and exchange of ideas, discussion of barriers to implementation, and final lessons learned.

Experience:

Danit Ariel, MD MS, is a Clinical Assistant Professor at Stanford University School of Medicine and the Founding Director of the Stanford Student Guidance Program, which is aimed at comprehensively supporting academically struggling medical students. Andrew Nevins, MD, is a Clinical Associate Professor at Stanford University School of Medicine, the Medical Director of the Standardized Patient Program for 15 years, and author of the Stanford Mini-Clinical Performance Exam. Both are members of the teaching faculty in the preclinical curriculum.

References:

1) Nevins AB, Russell I, Feaster SJ, Thomson Hall K, Buchanan A, Deitz J, Gesundheit N, Gaba D. A comprehensive end-of-second-year clinical skills examination can predict performance on clinical clerkships. Presented at: Association of American Medical Colleges (AAMC) national meeting, Seattle, Washington, November 2016. (abstract)

For more information about this abstract please contact: [daniel@stanford.edu]

Tricks of the Trade: Using Cognitive Psychology to Create an Optimized Learning Environment

Submission Type: Workshops

Accepted as: Poster

Authors:

Neil Haycocks, UNLV School of Medicine

Mark Guadagnoli, UNLV School of Medicine

Abstract Body:

Rationale:

Cognitive psychology has made many advances in our understanding of optimized adult learning.¹⁻³ Despite this, translation of the information into medical education has been inconsistent. Several distinct phenomena derived from cognitive psychology will be presented, each with potential application in the design and execution of medical education. Effective use of these techniques in instructional design promotes the creation of an optimized learning environment.

Learning Objectives:

1. Describe salient phenomena derived from cognitive psychology research that have applications in adult learning.
2. Describe how the application of these phenomena may vary depending on the stage of the learner.
3. Recognize the use of these phenomena in the rational design of educational experiences to promote an optimized learning environment.

Session Methods and Format:

Part 1 – Priming (8 minutes): The session will begin with an invitation for audience members to introduce themselves to others at their respective tables. Each attendee will briefly describe to partners an educational activity that he/she is involved in designing and/or teaching, and what they would like to achieve through the session. This will facilitate an appropriate physiological level of arousal prior to didactic component.

Part 2 - Didactic (25 minutes): With the audience primed, the presenters will cover specific methods from cognitive and performance psychology that have been successfully used to improve learning and performance. These methods will be presented relative to the Challenge Point Framework, which demonstrates optimized learning through appropriate challenge. [4, 5] This framework will be the lens by which several techniques will be applied. These techniques include: consequence, generation effect, testing effect, spacing, and interleaving. [6-9] Examples will illustrate how these techniques may be used progressively, from novice learners to experts. Special attention will be given to the psychological underpinnings of each method and their potential use in faculty development.

Part 3 – Small Group (22 minutes): Attendees at each table will choose one educational activity discussed at the beginning of the session. With this as a starting point, the group will discuss how it may be altered or redesigned to incorporate one or more of the techniques from the preceding

segment. The use of real life examples will itself underscore several of the techniques, including consequence and generation effect.

Part 4 – Large Group (25 minutes): Tables will "report out" the key aspects of their discussions. Rather than acknowledging the reports and moving on, the presenters will provide a brief ad hoc analysis and solicit additional feedback from the audience. Using examples derived from the personal experiences of audience members will help illuminate the common challenges shared by medical educators regardless of institution or curricular idiosyncrasies.

Part 5 – Wrap-up/Questions (10 minutes): The last few minutes will be reserved for concluding remarks and open questioning by attendees.

Experience:

Mark Guadagnoli, PhD has a doctorate in cognitive psychology with special emphasis on performance optimization and over 20 years of experience teaching in higher education.

Neil Haycocks, MD, PhD has three board certifications in pathology and over 10 years of experience teaching in higher education.

References:

1. Dunlosky, J., Rawson, K., Marsh, E. J., Nathan, M. J., & Willingham, D. T. (2013). Improving students' learning with effective learning techniques: Promising directions from cognitive and educational psychology. *Psychological Science in the Public Interest*, 14, 4–58.
2. Yan, V. X., Bjork, E. L., & Bjork, R. A. (2016). On the difficulty of mending metacognitive illusions: A priori theories, fluency effects, and misattributions of the interleaving benefit. *Journal of Experimental Psychology: General*, 145(7), 918.
3. Yerkes, R. M., & Dodson, J. D. (1908). The relation of strength of stimulus to rapidity of habit-formation. *Journal of Comparative Neurology and Psychology*, 18(5), 459-482.
4. Guadagnoli, M.A., & Lee, T. (2004). Challenge Point: Framework for Conceptualizing the Effects of Various Practice Conditions in Motor Learning. *Journal of Motor Behavior*, 39(2), 212-224.
5. Guadagnoli, M., Morin, M. P., & Dubrowski, A. (2012). The application of the challenge point framework in medical education. *Medical Education*, 46(5), 447-453.
6. Bertsch S, Pesta BJ, Wiscot R, McDaniel MA. (2007) The generation effect: A meta-analytic review. *Memory & Cognition*, 35, 201-210.
7. Birnbaum, M. S., Kornell, N., Bjork, E. L., & Bjork, R. A. (2013). Why interleaving enhances inductive learning: The roles of discrimination and retrieval. *Memory & Cognition*, 41(3), 392-402.
8. Gog, T., & Sweller, J. (2015). Not new, but nearly forgotten: the testing effect decreases or even disappears as the complexity of learning materials increases. *Educational Psychology Review*, 27(2), 247-264.
9. Swehla, S. E., Burns, M. K., Zaslofsky, A. F., Hall, M. S., Varma, S., & Volpe, R. J. (2016). Examining the use of spacing effect to increase the efficiency of incremental rehearsal. *Psychology in the Schools*, 53(4), 404-415.

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Using the iPad as an instructional tool to create educational videos and for “just in time teaching (JiTT)”

Submission Type: Workshops

Accepted as: Workshop

Authors:

Katharina Brandl, UC San Diego School of Pharmacy

Ilana (Lina) Lander, University of California, San Diego School of Medicine

Abstract Body:

Rationale:

As more medical schools adopted learner-centered curricula to encourage students to develop self-directed and life-long learning skills, content delivery occurs frequently outside the classroom. However, one of the challenges with this kind of instructional approach is keeping students focused and engaged. In this workshop, we will present narrated-animated videos (NAVs) as a specific "electronic" instructional method, where students listen to and watch a recording of an instructor drawing free-hand images and text on a screen while narrating the topic. One primary advantage of this type of approach is its ability to engage students by teaching a topic step-by-step as if the instructor was giving a "chalk talk". Another advantage is the ability to allow instructors to customize complex graphics with ease. Attendees will have an opportunity to make their own NAVs and present them to the group using an iPad.

We will also utilize the iPad as an instructional tool for “just-in-time-teaching” (JiTT) by demonstrating several apps to engage learners. As content-delivery occurs often outside the classroom, in-class time focuses now on assignments with cooperative problem solving. JiTT helps bridge the gap between outside instruction and the classroom activities. JiTT helps students to engage in course content and to help master the subject through feedback and active participation. Workshop participants will utilize Pages for JiTT and present an interactive handout to the audience. Finally, we will discuss and demonstrate examples of social media usage for medical education and easy ways for faculty to get started.

Learning Objectives:

After completing this workshop, participants will be able to:

- Explain the basic components on how to use the iPad as an instructional tool
- Create a NAV (“how to make a burger”) using an iPad and present it to the audience
- Discuss how the iPad can be used for JiTT and generate an interactive handout using Pages
- Compose and post a medical education post using NAV or JiTT on twitter

Session Methods and Format:

Participants are asked to bring their own iPads. We will have several loaner iPads available or participants can work in groups.)

- Introduction of facilitators and brief overview of new challenges faced in learner centered curricula [10 minutes]
- Guidance of downloading 2 apps that will be used for the creation of a NAV [5 minutes]

- Brief presentation on how to make a NAV [5 minutes]
- Participants will get together in groups of three and generate their own educational video [20 minutes] and an interactive handout using Pages.
- Every group will present their educational video and interactive handout to all participants [20 minutes]
- Compose and post medical education post on twitter [15 minutes]
- Guided discussion on perceptions and challenges faced when creating a NAV and the interactive handout [15 minutes]

Experience:

Dr. Katharina Brandl is an Assistant Professor at UC San Diego that uses the iPad for generating educational videos and for JiTT.

Dr. Lina Lander is an Associate Dean of Educational Technology and an avid iPad user at UC San Diego.

References:

N/A

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What Will You Keep? Affirming Personal Identity throughout the Transition into the Medical Profession

Submission Type: Workshops

Accepted as: Workshop

Authors:

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Keith Yiu Kei Wong, University of California, Los Angeles David Geffen School of Medicine
Neveen El-Farra, University of California, Los Angeles David Geffen School of Medicine
Valencia Walker, University of California, Los Angeles David Geffen School of Medicine

Abstract Body:

Rationale:

Professional Identity Formation (PIF) is an ongoing and dynamic process for people entering the profession of medicine. Medical students must learn to integrate PIF into their existing values, cultural backgrounds, and other markers of personal identity while also receiving the implicit and explicit lessons taught by the medical school curriculum and environment¹⁻³. Medical school curricula are beginning to provide explicit curricular content addressing developmental processes inherent to PIF⁴. However, the interaction between PIF and personal identity, including religion, cultural background, and physical appearance, lacks substantive educational scholarship.

These limitations significantly impact students underrepresented in medicine (URiM)⁵. Furthermore, the history of racism, sexism and homophobia combined with ongoing implicit and explicit biases within medicine validate and sustain a racialized definition of the physician “professional”^{6,7}. URiM medical students often face scenarios where immutable aspects of their identity are deemed “unprofessional.” Medical school curricula must address both the developmental nature of PIF and the challenges students may encounter in reconciling personal and professional identity.

This workshop models a “Transitioning to the Profession” session offered to all first-year medical students at one institution. Previously, a discussion of “professionalism” as a discrete educational topic encompassed two hours of lecture-based instruction during school orientation. The first hour introduced institutional policies followed by a second hour that presented scenarios based on prior cases of professional lapses. Faculty encountered several incidents of difficulties answering questions posed by students, particularly those with concerns about the incongruence between personal identities and professionalism norms. In response, medical students and faculty designed this new session to teach PIF with an awareness of the unique challenges faced by URiM students. The revised session actively engaged students in a shared knowledge exchange by fostering personal reflections within the “safe space” of a respectful learning environment.

Learning Objectives:

1. Define “professionalism” as both objective and subjective concepts within medicine
2. Describe specific challenges of URiM students navigating PIF during medical school
3. Develop strategies to resolve conflicts between personal versus professional identity within the process of PIF

Session Methods and Format:

1. [0:00-0:05] Introductions and Article Presentation (8)
2. [0:05-0:15] Video Vignette: Dr. El-Farra discusses practicing medicine after 9-11 as a Muslim physician.
3. [0:15-0:45] Small Group Discussion: Organize into groups of six. Utilizing the handouts provided, participants discuss a series of case vignettes and questions specifically developed for the workshop. Roving facilitators assist small group discussions.
4. [0:45-1:00] Large Group Summary: Review small group experiences
5. [1:00-1:15] Sticky Note Activity: On sticky notes, participants indicate what elements of their personal identity they want to preserve throughout their PIF process. Prompt: As you go through the process of developing your professional identity as a physician, what will you keep with you?
6. [1:15-1:30] Questions & Feedback

Experience:

Ananya Bhatia-Lin - DGSOM second-year medical student

Keith Yiu Kei Wong - DGSOM second-year medical student

Neveen El-Farra - DGSOM Associate Professor and former Associate Dean of Curriculum Affairs

Valencia Walker - DGSOM Associate Professor and current Assistant Dean of Equity and Diversity Inclusion

References:

1. Holden M, Buck E, Clark M, Szauter K, Trumble J. Professional identity formation in medical education: the convergence of multiple domains. *HEC Forum*. 2012;24(4):245-255. doi:10.1007/s10730-012-9197-6
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Writing Effective Titles and Abstracts: Making Your Scholarship Stand Out

Submission Type: Workshops

Accepted as: Workshop

Authors:

Toni Gallo, Association of American Medical Colleges

Jennifer Campi, Association of American Medical Colleges

Laura Roberts, Stanford University School of Medicine

Abstract Body:

Rationale:

Publishing your work in a peer-reviewed journal helps disseminate important finding and ideas to a wide audience. Publications are key criteria for promotion and tenure decisions. Yet most journals receive large numbers of submissions and have low acceptance rates. At the same time, there are increasing numbers of publications (journal articles, conference submissions, reports, etc.) competing for attention. In this workshop, the speakers will draw on their experience as authors and as editors for the journal *Academic Medicine* to offer strategies for how participants can make their work stand out to editors and readers.

Learning Objectives:

- Describe the peer-review process and common reasons for rejection
- Articulate the importance of a strong title and abstract for all types of scholarly publications
- Craft a strong title and abstract that accurately represent their work

Session Methods and Format:

Toni Gallo and Jennifer Campi will give an overview of the peer-review and publication processes as well as describe common reasons for rejection (30 minutes). They and Laura Roberts then will offer strategies for writing effective titles and abstracts for all types of scholarly publications and will lead an interactive discussion with participants regarding published examples from *Academic Medicine* to illustrate the strategies presented (30 minutes). The session will conclude with a title and abstract writing exercise so participants can apply what they have learned (30 minutes).

Experience:

Toni Gallo and Jennifer Campi are senior staff editors with the journal *Academic Medicine* and have led writing workshops at regional and national meetings. Laura Roberts will be the editor-in-chief of *Academic Medicine* (starting January 2020) and has led writing workshops on a number of topics.

References:

N/A

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