UT Systems Kenneth I. Shine M.D. Academy of Health Science Education

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Poster Abstracts

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1. One Pagers: A student created tool for boards preparation

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Introduction: Nurse practitioner students are required to learn and understand a variety of concepts in order to pass the national certification exam after graduation. In order to encourage active learning throughout the program, students were assigned a series of "one pagers" each semester covering main topics. These were then combined into a study guide for the students to use to prepare for the three practice certification exams administered in their final semester.

Methods/Project Description: Two cohorts of students were examined. One cohort included 5 students and the second cohort included 4 students (the total number of students enrolled in the program each cohort). The first cohort did not complete the one pager assignment. The second cohort of students were assigned five one pagers per student over the course of the program that covered the main topics on the certification exam. These one pagers were combined and disseminated to all of the second cohort students prior to the administration of three practice certification exams. The test grades between the first cohort and second cohort were compared to see if the introduction of the one pager study tool affected outcomes. The practice exams were used as a surrogate tool to measure predicted success for successful passing of the national certification exam with a goal passing threshold of 70%.

Results/Outcomes: The first cohort of students who did not complete one pagers were given three board certification preparation exams. The average score of the five students on the three exams was 67.85%. This is below the goal passing threshold of 70%. The second cohort of students who completed the one pager assignment, had a higher average test score of 72.21% for the three certification preparation exams.

Conclusions: Though this is a small proof of concept study, the cohort with the one pager assignments did have an increased average test score on certification preparation exams. In the future, this study should be repeated to include more students as well as to evaluate board certification exam pass rates.

2. Outcomes and impacts of Texas' only public BSN-DNP Nurse Anesthesia program: A seven-year evaluation

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Introduction: In response to the American Association of Colleges of Nursing (AACN) position statement of 2004, the UTHealth Cizik School of Nursing (CSON) developed an innovative 112-credit, three-year, full-time, BSN-DNP nurse anesthesia program. Clinical acumen development and training remained the priority of this innovative program. In 2014, following Texas Higher Education Coordinating Board (THECB) and Council on Accreditation of Nurse Anesthesia Educational Programs (COA) approval, the first cohort of BSN-DNP nurse anesthesia students was enrolled and completed the program in 2017. The program remains the only approved public nurse anesthesia (NA) program in the State of Texas. Programmatic outcomes and impacts for the initial seven cohorts of the program will be examined.

Methods/Project Description: Outcome data for seven graduating cohorts were examined and compared to available national data. This included programmatic completion rates, attrition rates, clinical case data, Self-Evaluation Exam (SEE) scores, National Certifying Exam (NCE) pass rates and scores, and graduate employment rates. Programmatic costs were also compared to Texas private and public out-of-state nurse anesthesia programs. Graduate impacts on Texas healthcare and the nursing profession were also examined.

Results/Outcomes: One hundred thirty-two (132) students have completed the BSN-DNP NA program, representing an 89.8% completion rate. The program maintained a 99.2% first-time pass rate on the NCE (national rate - 83.4%). All graduates have attained employment within 6 months of programmatic completion with 91.7% of graduates remaining in the state of Texas for initial employment. Programmatic clinical case numbers and clinical hours exceed the minimum requirements needed for NBCRNA certification. Programmatic NCE and SEE scores exceed the national average in all areas. Programmatic costs (tuition and fees) for Texas residents are substantially lower compared to other programs in Texas.

Conclusions: The innovative BSN-DNP NA program at UTHealth CSON successfully meets clinical preparation needs of enrolled NA students and Texas healthcare. The program is noteworthy for high quality outcomes and low costs. Reports indicate that graduates have limited post-graduate engagement in clinical quality improvement efforts despite significant curricular exposure; however, many graduates report substantial experiences in educational and leadership endeavors. This will require reevaluation of the quality improvement focus within the current curriculum.

References:

1. American Association of College of Nursing. (2004). Position statement on the practice doctorate in nursing. Washington, DC. https://www.aacnnursing.org/DNP/Position-Statement

2. Council on Accreditation of Nurse Anesthesia Programs. (2023). Standards for accreditation of nurse anesthesia programs: Practice doctorate. https://www.coacrna.org/wp-content/uploads/2023/02/Standards-for-Accreditation-of-Nurse-Anesthesia-Programs-Practice-Doctorate-revised-January-2023.pdf

3. National Board of Certification and Recertification for Nurse Anesthetists. (2023). NCE and SEE Exam Statistics. https://www.nbcrna.com/initial-certification/program-administration

4. Council on Accreditation of Nurse Anesthesia Programs. (2020). CRNA School Search. https://www.coacrna.org/programs-fellowships/crna-school-search/

5. UTHealth Houston. (2023). BSN to DNP Nurse Anesthesia. https://nursing.uth.edu/programs/dnp/nurse-anesthesia/

3. What do students think? A qualitative study exploring in-person compared to virtual modalities for interprofessional education activities.

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Introduction: Interprofessional education (IPE) occurs when students from multiple disciplines work together to learn and solve a problem. IPE is increasingly becoming a requirement by accrediting bodies (Champagne-Langabeer, Neher, Cardenas-Turanzas, and Swails, 2022). During the COVID-19 pandemic, IPE activities became available virtually. In-person and virtual IPE each have their benefits and disadvantages. The problem is, now that in-person opportunities are available, little is known about student perspectives for each modality. For the purpose of this study, the research was intended to examine the following central question: Are the expectations of IPE activities different when students attend in-person compared to virtually? This study is guided by the following research questions:

1. What are the expectations of students completing an in-person IPE activity compared to students completing a virtual IPE activity?

2. What were the perceptions of outcomes of students who completed an in-person IPE activity compared to the perceptions of students who completed a virtual IPE activity?

This study will aid faculty and administrators involved in IPE activities when deciding modality for future simulations.

Methods/Project Description: Students participated in one of two case scenarios. One case scenario involved a medical error in an inpatient setting. The second case scenario involved a patient treated in an outpatient charity clinic. The case scenario was completed either in-person (AY 2019-2020) or virtually (AY 2020-2021). Qualitative data from the pre-/post-surveys were analyzed using thematic analysis by the research team.

Results/Outcomes: Communication and teamwork were identified themes for each case, both in-person and virtual, and in the pre-test and post-test. A theme identified in the uninsured patient treated in an outpatient charity clinic scenario included learning about distinct roles. A theme identified in the medical error scenario included de-escalation. Interestingly, when asked what was learned from the activity, professionalism was a theme that emerged more when both scenarios were virtual.

Conclusions: Student expectations are one component of curriculum decision making. Understanding what students hope to get out of the activity and what they actually get out of the activity is one essential component faculty and administrators should include when making well-informed decisions.

References:

Champagne-Langabeer, T., Neher, S. E., Cardenas-Turanzas, M., & Swails, J. L. (2022, October). Unintended consequences of a transition to synchronous, virtual simulations for interprofessional learners. In Healthcare (Vol. 10, No. 11, p. 2184).

4. Practicing evidence-based medicine at the bedside: Pilot findings on a newly developed clerkship tool

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Introduction: The application of evidence-based medicine (EBM) is fundamental to patient care across all disciplines in medicine. The American Association of Medical Colleges considers competency in forming clinical questions and retrieving evidence to advance patient care as an entrustable professional activity for entering residency.

Methods/Project Description: Our internal medicine clerkship has implemented several strategies to incorporate an EBM component to the curriculum. We found that the key portion of the EBM assignment, the application of a study's findings to patient decision-making during rounds, was frequently absent. We developed a succinct 8-point EBM tool that makes the student's discussion of study findings during rounds the focus of the assignment. The new EBM tool provides guidance on the development of a clinically relevant question originating at the bedside and requires the search and review of a peer-reviewed randomized controlled trial addressing the query posed. It asks students to identify study strengths and weaknesses, applicability of study findings to their patient's case, and to provide a brief statement describing how the evidence presented during rounds contributed to decision-making. New to the assignment is the strong recommendation of having faculty overseeing patient care attest to discussion of the study findings during rounds. The clerkship directors review and score each completed Bedside EBM form and provide students with necessary feedback.

Results/Outcomes: Preliminary data (n=14) shows that the area of greatest difficulty for students lies in their understanding of how the evidence reviewed applies to patient decision-making (mean score 89 ± 19%). Issues limiting applicability of study findings not identified by students included differences between their patient and study participants. 93% of Bedside EBMs were presented to a faculty physician who confirmed that student discussion of study findings were discussed during rounds. We are continuing to analyze incoming Bedside EBM forms and will report on 75 submissions when presenting our findings.

Conclusions: Pilot findings suggest that this focused Bedside EBM tool is successful in moving the application of EBM skills to the bedside, creating a structure that supports active student discussion of findings during rounds and the incorporation of their input in patient decision-making.

References:

1. Crocks P. et al eds.; for Core EPAs for entering residency pilot program adapted from the Association of American Colleges (AAMC). Core entrustable professional activities for entering residency. 2014. Accessed at https://www.aamc.org/media/20211/download, October 29, 2023.

2. Williams KN et al. Improving bedside teaching: Findings from focus group study of learners. Acad Med 2008; 83: 257- 264

5. Confidence, Communications, and Teamwork of Allied Health and Nursing Students after Interprofessional Critical Care Simulation Experience: A Mixed-Method Study

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Introduction: Due to the increasing complexities of patients' medical conditions, students are feeling unprepared for their acute care clinical rotations due to the need for more academic preparation. Interprofessional critical care simulation (ICCSE) may provide additional academic preparation to increase students' confidence, communication, and teamwork while preparing for acute care rotations. The objectives of this study were (1) to determine the impact of ICCSE on allied health and nursing students' confidence, communications, and teamwork; and (2) to identify themes regarding students' critical thinking processes after completing ICCSE.

Methods/Project Description: This study utilized a mixed-method approach. Four simulations were conducted as part of the students' didactic course. Pre/post briefings were conducted on each ICCSE. Students (N=190) completed pre/post surveys using Likert-scale in measuring communication and teamwork (using University of the West of England Interprofessional Questionnaire) and confidence (using faculty created questionnaire).

Results/Outcomes: Quantitatively, students' responses were analyzed and compared using non-parametric tests. For qualitative approach, four focus group interviews were conducted post ICCSE with students representing each discipline. Statistical significance of alpha level of .05 was used. Calculated effect size determined the change magnitude in pre/post scores.

Quantitative: Students' paired comparisons of responses in communication and teamwork demonstrated statistically significant improvements in 7 out of 9 areas ($p<.05$). Two areas such as feeling comfortable working in a group and adapting communication style showed no significant improvements. Overall small effect sizes (< .03) were found as the magnitude of pre/post change.

Students' pre/post confidence scores were recode to high vs low levels and showed increased confidence post ICCSE. In 5 out 8 areas, students demonstrated statistically significant improvement in confidence.

Qualitative: Four themes emerged from the focus group analysis: (1) New knowledge and skills learned from this ICCSE; (2) collaborating and engaging with others in problem-solving and critical thinking processes; (3) application of classroom knowledge and skills learned during ICCSE; and (4) feedback and suggestions for future program implementation.

Conclusions: ICCSE improved students' confidence, communication, & teamwork skills. ICCSE also provided students' the opportunity to practice interprofessional teamwork and collaboration. ICCSE gave an insight to students about the complex working environment for future acute care clinical rotations.

References:

1. Kleib M, Jackman D, Duarte-Wisnesky U. Interprofessional simulation to promote teamwork and communication between nursing and respiratory therapy students: A mixed-method research study. Nurse Educ Today. 2021;99:104816.

2. Lochner L, Wieser H, Oberhöller G, Ausserhofer D. Interprofessional team-based learning in basic sciences: students' attitude and perception of communication and teamwork. Int J Med Educ. 2020;11:214-221.

3. Cunningham S, Foote L, Sowder M, Cunningham C. Interprofessional education and collaboration: A simulation-based learning experience focused on common and complementary skills in an acute care environment. J Interprof Care. 2018;32(3):395-398.

4. Thomas EM, Rybski MF, Apke TL, Kegelmeyer DA, Kloos AD. An acute interprofessional simulation experience for occupational and physical therapy students: Key findings from a survey study. J Interprof Care. 2017;31(3):317-324.

6. Measuring Core habits underlying competency in allied health professionals

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Introduction: The outcome of health professional curricula is to develop working professionals who routinely engage in evidence-based practice (EBP) and critical thinking/reflection, leading to the requirement to be able to evaluate these core skills in working professionals. The measure of evidence-informed professional thinking (EIPT) was developed to understand the health professional's habits of engagement in these critical tasks. The specific aims of this were to extend the range and breadth of the two scales of EIPT and develop a third computer adaptive test of numeracy and EBP skills and knowledge.

Methods/Project Description: The items of EIPT and new trial items were entered into an online survey. Clinical educators and universities with post-professional coursework were the targeted sample. Rasch analysis was used to identify and calibrate items which fit the criteria for equal-interval measurement.

Results/Outcomes: A two-dimensional solution employing 44 items was identified. The Evidence-Informed Practice (EIP) scale, comprised of 21 items with a person separation of 3.12 (0.91 reliability), an item separation of 7.70 (0.98 reliability). The Critical Clinical Reasoning (CCR) Scale is comprised of 23 items with a person separation of 3.07 (reliability 0.90), item separation of 9.01 (reliability 0.99). Both scales can reliably identify 4.42 strata of performance. The third scale was not developed due to low numeracy and EBP skills/knowledge in working professionals.

Conclusions: Habits of clinical reasoning and EBP can be measured by two correlated probabilistically equal-interval scales. It can identify therapists who never or rarely engaging in critical activities which ensure the provision of high-quality health services, as well as therapists who always engage in these activities. The "average" working allied health professional reports infrequent self-regulated engagement many critical tasks of EBP and critical reflection and low numeracy/statistical knowledge, suggesting the need to examine professional curricula activities to support acquiring these critical skills.

References:

1. Benfield, A. M., & Johnston, M. V. (2020). Initial development of a measure of evidence-informed professional thinking. Aust Occup Ther J, 67(4), 309-319. https://doi.org/10.1111/1440-1630.12655

2. Boone, W. J., Staver, J. R., & Yale, M. S. (2014). Rasch analysis in the human sciences. Springer.

7. Leveraging Generational Differences using Gamification

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Introduction: Healthcare organizations are experiencing a multigenerational workforce. Each generation shaped by major historical events, cultural changes, technological advances, and social trends of its time. With varying values, motivators and learning styles, healthcare institutions are challenged to meet the training needs of a multigeneration workforce.

At a cancer institution, we sought to use instructional strategies that span across generations, such as gamification. A gamified module titled "Restraint: Process and Procedure" was developed to provide learners with a comprehensive understanding of the policies and procedures guiding restraint use in the hospital. Understanding and adapting to the differences between each generation is crucial to engagement and retention. Therefore, gamification techniques were used to engage learners and promote knowledge acquisition.

Methods/Project Description: The primary goal of the module is to provide a clear understanding of the policies and procedures that guide the use of restraint, that is, understand processes and procedures prior to, during, and after the use of patient restraint. The module incorporates various game design elements, such as storytelling/journey, badges, point-system, levels, and feedback. Learners are tasked with managing different patients, each presenting unique challenges. This approach fosters engagement, a sense of reward, and effective comprehension. Performance feedback and game levels keep learners engaged and motivated to reach the highest badge- Healthcare Hero.

Results/Outcomes: A post-module survey was conducted, with 948 participants completing the survey. An overwhelming majority of respondents (93.0%) “strongly agreed”/“agreed” on the appropriateness and alignment of training goals and objectives. Furthermore, 92.4% of participants “strongly agreed”/“agreed” that the module significantly enhanced their knowledge and skill level. Additionally, 92.2% of respondents found the module to be highly useful and valuable in their professional development. Notably, participants mentioned the module's interactive elements as the aspect they found most valuable.

Conclusions: These survey results provide compelling evidence of the module's effectiveness across various generations. The high percentage of participants who “strongly agreed”/“agreed” with the module's appropriateness, knowledge enhancement, and value underscores its positive impact on healthcare professionals' understanding and application of restraint. The interactive and game elements have been particularly well-received, contributing to an engaging and effective learning experience for healthcare professionals.

References:

1. Boysen, P. G., Daste, L., & Northern, T. (2016). Multigenerational challenges and the future of graduate medical education. Ochsner Journal, 16(1), 101-107.

2. Pavey, S. (2021). Playing games in the school library: developing game-based lessons and using gamification concepts. Facet.

3. Rutledge, C., Walsh, C. M., Swinger, N., Auerbach, M., Castro, D., Dewan, M., Khattab, M., Rake, A., Harwayne-Gidansky, I., Raymond, T.T. and Maa, T., & Chang, T. P. (2018). Gamification in action: theoretical and practical considerations for medical educators. Academic Medicine, 93(7), 1014-1020.

4. Toda, A., Cristea, A. I., & Isotani, S. (2023). Gamification Design for Educational Contexts Theoretical and Practical Contributions. Springer International Publishing. https://doi.org/10.1007/978-3-031-31949-5

5. Vesa, M. (2021). Organizational gamification: Theories and practices of ludified work in late modernity. Routledge.

8. Empowering Students through Clinical Skills: The SCSS Approach

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Introduction: The Student Clinical Skills Society (SCSS) was created to offer practical learning experiences to preclinical medical students. At McGovern Medical School, the bulk of procedural training occurs in a short transition-to-clerkship week just before students start clerkships. This leaves preclinical students with few chances to acquire hands-on experience, often only accessible by joining a specialized interest group. This situation creates a dilemma for students who cannot afford membership in such organizations, as they have no alternatives for acquiring vital clinical skills.

Methods/Project Description: Established in the fall of 2022, SCSS collaborated with the directors of the McGovern Surgical and Clinical Skills Center (SCSC) to offer procedural training for preclinical students at no cost. This resource, typically reserved for residents and attending physicians, became accessible to our students through SCSS. Working closely with attending physicians and residents, SCSS has exposed students to more than ten different hands-on learning opportunities. The SCSC provided the necessary materials and space. To manage the limited spots available, a sign-up notification was distributed 24 hours in advance, and participants were selected on a first-come, first-served basis.

Results/Outcomes: By October 2023, 386 out of 479 preclinical students had independently registered for SCSS events, solidifying its position as the most active student organization at McGovern. The first two skills workshops of this year, featuring an intubation workshop (attended by 40 students) and a suturing workshop (attended by 80 students), reached full sign-up capacity in under 4 and 10 minutes, respectively. The tremendous interest from students was evident, with 138 sign-ups for intubation and 124 for suturing. The strong student engagement leads us to expect this positive trend to persist through upcoming skills sessions.

Conclusions: Since creation, the Student Clinical Skills Society has also been established at Texas A&M Medical School and Noorda College of Osteopathic Medicine. We are currently in the process of founding a new chapter at the University of Oklahoma College of Medicine. The overwhelmingly positive feedback from students at all three chapters underscores the invaluable resource that SCSS provides to preclinical students, and showcases its potential for replication at medical schools across the country.

9. Cultivating Academic Medicine Interest Group (AMIG) Chapters: Fostering Tomorrow's Medical Leaders

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Introduction: In an era of evolving medical education, the path to academic medicine remains elusive and undefined within many medical schools. Pursuing a career in academic medicine as a medical student necessitates self-discovery, making it a challenging journey for those aspiring to contribute to the field. This abstract presents a pioneering initiative: the establishment of an Academic Medicine Interest Group (AMIG) chapter at our medical school, aiming to illuminate the multifaceted nature of academic medicine and provide a structured platform for students to explore its various dimensions.

Methods/Project Description: Academic medicine encompasses a range of disciplines, including research, education, clinical practice, and policy. The absence of a clear roadmap for medical students to navigate this intricate landscape often leaves them feeling lost. Our AMIG chapter seeks to bridge this gap by building a foundation of research capital within our institution that can be harnessed by future academic medicine enthusiasts, creating a compass for students navigating this multifaceted field.

Results/Outcomes: One hallmark of our AMIG chapter's success is the strong support it has garnered from faculty members who are integral to the academic medicine community. Collaborating with these mentors, we have established a thriving AMIG chapter and played a pivotal role in influencing the creation of medical school's curriculum tracks/electives, hosting monthly student-led research grand rounds, facilitating faculty panels, and promoting student advocacy through the American/Texas Medical Association.

Conclusions: The creation and growth of an AMIG chapter at our medical school serves as a model for cultivating the next generation of academic medicine leaders. Moreover, our vision extends beyond our institution's boundaries; we aim to expand our influence to other medical schools, fostering a sense of collegiate coherence in promoting academic medicine. Through our collaborative efforts, we have defined the landscape of academic medicine, empowered students to explore its diverse facets, and forged strong connections with faculty members. As we extend our reach to other institutions, we aim to build a robust network that not only strengthens interest and skill development among medical students within academic medicine, but also influences healthcare policy and advocacy, innovating more opportunities for future medical education and research.

References:

1. Querido SJ, Vergouw D, Wigersma L, Batenburg RS, De Rond ME, Ten Cate OT. Dynamics of career choice among students in undergraduate medical courses. A BEME systematic review: BEME Guide No. 33. Medical teacher. 2016 Jan 2;38(1):18-29.

2. Granat LM, Weinstein A, Seltzer E, Goldstein L, Mihlbachler M, Chan T, Saggio G. Developing Future Academic Physicians: the Academic Medicine Scholars Program. Med Sci Educ. 2020 Feb 14;30(2):705-711. doi: 10.1007/s40670-020-00935-y. PMID: 34457728; PMCID: PMC8368134.

10. Education of Optimization Method in Medical Field

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Introduction: In the rapidly evolving landscape of healthcare, the utilization of optimization techniques remains underappreciated and under-taught. This abstract explores the pivotal role that optimization can play in the medical field, especially in data science and scheduling processes, focusing on how to deliver the education of the optimization method to this field.

Methods/Project Description: Enhancing Data Science Competence: A substantial portion of medical research relies on statistical analysis and data science, often intertwined with optimization techniques to maximize learning efficiency. Equipping medical researchers with optimization knowledge offers a profound understanding of the algorithms underpinning data-driven medical advancements.

Scheduling Advancements: Integer programming, a common but powerful optimization formulation method, can revolutionize scheduling in healthcare institutions. By applying integer programming with binary variables, we can formulate efficient scheduling algorithms that incorporate relevant constraints and objectives.

Optimization Education: A lot of topics need to be covered to deliver optimization tools, mainly including linear algebra, calculus, and programming. To convey optimization concepts to medical students without strong mathematical backgrounds, adapting the educational materials is essential. Simplifying and relating these concepts to practical usage is crucial. Concrete examples and clear explanations will aid in comprehending the relevance of these theories in the medical field.

Results/Outcomes: We present a sample syllabus and educational materials that outline a viable optimization curriculum for the medical field. This educational journey encompasses two parts: 1) introductory mathematical concepts including linear algebra and calculus, and 2) progressing to advanced optimization methodologies, all underscored with practical examples relevant to the medical field. To demonstrate the practical application of optimization, we offer a simulation involving physicians with unique constraints and preferences, showcasing an efficient approach to scheduling.

Conclusions: This abstract underscores the imperative need for integrating optimization education into medical curricula. As healthcare researches increasingly rely on data-driven solutions and efficient resource allocation, optimization knowledge empowers future healthcare professionals to excel in their roles. By bridging the gap between optimization and medical education, we aim to elevate the quality of healthcare services and reinforce the competence of medical professionals.

11. Outcomes of a Multi-year Biomedical Research Program for High School Students: The Voelcker Biomedical Research Academy

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Introduction: Pre-college pipeline programs have been offered by institutions of higher education to address the increasing demand for a well-trained workforce as well as to facilitate the recruitment of students from diverse backgrounds. An innovative, multi-year biomedical research program for meritorious high-school students, the Voelcker Biomedical Research Academy (VBRA), was developed at UT Health San Antonio.

Methods/Project Description: VBRA, was launched in 2009, through the financial support of the Max and Minnie Tomerlin Voelcker Fund, provided a unique opportunity for high school students to engage in biomedical research activities under the mentorship of established research faculty. The VBRA integrated hands-on research experience in biomedical sciences with multi-tier mentoring, inquiry-based learning, and college preparation guidance.

Results/Outcomes: Nine cohorts of 20-22 students from public, private, or charter high schools were admitted to the VBRA between 2009 and 2017. Applications (n=909) were submitted by freshman in late Fall, top-ranked applicants (n=486) were interviewed in the Spring, and VBRA Scholars (n=191) entered biomedical research training in June. The majority of Scholars attended public high schools, were Hispanic, and had parents with advanced degrees. Grit scores of Scholars significantly increased between the first and second years of the program. Over 90% of Scholars graduated from the program (VBRA Alumni) as rising seniors with significantly higher SAT and ACT scores than students at corresponding high schools. Of 177 who entered colleges and universities both in and out of state (70% and 30%, respectively), 140 (79%) matriculated at R1 institutions. Moreover, over 70% of VBRA Alumni enrolled in or completed advanced STEMM education programs or were employed in STEM-related careers (37% or 35%, respectively).

Eighty-four faculty across the full range of academic titles (instructor to full professor) served as primary VBRA mentors. Although a larger number of VBRA Scholars was trained by assistant professors, a smaller percentage matriculated at R1 institutions as compared to Scholars trained by more experienced faculty. Most of these Scholars also remained at in state institutions.

Conclusions: The multi-year VBRA promoted an innovative and effective biomedical research ecosystem with extensive peer mentoring and a vibrant alumni network to support the early career development of biomedical scientists and professionals.

12. STUROP: A Multi-year, Multi-tiered Mentorship Model for Undergraduate Research

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Introduction: Investment and engagement in undergraduate research plays a vital role in educating future scientists. Engaging in real-world research experiences not only develops undergraduates critical thinking skills but also assists them in developing science identity and discerning career trajectories. The South Texas Undergraduate Research Opportunities Program (STUROP) was created to provide a multi-year, research opportunity to South Texas students, promoting a well-equipped population of competitive applicants into professional research biomedical careers, providing an empowering, educational environment via mentorship, leadership development and research experiences that develop scholar growth, personally, scientifically, and professionally.

Methods/Project Description: Scholar recruitment was a comprehensive process including a rigorous review of each application package and an interview with the STUROP advisory committee. Accepted Scholars committed to 35-40 hours/week for a minimum of 9 weeks during the summer months and encouraged to engage in programmatic activities during the school year. The Year-1 curriculum consisted of matching with a research mentor, the design of an individual research project, conducting research protocols and weekly modules that combined lectures and laboratory exercises designed to introduce fundamental concepts of contemporary biomedical science, leadership development, journal clubs, “lab-life” discussions, and seminars. Mentoring of STUROP Scholars was intentionally designed as a multi-tier experience. Mentoring included not only the active participation of faculty, but also other members from the laboratories where the Scholars were placed and a committee of graduate students to provide additional support. A unique aspect of the STUROP program includes the establishment of a mentor team to include faculty mentors at both institutions (UT Health and the Scholar’s home institution), which facilitates the advancement of research projects year-round and provides continuous support to each Scholar.

Results/Outcomes: 11 STUROP scholars were selected, representing 6 Texas Universities. All completed the summer intensive and reported an average mentorship effectiveness score of 4.5 (scale from 0-5).

Conclusions: STUROP is an innovative pipeline program that engages college students in sustained longitudinal educational and hands-on research activities. Through direct participation in research project and academic enrichment, as well as robust mentoring and peer support including advice on career paths, STUROP aims to successfully prepare Scholars for biomedical research careers.

13. Apples to Oranges: Comparing the Quality of Pre-Med Resources on TikTok and YouTube

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Introduction: Applications to medical schools have consecutively been on the rise, with a significant increase seen after COVID-19. Though the number of applicants have increased, there has not been a proportional increase in admission to medical schools (1). Aspiring medical students compete at a greater intensity and may turn to the Internet for guidance. However, not all the information presented is reliable. The aim of this study is to evaluate the quality and reliability of the information available to Pre-Meds on two widely used multimedia platforms: YouTube and TikTok.

Methods/Project Description: Sixty videos for the search result of "premed advice" were compiled. Thirty YouTube results were compiled with an incognito browser and thirty TikTok results were compiled with two new accounts to eliminate any algorithmic biases. The media was evaluated with the JAMA Benchmark Criteria and a modified DISCERN Criteria (2,3). Information regarding the presenter's credentials and affiliations, length of the video, date published, number of views, and the number of likes were used to stratify the data. Media was grossly categorized into 4 categories: Independent Contractor, Professional Admissions Service, Educational Institution/University, and Student. One-way ANOVA was used to determine statistical significance ($p<0.05$).

Results/Outcomes: Professional organizations on YouTube scored significantly better on DISCERN compared to independent contractors on TikTok ($p = 0.00276$) and students on TikTok ($p=0.04546$). Professional organizations on YouTube also performed significantly better on JAMA Benchmark than TikTok content made by independent contractors ($p=.00001$) and students ($p=.000015$). YouTube content made by professional organizations did not perform statistically better on DISCERN than student-created YouTube content ($p=.08771$). Overall, YouTube scored higher on DISCERN ($p=0.00218$) and JAMA Benchmark ($p=0.00001$) than TikTok. No videos from accredited educational institutions appeared on the results of either platform.

Conclusions: On average, YouTube videos have higher quality, reliability, and accuracy than TikTok videos on pre-med advice. YouTube videos produced by professional admission organizations scored the highest on DISCERN and JAMA scales, showing their superior information compared to TikTok videos. To bridge this gap, educational institutions should widely distribute applicable and accurate content to guide prospective medical students.

References:

1. Boyle, P. (2021, December 8). Medical School applicants and enrollments hit record highs; underrepresented minorities lead the surge. AAMC. https://www.aamc.org/news/medical-school-applicants-and-enrollments-hit-record-highs-underrepresented-minorities-lead-surge

2. Cakmak G. (2021). Evaluation of Scientific Quality of YouTube Video Content Related to Umbilical Hernia. Cureus, 13(4), e14675. https://doi.org/10.7759/cureus.14675

3. Silberg, W. M., Lundberg, G. D., & Musacchio, R. A. (1997). Assessing, controlling, and assuring the quality of medical information on the Internet: Caveant lector et viewor--Let the reader and viewer beware. JAMA, 277(15), 1244–1245.

14. Enhancing Health Literacy in CHFC3 Patients - A quality initiative: The Impact of Educational Binders on Heart Failure Management

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Introduction: The Congestive Heart Failure Comprehensive Care Clinic (CHFC3) is a free program for unfunded patients recently discharged from the hospital after a heart failure diagnosis. Most patients are of a low socioeconomic status, placing them at a higher risk of having low health literacy and subsequent worse health outcomes [1,2]. The purpose of this project is to increase health literacy in patients enrolled in the CHFC3 program through the use of educational binders.

Methods/Project Description: Education binders were created at a 5th grade reading level in English and Spanish by an interprofessional team of students and faculty that contain vitals logs, calendars with their follow up appointments, and information regarding heart failure, medications, diet and nutrition, exercise, and recipes. When a patient is enrolled into the CHFC3 a medical student meets with the patient to walk them through the education binder, highlighting the importance of the factors that impact heart failure. A pre-survey containing the BRIEF health literacy screening tool and additional binder-specific questions is administered at their initial appointment to assess baseline understanding and health literacy. The same survey will be administered during their follow up appointments in weeks 4 and 8 to assess for changes in patients' understanding and health literacy after being given the binders.

Results/Outcomes: 26 patients have been enrolled into this quality initiative and received the initial surveys and binder, and at least 15 patients have completed their second appointment and subsequent surveys. The trends of the study are leaning towards an improvement in health literacy throughout the course of the program. We have observed the importance of medical students being able to deliver medical information to patients at an appropriate literacy level. Our program is unique in that the education binder is written at a 5th grade reading level in both Spanish and English and the medical students delivering the information are trained to educate patients at an appropriate level.

Conclusions: The implementation of these educational binders may improve overall health literacy and understanding of the factors that impact heart failure, ultimately resulting in improved health outcomes and quality of life.

15. Implementation and Evaluation of a Novel Health Equity, Advocacy, and Research Training (H.E.A.R.T) Track in a Family and Community Medicine Residency Program

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Introduction: Family Medicine (FM) residency programs serve diverse populations, including those at risk for poor health outcomes due to social conditions and systemic barriers. The social determinants of health are vital for all primary care providers to recognize and address to improve the health of their most vulnerable patients. Currently in residency programs, there is a lack of standardized, scalable community medicine training.

Methods/Project Description: A longitudinal community health track was designed and implemented within a large academic FM residency program (N=42) to provide a Health Equity, Advocacy, and Research Training (HEART) beyond core requirements. The track offers additional educational opportunities for direct community engagement work and practice in community-based participatory research (CBPR). A baseline program evaluation survey was created and administered to residents enrolled in the program (N=4). The survey evaluated residents' knowledge, attitudes, and skills surrounding health equity, advocacy, and research as well as their overall perception of the HEART track.

Results/Outcomes: Survey responses (N=4) demonstrated a strong base of knowledge and a desire amongst all respondents to continue learning from and working with underserved populations throughout their careers. Three of the respondents were second-year residents who had been in the HEART track program for less than one year and one respondent was a third-year resident who had been in the program for two years. All residents indicated that they either "agree" or "strongly agree" with statements assessing knowledge of health equity and health disparities principles. There was no consensus on statements assessing for confidence in implementing CBPR and health policy advocacy skills. Most residents did not believe that medical school had prepared them appropriately to address social determinants of health in practice.

Conclusions: There is an opportunity for intentional community medicine training within FM residency training that can standardize information on crucial topics to the modern primary care provider. Early data suggest that FM residents generally start off with high levels of self-assessed knowledge about social determinants of health, but do not universally have the confidence or skills to integrate that knowledge into healthcare practice. This gap in preparedness reinforces the need for similar specialized tracks during residency training.

References:

1. Folasade C. Lapite, Stephanie R. Morain & Faith E. Fletcher (2021) Grounding Medical Education in Health Equity: The Time is Now, The American Journal of Bioethics, 21:9, 23-25, DOI: 10.1080/15265161.2021.1952352

2. Institute of Medicine (US) Committee on Understanding and Eliminating Racial and Ethnic Disparities in Health Care; Smedley BD, Stith AY, Nelson AR, editors. Unequal Treatment: Confronting Racial and Ethnic Disparities in Health Care. Washington (DC): National Academies Press (US); 2003. Available from: https://www.ncbi.nlm.nih.gov/books/NBK220358/ doi: 10.17226/12875

16. Critical Success Factors for Advising and Mentoring Doctor of Nursing Practice Students

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Introduction: Doctor of Nursing Practice (DNP) programs continue to evolve, and the role of faculty in advising and guiding the scholarly project and supporting the development of students' leadership acumen is an essential ingredient to student success. There is limited evidence about this topic.

Methods/Project Description: A mixed methods sequential explanatory design was used to identify critical success factors used by faculty for advising and mentoring DNP students that support the development of leadership acumen that goes beyond the completion of the scholarly project. The Mentoring Competency Assessment (MCA-21) tool was utilized to collect quantitative data followed by voluntary qualitative interviews that were recorded and analyzed for themes to develop an emerging framework of best practices for student mentoring.

Results/Outcomes: Sixty-five DNP faculty from across the USA completed the MCA-21 survey. The majority (95.74%) had >16 years RN experience, more than 63% had >11 years of teaching experience, 87.25% had less than 10 years of advising. Most respondents (73.21%) received no formal training for advisement. 98.87 % taught courses while advising/mentoring students, however, only 76.60% received workload credit for advisement. Emerging themes included: Transformational Mentoring; Mentor's Ways of Knowing; Learning by Doing; Fundamentals of Mentoring; and Scholarship of Mentoring

Conclusions: The reported results provided insight into the lived experience of DNP faculty mentors/advisors; identified critical factors of successful DNP student mentoring/advising, and ascertained advising strategies that support the development of leadership acumen. Study findings also, built on the previous work of Corey and Roussel, and offer a conceptual connection between the MCA, Mentee Ways of Being, and Transformational Mentoring Frameworks.

References:

1. Fleming, M., House, S., Hanson, V. S., Yu, L., Garbutt, J., McGee, R., Kroenke, K., Abedin, Z., & Rubio, D. M. (2013). The Mentoring Competency Assessment: validation of a new instrument to evaluate skills of research mentors. Academic medicine: journal of the Association of American Medical Colleges, 88(7), 1002–1008. https://doi.org/10.1097/ACM.0b013e318295e298

2. Hande, K., Christenbery, T., & Phillippi, J. (2017). Appreciative Advising: An Innovative Approach to Advising Doctor of Nursing Practice Students. Nurse educator, 42(6), E1–E3. https://doi.org/10.1097/NNE.0000000000000372

3. Hyun, S. H., Rogers, J. G., House, S. C., Sorkness, C. A., & Pfund, C. (2022). Revalidation of the Mentoring Competency Assessment to evaluate skills of research mentors: The MCA-21. Journal of clinical and translational science, 6(1), e46. https://doi.org/10.1017/cts.2022.381

4. Waldrop, J., Reynolds, S. S., McMillian-Bohler, J. M., Graton, M., & Ledbetter, L. (2023). Evaluation of DNP program essentials of doctoral nursing education: A scoping review. Journal of professional nursing : official journal of the American Association of Colleges of Nursing, 46, 7–12.

17. Enhancing Peer-Led Learning: A comparative study of single and shared facilitator models in Problem-Based Learning.

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Introduction: In the academic year 2324, an organ-based course in the second year of the curriculum's preclinical phase faced a challenge in recruiting sufficient faculty to assign a dedicated faculty facilitator to each of the 28 Problem-Based Learning (PBL) groups. As a creative solution, 14 PBL groups were facilitated by a dedicated faculty facilitator, and the remaining 14 PBL groups shared one facilitator between two PBL groups.

Methods/Project Description: Faculty assigned to facilitate two groups were chosen based on their previous PBL experience and high student ratings in previous courses. Shared facilitators dedicated time to each of their groups daily, even if not physically present, by closely monitoring student's self-directed learning inquiries. The study involved 103 students in the traditional PBL configuration, each with a dedicated facilitator, and 130 students in the pilot groups, sharing a faculty facilitator. An analysis of variance (ANOVA) was conducted on all summative quizzes and NBME customized examinations, to explore both between group and within group variance. Student and faculty input regarding the pilot was evaluated through end of course evaluations and faculty focus groups.

Results/Outcomes: Our findings indicate that there are no statistically significant differences in student performance on PBL, large group quizzes, midterm and final high stakes examinations when comparing students in groups with a shared facilitator and those in traditionally structured groups. The student comments regarding the shared facilitator pilot were mixed, ranging from unsatisfactory impacting student learning to satisfactory experiences with the process. Notably, facilitators in shared PBL groups consistently received high rankings by students, above faculty dedicated to one group.

Conclusions: The data suggests that the shared facilitator model, while met with varied student responses, did not compromise the quality of faculty facilitation, and did not hinder student performance across these groups. This innovative approach demonstrates the potential for optimizing faculty resources in the face of recruitment challenges, while optimizing student driven learning in a PBL setting. Further refinement of this model may reveal its potential to enhance the educational experiences for students and faculty.

18. Transforming Course Evaluations: A Framework for Success

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Introduction: Course evaluations play a pivotal role in the success of health professions education. This proposal outlines our transformation journey, moving from conventional course evaluations towards a unified and efficient system that delivers invaluable, high-quality data to benefit educators, administrators, and students. We have created a framework that we would like to share.

Methods/Project Description: Conventional course evaluations often generate incomplete or superficial data. Our evaluation team undertook a significant overhaul to ensure robust data collection and swift data dissemination to empower course directors and deans with insights into course and clinical rotation strengths and areas of concern. This approach facilitated prompt adjustments and provided a more comprehensive understanding of student learning experiences. Maintaining a remarkable student response rate exceeding 90% and dramatically increasing the faculty response rate has been a hallmark of our evaluation process. We achieved this through a blend of techniques, including anonymous surveys, focused evaluation timelines, and clear communication strategies.

We created templates for generating end-of-year reports, which encompass multiple years of data. Furthermore, we developed mid-year and end-of-year reports for clinical clerkships, incorporating site comparison data. These reports highlight strengths and areas of concern within specific curriculum areas, offering insights for clerkships.

End-of-course evaluation reports are forwarded to the educational review committees, where course performance data is combined with evaluation findings. Subsequently, these reports return to the evaluation team to compile year-wise, phase-wise, and overall curriculum evaluations. By scrutinizing the broader effectiveness of the curriculum, we unearth avenues for improvement, ensuring program alignment. This approach fosters a culture of continuous adaptation and innovation in health professions education.

Results/Outcomes: A team of four professionals efficiently produces nearly 500 high-quality evaluation reports annually that are customized with specific data. This enables course directors, the curriculum committee, and administrators to utilize the reports for continuous quality enhancement and curriculum monitoring.

Conclusions: The streamlined evaluation process has facilitated the rapid dissemination of reports to course directors and administrators for timely decision-making. This process has empowered us to swiftly generate quality reports for accreditation, research endeavors, and other educational purposes, which contributes to the agility and responsiveness of our program.

References:

1. Kogan, J.R. and Shea, J.A., 2007. Course evaluation in medical education. Teaching and Teacher Education, 23(3), pp. 251-264.

2. Fleming, P., Heath, O., Goodridge, A. and Curran, V., 2015. Making medical student course evaluations meaningful: implementation of an intensive course review protocol. BMC Medical Education, 15(1), pp.1-6.

19. Building Physician Educators: The Pediatric Academic Medicine Summer Preceptorship Program

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NOTE: content displayed adapted from alternative submission format

Background: The summer between the first and second year of medical school has historically provided time where students can participate in research or additional clinical experience. However, there are few published summer programs offering a combined summer experience. The 2023 AAMC Medical School Graduation Questionnaire of graduating medical students showed that 79% plan to teach, 39% plan to become medical school faculty, and 49% plan to carry out research in their careers (1). Thus, it is important to have early exposure to academic medicine.

The Pediatric Academic Medicine Summer Preceptorship Program (PAMSPP) is a fully funded program founded upon the collaboration of four core pillars within academic medicine: clinical experience, scholarly activity, education, and advocacy. In the last four years, PAMSPP has seen success with students presenting posters at national conferences, advocating at the City of Houston Council for Disabilities, winning poster competitions, and participating in clinical research across subspecialties.

References:

Graduation Questionnaire (GQ). AAMC. https://www.aamc.org/data-reports/students-residents/report/graduation-questionnaire-gq

20. Analyzing Early Outreach Efforts of the Joint Admission Medical Program (JAMP) and Their Efficacy.

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Introduction: The Joint Admission Medical School Program is a pipeline program established in 2001 that provides students from economically disadvantaged backgrounds with resources to prepare for medical school applications as well as guaranteed admission to one of 13 participating Texas medical schools. With JAMP currently allotting 100 seats for students across 68 private and public universities in Texas and looking to expand, it is important to analyze whether the program is promoted in an efficient manner to the target population of students.

Methods/Project Description: A group of JAMP members created a survey assessing the demographic and outreach experiences of JAMP participants. The survey was piloted to ensure appropriate data collection. An electronic survey link was sent three times to 94 current and graduated McGovern Medical School JAMP members. Institutional Review Board granted approval. Data analysis included descriptive statistics with calculation of frequencies.

Results/Outcomes: From 40 respondents, 87.5% agreed that JAMP was not a widely known program. Most students learned about JAMP during their second semester of freshman year (34.15%). However, 47.5% of respondents wished to have known about JAMP earlier. Cited reasons for such included to be a more competitive applicant, having more time to prepare their application, as well as to further understand the rigors of the profession before committing to the program. Only 7.3% of this cohort discovered the program through a JAMP outreach event with 36.6% discovering it through their schools Health Professions Office, and 31.7% through other manners like flyers, family, and friends. 48.8% of McGovern JAMP students came from suburban communities and 67.5% attended large public or private institutions.

Conclusions: Amongst JAMP scholars at McGovern Medical School, it is widely agreed that the program needs to have higher recognition. Diversifying outreach efforts in a way that encompasses more students from socioeconomically disadvantaged schools and communities may open unknown opportunities to a career in medicine. Increasing awareness of the JAMP program amongst this student population promotes the very purpose of its establishment as targeting these efforts further accomplishes its mission to minimize challenges in accessing a path toward medicine for economically disadvantaged youth in Texas.

21. Interdisciplinary Integrated Primary and Behavioral Healthcare (I2PBH) Initiative

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Introduction: The Interdisciplinary Integrated Primary and Behavioral Healthcare (I2PBH) Initiative currently trains University of Texas Rio Grande Valley (UTRGV) mental health graduate-learners to deliver Integrated Behavioral Health (IBH) services through the evidence-based Primary Care Behavioral Health (PCBH) model in the RGV – a medically underserved Hispanic region along the US-Mexico border.

Methods/Project Description: The I2PBH initiative trains up to six graduate students each year from four mental health disciplines (Social Work, Clinical Mental Health Counseling, Rehabilitation Counseling, and Psychology) with an emphasis on basic as well as advanced theory and clinical skills in the PCBH model. Students also serve as Behavioral Health Consultants (BHC), working alongside healthcare professionals in a primary care setting, to meet set practicum/internship requirements. As BHCs, they work alongside healthcare providers and other health profession trainees in three Area Health Education Center (AHEC) Primary Care Clinics and one mobile clinic, located within rural counties of South Texas. Student trainee's complete trauma-informed, culturally adaptive PCBH-focused coursework (e.g., Foundations of IBH; Clinical Skills for the BHC) in conjunction with advanced PCBH-oriented clinical supervision, digitally enhanced training - Mixed-Reality Simulations, and asynchronous distance learning via virtual platforms (e.g., Blackboard, Zoom). Based on a discipline-agnostic approach, this teaches PCBH specific competencies while also providing concurrent, primary-care focused clinical experiences, resulting in a behavior health workforce that is primary-care ready and trauma-informed.

Results/Outcomes: Utilizing the PPAQ subscales, significant changes in the adherence to essential behaviors when providing IBH services in a primary care setting has been observed [before training (M=46.25; SD= 9.74), after training (M=161.25; SD=7.89); {t(3)=-21.86, p<.001}]. Post-test mean is 161.25, indicating that trainees' scores are in the preferred level of model fidelity. Secondly, in the ISVS scale, the mean of trainee's total score is 133.56 out of 147, with an average mean score being 6.36 out of 7. Our post-tests demonstrate that after training, our participants have improved their interprofessional attitudes, beliefs, and competencies.

Conclusions: The I2PBH initiative increases the presence of culturally concordant, primary care competent BHCs on the frontlines to function as primary care provider extenders for all behaviorally informed needs of patients, thus increasing access and delivery of whole-person care.

References:

1. Dube, S. R., Cook, M. L., & Edwards, V. J. (2010). Health-related outcomes of adverse childhood experiences in Texas, 2002. Preventing chronic disease, 7(3), A52.

2. Aguilar-Gaxiola S, Lorea G, Mendez L, Sala M, & Nakamoto J. (2012). Community-Defined Solutions for Latino Mental Health Care Disparities: California Reducing Disparities Project, Latino Strategic Planning Workgroup Population Report. Sacramento, CA

3. Miller BF, et al. (2016). Creating a Culture of Whole Health: Recommendations for Integrating Behavioral Health and Primary Care.

22. Application of Just Culture Principles and Best Practices for Effective Research Mentorship of Undergraduates

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Introduction: Just Culture (JC) is a healthcare organizational approach emphasizing multi-level accountability (1). Extension of JC to undergraduate mentorship could promote research experience and skill development for underrepresented individuals in compliance with Senate Bill 17. This presentation describes the application of JC within our team, identifies next steps, and shares examples for adaptation by others.

Methods/Project Description: Osier Laboratory is a research mentorship program focusing on co-creation of research deliverables with undergraduates. We applied JC principles to our program (2) and will describe them for adaptation by others.

Results/Outcomes: Including/Engaging Diverse Perspectives: To promote diverse perspectives, we use both snowball recruitment and active outreach (3). Members are provided options for remote projects, reducing barriers to participation for those with more extensive commitments (e.g. employment) (4). Members are encouraged to share their perspectives throughout project planning and execution.

Creating Safe Spaces to Learn: Mentees are explicitly told the laboratory is intended to be a non-punitive learning environment where they can safely report issues and request help. Membership contracts outline expectations, and annual performance reviews emphasize effort as the basis for contract renewal. To date, none of our 247 lifetime members has been terminated for a mistake.

Providing Reliable Processes & Resources: We create standardized resources to guide members through project completion. For example, when working on a manuscript, mentees are given a roadmap detailing the publication process as well as standard operating procedures (SOPs) detailing key steps (e.g. crafting a title).

Promoting Multi-Level Accountability: When mistakes arise, systemic contributors are explored and addressed (2). Consequently, SOPs are being constantly revised as new points of confusion are identified.

Establish Communication: Mentees are provided with various channels for communication with their peers and the principal investigator, including weekly surveys, regularly scheduled zoom office hours, working groups, team meetings, and other methods.

Conclusions: JC principles have been incorporated into Osier Laboratory's mentorship program with several examples provided. Other investigators should consider application of JC to their own mentorship, and/or formal study of the impact of this work.

References:

1. Boysen PG. Just culture: a foundation for balanced accountability and patient safety. Ochsner J. 2013;13(3):400–6.

2. Odinet J, Ogden E, Revo E, Joshi R, Hanson K, Asplund B, et al. Just Culture Toolkit [Internet]. 2021. Available from: http://12.53.28.72/-/media/assets/pharmacy-practice/resource-centers/patient-safety/Just-Culture-Toolkit_-Final.pdf

3. Ibrahim S, Sidani S. Strategies to Recruit Minority persons: A Systematic Review. J Immigr Minor Health. 2014 Oct 22;16(5):882–8.

4. Ahmad AS, Sabat I, Trump-Steele R, King E. Evidence-Based Strategies for Improving Diversity and Inclusion in Undergraduate Research Labs. Front Psychol. 2019 Jun 18;10.

23. Advancing Interprofessional Competencies in Senior Medical and Nursing Students: A Large-Scale Mock Paging Activity

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Introduction: A Mock Paging Activity was developed at the University of Texas Medical Branch with interprofessional education collaboration (IPEC) objectives within the senior classes of the School of Medicine (SOM) and School of Nursing (SON) in the semester prior to graduation (1).

Methods/Project Description: The Mock Paging Activity has been implemented for all Spring cohorts of SOM and SON since 2021. During the Mock Paging Activity, senior SON students were given one of nine clinical cases to prepare SBAR (situation, background, assessment, recommendation) reports. All fourth year SOM students were given an alpha numeric pager, a patient check-out report, and placed "on-call" for one week. During the week on call, SOM students received pages from SON students regarding a simulated patient on their census. During their interaction, SOM students extrapolated information provided by SON students and gave verbal orders to resolve patient problems of varying acuity. 223 SOM students and 100 SON students participated in the Mock Paging Activity and were asked to complete the Interprofessional Collaborative Competency Attainment Scale (Revised) (ICCAS-R) before and after (2). The twenty-item questionnaire investigated self-reported competency in five interprofessional constructs: communication, collaboration, roles and responsibilities, patient centered management, and conflict management. All items were ranked on a 5-Point Likert scale (1=Poor, 5= Excellent).

Results/Outcomes: Each item on the ICCAS-R was rated higher after completion of the Mock Paging Activity. The increase in scores within SOM and SON students are all statistically significant (two sample t-test, p value < 0.001).

Conclusions: Through this large-scale Mock Paging Activity, medical and nursing students were able to practice interprofessional communication in a low-risk setting. All students in both schools demonstrated an increase in interprofessional communication, collaboration, roles and responsibilities, patient centered management, and conflict management. This Mock Paging Activity is mutually beneficial in preparing medical and nursing students for real life healthcare practice.

References:

1. American Association of Medical Colleges (AAMC). "Interprofessional Education." https://www.aamc.org/what-we-do/mission-areas/medical-education/interprofessional-education. Accessed [October 16, 2023].

2. Schmitz CC, Radosevich DM, Jardine P, MacDonald CJ, Trumpower D, Archibald D. The Interprofessional Collaborative Competency Attainment Survey (ICCAS): A replication validation study. J Interprof Care. 2017;31(1):28-34.

24. UTMB Food Pantry "The Picnic Basket" Student Usage Outcomes

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Introduction: Food insecurity is defined as a household-level economic and social condition of limited or uncertain access to sufficient nutritious and affordable food.1-4 The rates of food insecurity among the general population in the U.S. is 10.2%.1 While previous studies have assessed food insecurity in undergraduate and medical students, other health professions have not yet been considered. 2-4 Food insecurity among students relates to poor health and academic outcomes. The objectives of this study include to investigate the level of food insecurity among UTMB health professions students and to assess potential deterrents preventing usage of the UTMB on-campus student food pantry.

Methods/Project Description: We created a survey which included the U.S. Adult Food Security Module to evaluate food insecurity among students at UTMB and questions to assess the UTMB student food pantry usage and potential deterrents against usage. The survey was distributed among all the current classes of students including health professional graduate students, nursing students, and medical students. The survey was distributed by official email, Facebook, and GroupMe and will be open for 6 weeks total. We are currently still in that 6-week period of data collection.

Results/Outcomes: Upon preliminary analysis, 77 students have completed the survey with the majority being medical students (~66%) and nursing students (~28%). The rate of food insecurity was 25.6%. Additionally, 12.9% of students were found to have very low food security with the primary reasons including insufficient funds (29.9%) and lack of time (26%). Barriers to food pantry usage listed by students include fear of stigma (20%), believing they don't qualify financially (49.2%), and lack of awareness (12.3%).

Conclusions: Prevalence of food insecurity among health professions students may be similar or greater to that of the general population. However, these results may be present among other non-healthcare institutions. Further evaluation of food insecurity among this population is needed as intervention can improve student health. Possible intervention methods to increase food pantry usage include raising awareness of the food pantry location and hours, making it easier for students to determine if they qualify financially, and reducing stigma.

References:

1. https://www.ers.usda.gov/topics/food-nutrition-assistance/food-security-in-the-u-s/definitions-of-food-security/

2. Jamie B. Daugherty, Matthew Birnbaum & Alena Clark (2019) 'Having Enough': Students' Understanding of Food Insecurity and Campus Food Pantry Use, Journal of Poverty, 23:7, 600-620, DOI: 10.1080/10875549.2019.1652721

3. Gaines, A., Robb, C.A., Knol, L.L. and Sickler, S. (2014), Food security and resource adequacy. International Journal of Consumer Studies, 38: 374-384. https://doi-org.libux.utmb.edu/10.1111/ijcs.12110

4. Flynn MM, Monteiro K, George P, Tunkel AR. Assessing Food Insecurity in Medical Students. Fam Med. 2020 Jun;52(7):512-513. doi: 10.22454/FamMed.2020.722238. PMID: 32640474.

25. Primary Care Behavioral Health Partnerships Advancing & Transforming Health Sciences (PCBH PATHS)

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Introduction: Although primary care has long been designated as the de facto mental health system, where up to 74.5% of patients receive psychiatric medications from primary care providers (PCP), lack of PCP training often leads to mismanagement of mental health conditions in primary care. Family physicians in practice often cite behavioral health as an area that was underemphasized in their residency training. Furthermore, PCP trainees often receive mental health training through a psychiatric rotation that occurs within an inpatient mental health setting, divorced from primary care. The lack of integration in training for providers further encourages the fragmentation in practice, and reifies stigma, where behavioral health aspects of physical health often remain under recognized, and under treated, and where mild-to-moderate mental health concerns are over treated.

Methods/Project Description: Primary Care Behavioral Health Partnerships Advancing & Transforming Health Sciences (PCBH PATHS) is a medical workforce development pipeline project aimed at permanently supporting institutional capacity to address the shortage of Integrated Behavioral Health (IBH) competent medical providers locally, regionally, and nationally. Through monthly IBH rotations and asynchronous modular curricular pathways, medical learners receive training in basic to advanced PCBH competencies as well as medication assisted treatment (MAT) pathways as a complementary training resource to the medical education they receive in their respective programs. This initiative strengthens an existing commitment to expand the PCBH model across the Rio Grande Valley, and similarly marginalized and vulnerable communities, to address physical and behavioral health disparities (e.g., diabetes, depression, pain management, opioid, and substance use issues) for a predominantly Latino population along the US-MX border.

Results/Outcomes: Since its implementation, the initiative has impacted +375 medical trainees (e.g. MD, PA, NP, MSW) prior to completing their respective program training. Following their graduation, these providers have primarily continued to practice in a medically underserved area (91%).

Conclusions: A PCBH focused delivery system (clinical and educational), in which primary care providers and behavioral health consultants are trained to provide routine, population-based, biopsychosocial care can increase parity for mental health access, minimize toxic effects of culturally bound stigma, reduce fragmentation of physical-mental health and stave off the effect of an expanding opioid use disorder crisis.

References:

1. Regier DA, Narrow WE, Rae DS, Manderscheid RW, Locke BZ, Goodwin FK. The de facto US mental and addictive disorders service system. Epidemiologic catchment area prospective 1-year prevalence rates of disorders and services. Arch Gen Psychiatry. 1993 Feb;50(2):85-94. doi: 10.1001/archpsyc.1993.01820140007001. PMID: 8427558.

2. Abed Faghri NM, Boisvert CM, Faghri S. Understanding the expanding role of primary care physicians (PCPs) to primary psychiatric care physicians (PPCPs): enhancing the assessment and treatment of psychiatric conditions. Ment Health Fam Med. 2010 Mar;7(1):17-25. PMID: 22477919; PMCID: PMC2925161.

3. Brandt-Kreutz, R. L., Ferguson, K. E., & Sawyer, D. (2015). Behavioral science priorities in residency education: The perspective of practicing family physicians. Families, Systems, & Health, 33(4), 339–348. https://doi.org/10.1037/fsh0000144

4. Kinman CR, Gilchrist EC, Payne-Murphy JC, Miller BF. Provider- and practice-level competencies for integrated behavioral health in primary care: a literature review. (Prepared by Westat under Contract No. HHSA 290-2009-00023I). Rockville, MD: Agency for Healthcare Research and Quality. March 2015.

5. Landoll RR, Maggio LA, Cervero RM, & Quinlan JD. (2018). Training the Doctors: A Scoping Review of Interprofessional Education in Primary Care Behavioral Health. Journal of Clinical Psychology in Medical Settings. https://doi.org/10.1007/s10880-018-9582-7

26. Development of a Medical School Advanced Elective for Environmental Health emphasizing Active, Problem Based Learning Techniques

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Introduction: Climate change is rapidly becoming the single greatest threat to human health, with potential consequences that affect people from all walks of life and span the globe. Rising temperatures have expanded the geographic range of disease-carrying vectors, increasing prevalence of diseases like malaria and dengue into Texas. Furthermore, climate change increases extreme weather events and disrupts food and water security, contributing to malnutrition and waterborne disease. These impacts will be felt broadly but will do the greatest harm in the most vulnerable communities: globally, nationally, and right here in Texas.

Educating today's medical students about the environment and its direct and indirect impacts on health is imperative, since they'll need to be equipped with the knowledge and skills to recognize, prevent, and treat climate-related health threats. As stewards of public health, future doctors have a crucial role to play in shaping a more sustainable, healthier future for everyone.

Methods/Project Description: Faculty from the Health Systems and Population Health Sciences department at a relatively new, resolutely mission-driven medical college in a large, majority-minority and underserved community, decided to design and launch an advanced elective titled "Environmental Health and Justice". Planned teaching techniques include a mix of lectures with active learning, weekly problem-based learning activities, a monthly-long scholarly project, and experiential activities with environmental engineering faculty and environmental health officers from the local public health department. Relevant medical education program objectives (MEPOs) and cross-cutting objectives from the preclinical course (Physicians, Patients, and Populations) were used to shape the curriculum learning objectives and tie the course into LCME accreditation requirements.

Results/Outcomes: Class participants are assessed using a mix of NBME-style summative exam and application of rubrics for scholarly projects. A standardized and weighted grading rubric and schedule were formulated to support objective, qualitative grading of student scholarly work and experiential activities. Course, faculty and guest lecturer satisfaction measures will also be collected.

Conclusions: Incorporating multiple teaching modalities and assessment frameworks to optimize skill and knowledge acquisition, this new elective aims to train the next generation of clinicians to identify and address health impacts of our changing climate at both the population- and patient-level.

27. Introducing Innovation in Creating Leadership Concept Scenarios Utilizing the Reverse Case Study Approach

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Introduction: The Reverse Case Study (RCS) approach allows students to increase their critical thinking and decision-making skills. Their skill set, along with applying various guidance characteristics, helps them to simulate the role of nurse managers/leaders. The students must decide on how to Reverse the Steps using a selective type of leadership style. Case-based teaching is an approach that significantly develops student's critical thinking, clinical and decision-making skills (Mahdi, O., Nassar, I., & Almuslamani, H. (2020). Mentoring students in this type of study will enhance their ability to understand the nuances of leadership styles, the ability to apply practice, and critically examine resolutions to leadership problems.

Methods/Project Description: This project allowed students to be the facilitator of learning and teach (and be taught by) their peers based on leadership concepts. The project will build rapport and bonding with peers but will infuse creativity into the learning process (Atkinson, 2014). One hundred fourteen fourth semester undergraduate BSN nursing students enrolled in the Leadership and Management class were given a realistic leadership scenario with limited information about the situation(s). Students were assigned in randomized groups with a Team Leader to develop a scenario based upon certain leadership concepts such as bullying, incivility, Safe Harbor, etc. A pre-test was administered prior to the Leadership presentation and a post-test was administered upon completion of the presentation. All team members were expected to participate in the creation and delivery of the presentation. Students were allowed 25 minutes for presentation, and 10 minutes to ask and answer questions from their peers.

Results/Outcomes: Analysis of data from the nine leadership concepts using the Leadership Concept RCS Pre/Post-Presentation Surveys showed that student knowledge level increased in all nine leadership concepts after the presentations. Overall results of all nine leadership concepts improved by 19.6%.

Conclusions: The results illustrate an improvement in self-reported knowledge level for all nine leadership concepts after peer presentations were completed. This teaching/mentoring approach provided students an opportunity to apply their knowledge of leadership concepts and create a successful baseline for leadership situations.

References:

1. Mahdi, O., Nassar, I., & Almuslamani, H. (2020). The role of using case studies method in improving students' critical thinking skills in higher education. International Journal of Higher Education. doi:10.5430/ijhe. v9n2p297.

2. Atkinson, T. (2014). The "reverse case study:" enhancing creativity in case-based instruction in leadership studies. Journal of Leadership Education. DOI: 1012806/V13/13/A3

28. A YouTube Platform to Support and Empower Local Afghan Women: A Decision-Making Intervention

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Introduction: Afghans resettle in San Antonio with poor oral/health and zero access to healthcare coverage and employment resources. We aimed to 1) understand Afghan women's cultural influences on their oral/health practice, access to healthcare, and social well-being and 2) advance their knowledge by learning from in-depth interviews, designing an intervention, and disseminating informational videos. We considered their sociodemographic and English language proficiency in planning and delivering creative solutions for their intervention through YouTube technology.

Methods/Project Description: A community needs assessment revealed Afghan women's rampant urgent care needs, widespread challenges to accessing oral health care, and positive attitudes toward using technology (WhatsApp) to receive information. The intervention included 1) a pre-survey collecting participant sociodemographics, quality of life, and perceptions of barriers to dental care, 2) two tailored Pashto language YouTube videos delivering oral and nutritional health overviews, and 3) a post-survey assessing knowledge gained. The in-depth survey administration allowed participants to request clarifications in real-time from a calibrated interpreter in their preferred language. The videos were designed to inform participants with limited or no formal education.

Results/Outcomes: Thirty-two Afghan women ages 19 and 57 participated; the majority spoke in Pashto (72%). Only 6.3% were enrolled in English as a Second Language classes. 25% had completed basic secondary grades (10-12), 16% achieved primary grades (1-6), and 34% had no formal education. Access to oral healthcare was scarce due to information, financial, and transportation challenges. 78% had stay-at-home jobs, 12.5% drove a vehicle, 28% received transportation from their husbands, 19% carpooled with friends, 19% used buses, and 12.5% walked to the sessions. 47% sought dental care at charitable San Antonio Refugee dental Clinics, and 41% had not visited a dentist.

The mean pre-survey score was 8.8 (SD=2.95), and the mean post-survey score was 13.6 (SD=3.19). A paired t-test indicated that the increase in mean survey score from pre-survey to post-survey was statistically significant for $p<0.05$ ($p=<0.001$).

Conclusions: Healthcare providers are called to manage the unique needs of vulnerable populations effectively by engaging them in tailored oral/health promotion and intervention programs to enhance their access to care while delivering appropriate, equitable cultural and linguistic services.

References:

1. The United States Department of State, The U.S. Refugee Admissions Program, Refugee Processing Center retrieved (Oct. 15, 2023). https://www.wrapsnet.org/admissions-and-arrivals/

2. U.S. Department of Health and Human Services, Office of the Refugee Resettlement, State retrieved (Oct. 15, 2023). https://www.acf.hhs.gov/orr/site_search?keyword=Afghans+in+Texas

3. Sanders J, Lefkowitz J, Patel C, Paz G, Abdollahi A, Mehmandoost A, Paico C, Kamat R, Diab A, Ehtesham Y, Baraka A, Skarpiak B, MD, Worabo H, DNP, RN and Farokhi M, DDS, MPH. San Antonio Refugees: Their Determinants of Oral Health, Status, and Barriers, 2021 UTHSA Annual Community Service Learning Conference, San Antonio, Texas.

4. Yousefy AR, Ghassemi GR, Sarrafzadegan N, Mallik S, Baghaei AM, Rabiei K. Psychometric properties of the WHOQOL-BREF in an Iranian adult sample. Community Ment Health J. 2010 Apr;46(2):139-47. http://www doi: 10.1007/s10597-009-9282-8

5. Mahmoodi Z, Bahrami G, Ghavidel N, Seddighi H. The effect of social determinants of health on quality of life among Afghan refugees in Iran during the COVID-19 pandemic: a path analysis. BMC Psychiatry. 2023 Jan 4;23(1):11. http://www doi: 10.1186/s12888-022-04502-0

29. Enhancing Spanish-Language Capacity Among Volunteers at Bexar County Eye Screenings

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Introduction: In Bexar County, Texas, 61.3% of the population is Hispanic, and Spanish is the predominant language spoken in 43% of households. Despite the significant proportion of individuals who speak Spanish in the United States, non-English-speaking status puts a population at risk for decreased access to health care.3 This study describes the implementation and evaluation of an English-to-Spanish script given to volunteers of the Lions Mobile Eye Screening Unit (MESU) to build Spanish-speaking capacity and to help deliver effective eye screenings to diverse populations.

Methods/Project Description: The MESU, operated by the Lions Club of District 2-A2, provides free eye screenings to underserved neighborhoods in Bexar County, Texas. During each screening, a patients' visual acuity, visual field, and intraocular pressure are measured independently in each eye. All screenings are conducted by trained volunteers composed of Long School of Medicine students. At each event, volunteers were provided an English-to-Spanish script to facilitate performing eye screenings in Spanish. Pre- and post-surveys were distributed to volunteers to assess Spanish-speaking competence and evaluate script efficacy. Results were analyzed with a paired student's t-test.

Results/Outcomes: Eleven volunteers completed both pre- and post-surveys across three screening events. 2. A majority of volunteers (81.8%) cited a high school Spanish class as their primary Spanish exposure. 3. Despite this, 72.7% of volunteers rated their Spanish-speaking ability at either a 1 or 2 on a 1 – 5 scale. 4. After using the script, volunteers' self-reported confidence in conducting an eye screening in Spanish increased significantly, with a mean score change of 1.18 (95% CI [0.52 – 1.84]). 5. Volunteers' self-reported interest in improving Spanish interaction abilities also increased significantly, with a mean score change of 0.73 (95% CI [0.05 – 1.41]).

Conclusions: Implementation of an English-to-Spanish script can increase individuals' confidence in delivering eye screenings to patients who speak Spanish and build a greater desire to improve Spanish interaction abilities. These findings suggest more robust initiatives be created to reduce language barriers and better accommodate patients who speak Spanish in healthcare settings.

References:

1. United States Census Bureau. (2022). QuickFacts: Bexar County, Texas. U.S. Department of Commerce. Retrieved August 6, 2023 from https://www.census.gov/quickfacts/fact/table/bexarcountytexas/PST045222

2. Freeman, K. (2017). 2017 Demographic Summary: Bexar County, Texas. San Antonio Metropolitan Health District. Retrieved August 6, 2023 from https://www.sanantonio.gov/Portals/0/Files/health/News/Reports/2017DemographicReport11-29-18.pdf?ver=2018-12-03-150427-547

3. Timmins, C. L. (2002). The impact of language barriers on the health care of Latinos in the United States: a review of the literature and guidelines for practice. Journal of midwifery & women's health, 47(2), 80-96.

30. Implementing an interprofessional health education (IPE) pilot program to gain knowledge of the global health stage while encouraging future global health research endeavors and promoting student academic success

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Introduction: The University of Texas Health Science Center at Tyler implemented a university wide health education seminar pilot focusing on international health in the country of India. Collaborators from the College of Nursing, School of Health Professions, Health Administration, Public Health, and the Office of International Programs worked together to deliver a faculty led program for graduate and undergraduate students in health-related disciplines. The goal of the pilot was to promote interprofessional health education (IPE), awareness of global health, and the importance of global health research among students in health-related disciplines.

Methods/Project Description: A substantial body of knowledge demonstrates benefits of IPE initiatives for health program students and the importance of developing collaborative skills to address issues of heath equity (Dyess, et al; Morley & Cashell, 2017). Research has also demonstrated that students, particularly those in underserved regions that participate in international educational experiences have improved academic outcomes (Bell, Bhatt, Rubin, & Shiflet, 2019). The 3-credit pilot included lectures, group discussions, written assignments, and a final presentation. Several urban and rural healthcare facility tours enriched the twelve-day cultural immersion experience. Pre and post pilot surveys were administered to assess familiarity with the concepts of IPE, Global Health, and Global Health Research. Importance items asked about the significance of international educational experiences and if the experience contributed to student professional development.

Results/Outcomes: Pre and post pilot data were gathered from 12 seminar participants. Participant average age was 28.5 years and 75% of participants had previous international travel experience. For the familiarity items, participants reported significant increases from pre to post test with large effect sizes. For the importance items, participants reported significant increases from pre to post test on one item. The increase on the second importance item approached significance, and both had medium effect sizes.

Conclusions: Findings demonstrate that exposure to IPE and global health can positively impact student interest and future engagement in IPE and global health. Research limitations include a small sample size. Implications for practice include offering more IPE opportunities and health related study abroad opportunities. Faculty led programs with university support can drive significant benefits.

References:

1. Bell, A., Bhatt, R., Rubin, R., & Shiflet, C. (2019). Assessing the Impact of Education Abroad through a National Consortium. Atlanta: The University of Georgia System Consortium for Analysis of Student Success through International Education

2. Dyess, A. L., Brown, J. S., Brown, N. D., Flautt, K. M., & Barnes, L. J. (2019, 10 23). Impact of interprofessional education on students of the health professions: a systematic review. Journal of Educational Evaluation for Health Professions, 33.

3. Morley, L., & Cashell, A. (2017). Benefits of Collaboration in Healthcare. Journal of Medical Imaging and Radiation Sciences, 207-216. doi:https://doi.org/10.1016/j.jmir.2017.02.071

31. Texas Two-Step: The Hybrid Clerkship Curriculum

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NOTE: content displayed adapted from alternative submission format

Background: In the context of COVID-19, medical education has transitioned to a hybrid model of both in-person and virtual activities (1-5). Institutions have created a variety of hybrid curricula, leading to calls for standards of educational practice (6) This presentations addresses current hybrid curricular practices at regional medical school psychiatry clerkships.

Objectives: gain awareness of current institutional practices across the country, with consideration of stakeholders, pros, cons, and lessons learned (e.g. barriers to implementation and possible solutions); update understanding of evidence-based results of hybrid learning models as reported in educational literature; compare results in the literature to ongoing curricular practices, including their institution's clerkship

References:

1. Bashir A, Bashir S, Rana K, Lambert P and Vernallis A (2021) Post-COVID-19 Adaptations; the Shifts Towards Online Learning, Hybrid Course Delivery and the Implications for Biosciences Courses in the Higher Education Setting. Front. Educ. 6:711619. doi: 10.3389/feduc.2021.711619
2. Guo MZ, Allen J, Sakumoto M, Pahwa A, Santhosh L. Reimagining Undergraduate Medical Education in a Post-COVID-19 Landscape. J Gen Intern Med. 2022 Jul;37(9):2297-2301. doi: 10.1007/s11606-022-07503-7. Epub 2022 Jun 16. PMID: 35710661; PMCID: PMC9202962.
3. Haldar SK, Lloyd G, Ng GA, Ray SG, Dobson R, Cartwright C, Hargreaves C, O'Flynn R, Greenwood JP. The Changing Face of Medical Education in the aftermath of COVID-19: The True Digital Era Begins. J Eur CME. 2022 Feb 6;11(1):2035949. doi: 10.1080/21614083.2022.2035949. PMID: 35145764; PMCID: PMC8823680.
4. Kanekar, A., Snyder, J. and Prince, B. (2023), ""Best Practices in Online and Hybrid Teaching and Learning in Health Education/Promotion – Current and Post-COVID"", Sengupta, E. (Ed.) Pandemic Pedagogy: Preparedness in Uncertain Times (Innovations in Higher Education Teaching and Learning, Vol. 49), Emerald Publishing Limited, Bingley, pp. 163-177. https://doi.org/10.1108/S2055-364120230000049010
5. Penna, S.; Popli, S.; Surender, V. "Engaging Hybrid Clerkship Experience." Journal of General Internal Medicine ; 37:S622, 2022. Article Dans Anglais | EMBASE | ID: covidwho-1995777
6. International Federation of Medical Student Associations. "IFMSA Policy Proposal Post-Pandemic Recovery of Medical Education." March 2022. GS_MM2022_[POLICY]_[Post-Pandemic Recovery of Medical Education].docx (ifmsa.org)

32. Professionalism Remediation for Health Professions Learners

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Introduction: Professionalism is an essential construct across all levels of health professions education. In medical education, it is one of the competency domains required by the Accreditation Council for Graduate Medical Education (ACGME), and it is emphasized in the undergraduate medical education curriculum in instructional and assessment activities. Professionalism lapses among learners have been correlated with potential future behavior that may lead to disciplinary actions by healthcare professional licensure agencies. Remediation of professionalism focuses on facilitating learner reflection and planning utilizing a growth mindset perspective. We describe a remediation course designed to help health professions students identity strategies to address professionalism concerns. The purpose of this presentation is to help participants reflect upon the effectiveness of a professionalism remediation course on health professions learners.

Methods/Project Description: We utilized the six-step curriculum development model to design and implement a four-week professionalism remediation course. The course aims to help students reflect on professionalism in medicine and identify professional development needs. The course combines one-on-one discussion meetings and, when needed, targeted practical experiences to address both general considerations of professionalism in health professions and specific learner needs. Students use the activities of the course and personal insight to prepare a professionalism development plan and write a reflection paper on specific professionalism issues.

Results/Outcomes: Students have provided meaningful comments about their learning. Course activities have helped students expand understanding of professionalism and design strategies for current and future behavior. Depth of insight and application varied according to professionalism concern and learner developmental level.

Conclusions: Although a remediation course, the class focuses on guiding the student to reflect, discover, and approach behavioral adjustments with a growth mindset to guide their professional development.

References:

1. Sattar K, Akram A, Ahmad T, Bashir U. Professionalism development of undergraduate medical students; effect of time and transition. Medicine 2021;100:9(e23580).

2. Ramani S, McMahon GT, Armstrong EG. Continuing professional development to foster behaviour change: From principles to practice in health professions education. Med Teach. 2019;41(9):1045-1052. DOI: 10.1080/0142159X.2019.1615608.

3. Spandorfer J, Pohl CA, Rattner SL, Nasca TJ (eds). Professionalism in medicine: A case-based guide for medical students. New York: Cambridge University Press, 2010.

4. Cruess Rl, Cruess SR, Steinert Y (eds.). Teaching medical professionalism: Supporting the development of a professional identity, 2nd ed. Cambridge, UK: Cambridge University Press, 2016.

5. ABIM Foundation, ACP–ASIM Foundation, and European Federation of Internal Medicine. Medical professionalism in the new millennium: A physician charter. Annals on Int Med. 2002;136(2):243-246.

6. Papadakis MA, Hodgson CS, Teherani A, Kohatsu ND. Unprofessional behavior in medical school is associated with subsequent disciplinary action by a state medical board. Acad Med. 2004;79:244-249.

7. Thomas et al., eds. Curriculum development for medical education: A six-step approach, 3rd ed. Baltimore: Johns Hopkins University Press, 2016.

8. The Program Director Guide to the Common Program Requirements (Residency). ACGME, 2021. https://www.acgme.org/globalassets/pdfs/program-director-guide---residency.pdf. Accessed May 6, 2022.

33. Incorporating Nutritional Counseling as Part of Nonsurgical Periodontal Therapy

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NOTE: content displayed adapted from alternative submission format

Overview: A patient's dietary intake plays a role in periodontal health. Good nutrition facilitates tissue repair and wound healing, improves resistance to infection, reduces the number and severity of complications, and results in a shorter recovery. Educators are to encouraged to incorporate nutritional counseling as part of a complete periodontal treatment. Participants will learn about the effect of critical nutrients affecting the periodontium and the steps of nutritional counseling.

References:

1. K. Lee; J. Kim Dairy Food Consumption is Inversely Associated with the Prevalence of Periodontal Disease in Korean Adults., 2019, 11, 1035. DOI: https://doi-org.uthdentistry.idm.oclc.org/10.3390/nu11051035 ;
2. Li, Y., Wang, J., Cai, Y., & Chen, H. (2023). Association of Serum Vitamin D With Periodontal Disease. International Dental Journal. https://doi.org/10.1016/j.identj.2023.06.004 ;
3. D.W. Dodington; H.E. Young; J.R. Beaudette; P.C. Fritz; W.E. Ward Improved Healing after Non-Surgical Periodontal Therapy Is Associated with Higher Protein Intake in Patients Who Are Non-Smokers., 2021, 13, 3722. DOI: https://doi-org.uthdentistry.idm.oclc.org/10.3390/nu13113722. ;
4. Li, Y., Wang, J., Cai, Y., & Chen, H. (2023). Association of Serum Vitamin D With Periodontal Disease. International Dental Journal. https://doi.org/10.1016/j.identj.2023.06.004; Waddington, R., Moseley, R., & Embery, G. (2000). Periodontal Disease Mechanisms: Reactive oxygen species: a potential role in the pathogenesis of periodontal diseases. Oral Diseases, 6(3), 138–151. https://doi.org/10.1111/j.1601-0825.2000.tb00325.x ;
5. Hirschfeld, J., White, P. C., Milward, M. R., Cooper, P. R., & Chapple, I. L. C. (2017). Modulation of Neutrophil Extracellular Trap and Reactive Oxygen Species Release by Periodontal Bacteria. Infection and immunity, 85(12), e00297-17. https://doi.org/10.1128/IAI.00297-17 ;

34. Enhancing Cultural Competence in Healthcare Education: Addressing the Impact of Folk Illnesses

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Introduction: In an increasingly globalized world, the intersection of culture, religion, and bioethics has significant implications for healthcare education. This research explores the often-overlooked influence of folk illnesses, deeply rooted in cultural beliefs and practices, on Western medicine. Recognizing the challenges these conditions pose, particularly in clinical settings, is essential for healthcare providers and educators. We aim to examine the impact of folk illnesses on patient care and assess the need for their integration into medical education curricula.

Methods/Project Description: Our research involved a scoping review to gauge the extent of existing knowledge regarding folk illnesses and their effects on healthcare practices, as well as any recommendations for practice. We followed a bioethics scoping review method, identifying a question, identifying relevant articles (through a multi-stage evaluation process between members) and charting data, before collating and summarizing for analysis.

Results/Outcomes: We found 221 articles that were reduced to 123 articles through a multi-stage evaluation. We organized information by folk illness definition and type, symptom presentations, and management strategies or recommendations. We found that the literature describes some specific folk illness as well as variation in how some illness defined biomedically may present across cultures or ethnicities.

Conclusions: This research underscores the need to integrate cultural humility and folk illness awareness into healthcare education. Our results emphasize that recognizing the impact of folk illnesses is essential for fostering inclusive, effective, and ethical patient care in our diverse, multicultural world. By addressing the interplay between folk illnesses, culture, and bioethics, our study contributes to the broader conversation on promoting diversity, inclusivity, and ethical excellence in healthcare practices with the goal of improving care for patients from all backgrounds.

35. Simulators to Improve Confidence in Performing Joint Injections

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Introduction: Joint injections are effective in treating various musculoskeletal problems. Trainees need a safe environment to gain confidence in performing these procedures. We hypothesized that a short, concise curriculum using high-fidelity joint simulators could help busy trainees develop necessary confidence. We expanded on previously described injection workshops, by adding knee arthrocentesis (KA).

Methods/Project Description: This curriculum on shoulder joint (SJ) injection, subacromial bursa (SAB) injection, and KA is intended for fellows, internal/family medicine residents, and clinical year medical students. Curriculum elements are: (a) Pre-workshop instructional material: provided to each trainee prior to the course containing information on materials used, indications/contraindications, complications, anatomical landmarks, and general approaches. (b) 60-minute face-to-face workshop: 6-8 trainees use high-fidelity joint simulators that provide immediate feedback from Green LED lights, and aspiration of fluid with correct needle placement. (c) Pre- and post-workshop surveys to assess confidence for performing each joint procedure, using 5-point Likert scales.

Results/Outcomes: From Feb 2021 to Oct 2022, 32 trainees completed the curriculum: 7(22%) fellows, 19(59%) residents, 6(19%) students. Survey completion rates were 100%, 95%, 100% pre-workshop, and 71%, 84%, 100% post-workshop. Mean (SD) pre-workshop confidence scores for SJ, SAB and KA were 1.4(0.8), 1.4(0.8) and 1.6(1.0) respectively. Scores improved significantly from pre- to post-workshop for all three injection types: 3.9(0.8), 3.9(0.8) and 4.1(0.7). Pre-workshop confidence scores for each joint were higher for fellows, however, this between-groups difference decreased post-workshop.

Conclusions: With a concise, easy-to-implement high-fidelity simulator course, we were able to show improved confidence of trainees for performing these procedures. We expanded on previous published curriculum with focus on additional procedures, adding pre-workshop instruction, shortening time, and focusing on confidence as an outcome. Further course implementation is needed to achieve a larger sample size to check validity of these early results. Also, assessing confidence of course graduates once they are in clinical practice might help determine sustainability of effects.

References:

1. Seifert MK, et al. Improving internal medicine resident comfort with shoulder and knee joint injections using an injection workshop. MedEdPORTAL.2020;16:10979.

36.Training Future Clinical Educators to be Effective Mentors

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Introduction: Effective mentorship is pivotal in academic medical institutions for first-time faculty physicians for them to attain their professional goals of balancing clinical, administrative, and teaching roles, while nurturing research initiatives. Besides being mentored by established faculty colleagues, these individuals will also find themselves in the role of a 'mentor' to trainees. This can be a daunting prospect, particularly if they have just completed a residency/fellowship program prior to their first faculty appointment and have not had any training or experience of being a mentor. Objective of this pilot study aims to assess a novel approach to equip clinical fellows with mentorship skills, fostering their ability to become future effective and confident mentors.

Methods/Project Description: Neonatal and pediatric-subspecialty fellows received a one-hour comprehensive lecture designed to achieve four key objectives: a) understand the elements of mentoring; b) describe the characteristics of a good fellow mentor; c) appreciate the importance of effective communication, and d) recognize and resolve challenges of mentoring. Since August 2020, 1 virtual and 5 in-person lectures have been given to different cohorts of fellows. To gauge the lectures impact, anonymous pre-and post-lecture surveys asked fellows to rate their suitability and willingness to be a mentor, and the importance of a good relationship, frequent communication, discussing goals and expectations, and constructive feedback with a trainee (medical student or resident) utilizing 5-point Likert scales. Responses were analyzed by the Wilcoxon signed rank test using R software. A p-value of < 0.05 was considered statistically significant.

Results/Outcomes: The pre-lecture survey collected responses from 39 fellows, while the post-lecture survey was completed by 18 fellows. An analysis of pre- and post-lecture responses revealed a statistically significant increase ($p < 0.016$) in fellows' self-assessment of their suitability for mentoring a trainee after the lecture. There was no difference in any of the other survey questions which indicates that fellows are willing to be mentors and do appreciate the importance of good relationship, frequent communication, discussing goals and expectations, and constructive feedback with a trainee.

Conclusions: By introducing a comprehensive lecture that teaches fellows the strategies to become effective mentors may complement their professional development as first-time faculty.

37. Implementation and Perceptions of a "Digital Hand Story" in an Occupational Therapy Gross Anatomy Course

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Introduction: Digital stories are multimedia presentations that combine a variety of digital elements within a narrative structure. Creating digital stories provides students with an opportunity to be creative, develop their individual voice, and build their empathy and communication skills. To further engage students in and promote a deep appreciation for the anatomy of the hands and their profound impact on one's life, a Digital Hand Story activity was created and implemented in an Occupational Therapy Gross Anatomy course at UT Health San Antonio.

Methods/Project Description: 52 occupational therapy students were assigned to create two "Digital Hand Stories" as a mechanism to emphasize the totality and significance of the hands beyond the collection of anatomical structures: one as a reflection capturing the role of their hands in their personal life and another of a community members' hands. The Digital Hand Story exercise was flexible; students could utilize any technology or software to create a short 2–3-minute clip. Students were provided a grading rubric and assessed on the script, audio, pacing of the narrative, quality of images, motions, transitions, and the overall effect. Upon completion of the course, 37 out of 52 students completed a voluntary survey on their perceptions of the assignment.

Results/Outcomes: Results from the course evaluation show that 78.4% of occupational therapy students "Strongly Agreed" or "Agreed" that the Digital Hand Story was a valuable course activity. 89.2%, 86.5%, and 83.4% of students "Strongly Agreed" or "Agreed" that the Digital Hand Story gave them a greater appreciation for the role of hands in their Personal, Professional, and Future Patient lives', respectively. Qualitative student feedback stated that students enjoyed being creative and getting to express themselves. They also learned to see each patient as a person and recognize their uniqueness. Lastly, they felt the greatest challenges were being vulnerable and portraying others' stories in a respectful manner.

Conclusions: Student-provided feedback of the activity was generally very positive. Student submissions of the Digital Hand Story demonstrated thoughtful and heartfelt literal and metaphorical pieces that symbolize the vast responsibilities and rewards that our hands provide to ourselves and others.

38. Student Perceptions of a Digital Anatomical Sciences Atlas of Plastinated Specimens as a Supplemental Learning Resource

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Introduction: At the UTHealth School of Dentistry, plastinated anatomical specimens are used to teach anatomy to D1 students [1-2]. These specimens provide a detailed view of anatomical structures without the process of student dissection [3-5]. However, some challenges include the difficulty for students to fully engage in the learning activity and the lack of learning resources specific to plastinated anatomical specimens. A digital atlas of plastinated specimens was created to serve as an additional resource for students to engage with the content of learning anatomy outside of the classroom. This purpose of this study is to access students' perspectives regarding the usefulness of this digital resource to supplement their anatomy studies.

Methods/Project Description: The study population consisted of D1 students (N=105) enrolled in the Spring 2023 Head and Neck anatomy course. Students were administered a pre-test, access to the digital anatomical atlas, a post-test, and a perception survey. Descriptive statistics and Fisher's exact test were used to analyze students' responses.

Results/Outcomes: Fifty-three dental students participated giving an overall 50% response rate. The mean scores of the pre- and post-tests were 73 and 95 respectively ($p \leq 0.05$). Results from the perceptions survey indicated that students strongly agreed that the digital atlas was engaging, user friendly, and gave them confidence in identifying structures in the laboratory. The analytics of how frequent students utilized the digital atlas showed that students' perception of the atlas influenced their usage.

Conclusions: Overall, D1 students found that the digital atlas was very helpful in their anatomy studies. The students conveyed that this resource was well- organized, informative, easy to maneuver and great for recall. Students also liked the practice questions provided in the atlas which helps them gauge their understanding. The digital atlas also increased students' confidence in the laboratory in terms of being able to identify anatomical structures.

References:

1. Nguyen VH, Pham PT, Joo K, Jeter CB. Dental Students' and Residents' Opinions and Performance of Anatomy Learning via Cadavers or Plastinated Specimens. J. of Plastination. 2019. 31(1): 6-13

2. Nguyen VH, Spears RD, Warner RL, Joy-Thomas AR. Transitioning the anatomy curriculum to an online platform: Lessons learned. J Dent Educ. 2020 Aug 21. doi: 10.1002/jdd.12394. Epub ahead of print. PMID: 32822511.

3. Riederer BM. Plastination and its importance in teaching anatomy. Critical points for long-term preservation of human tissue. J Anat. 2014 Mar;224(3):309-15. doi: 10.1111/joa.12056. Epub 2013 Apr 29. PMID: 23621482; PMCID: PMC3931543.

4. Chytas D, Piagkou M, Johnson EO, Tsakotos G, Mazarakis A, Babis GC, Nikolaou VS, Kaseta MK, Natsis K. Outcomes of the use of plastination in anatomy education: current evidence. Surg Radiol Anat. 2019 Oct;41(10):1181-1186. doi: 10.1007/s00276-019-02270-3. Epub 2019 Jun 15. PMID: 31203398.

5. Klaus RM, Royer DF, Stabio ME. Use and perceptions of plastination among medical anatomy educators in the United States. Clin Anat. 2018 Mar;31(2):282-292. doi: 10.1002/ca.23025. Epub 2017 Dec 27. PMID: 29178370.

39. Assessing DEI Efforts and Initiatives on Texas Residency Websites Prior to SB-17 Enactment

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Introduction: The purpose of this cross-sectional study is to assess the current landscape of public-facing residency websites in Texas related to diversity, equity, and inclusion (DEI) content, and to compare DEI content on websites of specialties with historically low diversity compared to more diverse specialties.

The 2023 National Resident Matching Program Applicant Survey revealed 45% of applicants viewed an institution's diversity as a factor when selecting a program. In light of Texas Senate Bill 17, which regulates institutions' DEI efforts, becoming effective January 1st, 2024, we aim to assess the status of DEI-relevant information on residency websites before enactment.

Methods/Project Description: A cross-sectional study was conducted to evaluate presence or absence of 11 DEI criteria on residency websites across the 5 most diverse and 5 least diverse specialties. All residency program-specific websites in Texas in those specialties were included except for military programs and those who did not have at least 8 of 10 of the specialties of interest. Two authors independently extracted data.

Results/Outcomes: The overall range of compliance for the 76 evaluated websites was 19.78% (range 0-90% across specialties). From least to highest in average compliance was Orthopedics (15.14%, 0-36%), Physical Medicine and Rehabilitation (18.18%, 0-70%), Dermatology (19.82%, 0-54.4%), Radiology (20.80%, 0-60%), Otolaryngology (20.82%, 0-45.45%), Plastic Surgery (22.91%, 0-22.22%), Vascular Surgery (23.72%, 0-40%), Psychiatry (26.48%, 0-90%), Family Medicine (29.43%, 9.09-72.73%), and Obstetrics and Gynecology (30.03%, 0-90%). Amongst reviewed institutions, the range of overall compliance was 3.14% to 41.89%.

Conclusions: Our study found that a majority of residency websites contained limited information on many of the DEI factors we evaluated. There was significant variance in presence of DEI criteria across programs and specialties. Key limitations are that program websites may not reflect all ongoing DEI initiatives, and a lack of DEI efforts on public display may not correlate with program priorities.

References:

1. Wei C, Bernstein SA, Gu A, et al. Evaluating Diversity and Inclusion Content on Graduate Medical Education Websites. J Gen Intern Med. 2023;38(3):582-585. doi:10.1007/s11606-022-07973-9

2. Akhiyat S, Cardwell L, Sokumbi O. Why dermatology is the second least diverse specialty in medicine: How did we get here?. Clin Dermatol. 2020;38(3):310-315. doi:10.1016/j.clindermatol.2020.02.005

3. Schwartzman G, Qureshi A, Friedman AJ. Utilization of Instagram by dermatology residency programs in the era of COVID-19. J Am Acad Dermatol. 2021;85(1):204-206. doi:10.1016/j.jaad.2021.03.078

4. Williams JC, Valladares HC, Waul MA, Pandya AG, Mathes E, Amerson EH. 15-Year Diversity Trends Among Dermatology Resident Trainees Compared With Other Specialties. JAMA Dermatol. 2023;159(1):104-106. doi:10.1001/jamadermatol.2022.4991

5. Wyant WA, Elman SA, Nambudiri VE. Website transparency of dermatology residency programs: a cross-sectional study. Arch Dermatol Res. 2023 Apr;315(3):625-627. doi: 10.1007/s00403-022-02384-6. Epub 2022 Aug 17. PMID: 35976407; PMCID: PMC9382613.

6. Nguemeni Tiako MJ, Johnson S, Muhammad M, Osman NY, Solomon SR. Association Between Racial and Ethnic Diversity in Medical Specialties and Residency Application Rates. JAMA Netw Open. 2022 Nov 1;5(11):e2240817. doi: 10.1001/jamanetworkopen.2022.40817. PMID: 36367730; PMCID: PMC9652751.

7. Mazmudar RS, Vaccarello A, Onamusi T, Sarfo A, Sharma T, Carroll BT. Availability and content of diversity, equity, and inclusion information on dermatology residency program websites. J Am Acad Dermatol. 2023;88(4):891-893. doi:10.1016/j.jaad.2022.10.018

8. Sanchez AN, Martinez CI, Lara AM, Washington M, Escalon MX, Verduzco-Gutierrez M. Evaluation of Diversity and Inclusion Presence Among US Physical Medicine and Rehabilitation Residency Program Websites. Am J Phys Med Rehabil. 2021;100(12):1196-1201. doi:10.1097/PHM.0000000000001693

9. Driesen AMDS, Romero Arenas MA, Arora TK, et al. Do General Surgery Residency Program Websites Feature Diversity?. J Surg Educ. 2020;77(6):e110-e115. doi:10.1016/j.jsurg.2020.06.01

40. Equipping medical students with knowledge and skills for comprehensive care to patients afflicted by substance use disorder within a primary care context.

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Introduction: Report from the Center for Disease Control and Prevention projects a grim outlook in the fight against substance use disorder (SUD). To provide effective care to patients struggling with this complex and pervasive issue, medical students should be equipped with the knowledge and skills to recognize, assess, and treat SUD. We designed a two-week primary care clerkship elective for third- and fourth-year medical students to acquire skills in screening, assessing, and treating patients for SUD seen in the primary care office.

Methods/Project Description: The elective assignments consisted of direct patient care under the supervision of residents and a faculty in which students were assigned patients presenting for their routine primary care visit. Using validated screening tools to screen for Alcohol Use disorder (AUD), Opioid Use Disorder (OUD), and Tobacco Use Disorder, the faculty and residents assisted the students to identify patients who screened positive for any SUD. Students proposed a recommendation for treatment or referral based on their assessment. To assess change in student knowledge when faced with a patient with SUD, students completed a pre- and post-rotation survey composed of 8 multiple choice questions and 2 Likert scale question that evaluated their intention on pursuing further education in the future. As part of didactic and self-study, the students were required to complete the American Academy of Addiction Psychiatry Providers Clinical Support System's 8-hour student Buprenorphine training, Alcohol and Drug Use Disorders, and Changing Language to Change Care: Stigma and Substance Use Disorders. The students were asked to submit certificates of completion for the courses.

Results/Outcomes: There were significant improvements in knowledge scores in the survey after course completion. The students also showed increased intention of pursuing further SUD training as part of their continuing medical education.

Conclusions: SUD is prevalent and multifaceted, often co-occurring with other medical conditions encountered in the primary care setting. It is therefore imperative that primary care physicians be able to recognize and treat patients who suffer from SUD. Incorporating SUD education into the primary care clerkship curricula, we can ensure future primary care physicians are better prepared to meet the ongoing healthcare challenges caused by addiction.

References:

1. Muzyk, Andrew PharmD, MHPE; Smothers, Zachary P.W. MS; Akrobetu, Dennis; Ruiz Veve, Jennifer; MacEachern, Mark MLIS; Tetrault, Jeanette M. MD; Gruppen, Larry PhD. Substance Use Disorder Education in Medical Schools: A Scoping Review. Academic Medicine 94(11):p 1825-1834, November 2019.

2. O'Donnell J, Tanz LJ, Gladden RM, Davis NL, Bitting J. Trends in and Characteristics of Drug Overdose Deaths Involving Illicitly Manufactured Fentanyls - United States, 2019-2020. MMWR Morb Mortal Wkly Rep. 2021;70(50):1740-1746. Published 2021 Dec 17.

3. Muzyk A, Mantri S, Mitchell P, Velkey JM, Reisinger D, Andolsek K. Transformative Learning and Critical Consciousness: A Model for Preclerkship Medical School Substance Use Disorder Education. Acad Psychiatry. 2023;47(2):152-158.

4. Langabeer JR, Chambers KA, Cardenas-Turanzas M, Champagne-Langabeer T. County-level factors underlying opioid mortality in the United States. Subst Abus. 2022;43(1):76-82.

41. Measuring Mentorship's Magnitude: A Mechanism and Model for Metrics Management

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Introduction: Undergraduate mentorship is considered during faculty merit and promotion reviews, with paperwork including quantitative and qualitative reports of student impact. With no university-supported system, faculty must rely on memory or develop their own recordkeeping. This project describes the development and use of a novel system for measuring and reporting mentorship successes, which will be shared with participants along with example reports.

Methods/Project Description: University faculty paperwork was evaluated for reporting expectations and a list of specific data to track generated (e.g. number of publications and presentations with student co-authors). Plans were made to update existing resources and create new systems for tracking. An existing database of publications was updated to add columns for if and how many student co-authors are included. A database of all mentees was created using Google Sheets to capture for tracking success at the level of the individual mentee (e.g. date mentoring relationship began; deliverables completed). Data validation was used to promote accuracy. Databases were used to produce graphical representations and summary statistics for use in faculty review paperwork. Resulting systems will be shared with considerations for their use and adaptations.

Results/Outcomes: During my faculty career to-date, I have mentored 247 students, co-authoring at least 1 publication with 59. Of these, 13 have 2 publications, 2 have 3, and 1 has 4. In total, 30 papers include at least 1 student co-author. 78 distinct students have additionally been included in presentations, with 43 (55%) having at least 2 presentations (range = 1-10). During the 2022-2023 academic year alone, all 7 of my publications and 9 of my 13 presentations included at least 1 student co-author.

Conclusions: This system will be used for the creator's own future merit, promotion paperwork and award applications, and can be adapted for use by other faculty. Future directions include expansion of data collection and analysis including graphing progress over time, breakdowns for manuscript type (e.g. systematic review; data-based) or presentation format (e.g. poster; podium). This work has the potential to save time in completing university paperwork and award applications and may prove useful in motivating and tracking continued mentorship efforts.

42. Mentors in Medicine II: Implementation of a Medical Pathway Program for Bexar County High School and College Students

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Introduction: It is well recognized that a diverse workforce of health care providers improves health outcomes and access to care among disadvantaged groups.1 However, research continues to show that minority populations are severely underrepresented in health careers.2 This study describes the implementation and evaluation of a medical pathway program at Long School of Medicine focused on supporting minority students, building interest in health professions, and helping to address future workforce disparities

Methods/Project Description: Mentors in Medicine II was started in collaboration with the Joint Medical Admissions Program. The initiative targets high school seniors and college freshmen living in Bexar County (an HPSA community) and involves a four-week curriculum consisting of lectures, hands-on activities, and clinical skills workshops. High school and college students (mentees) were recruited by the Office of Admissions and Outreach and chosen through an application process. Each selected mentee was matched to a Long School of Medicine medical student mentor. Mentors provided academic and career advice to mentees as well as support and guidance throughout the program curriculum. Pre- and post-surveys were distributed to mentees to evaluate program efficacy. Results were analyzed with a paired student's t-test and Wilcoxon rank test.

Results/Outcomes: Twenty mentees completed both pre- and post-surveys. Students' career preparedness, ability to locate career resources, ability to find mentors, and understanding of different health professions all increased significantly. The ability to find mentors showed the largest improvement among significant results, with a mean score difference of 2.9 (95% CI [1.93 - 3.87]) on a 1-10 scale. A majority of student mentees (55%) chose the Wilderness Medicine Stretcher Building Demonstration or Suture Activity as their favorite event.

Conclusions: A structured, four-week medical pathway mentorship program can significantly improve several metrics of career support and understanding among participating student mentees.

References:

1. Mitchell, D. A., & Lassiter, S. L. (2006). Addressing health care disparities and increasing workforce diversity: the next step for the dental, medical, and public health professions. American Journal of Public Health, 96(12), 2093-2097.

2. Salsberg, E., Richwine, C., Westergaard, S., Martinez, M. P., Oyeyemi, T., Vichare, A., & Chen, C. P. (2021). Estimation and comparison of current and future racial/ethnic representation in the US health care workforce. JAMA network open, 4(3), e213789-e213789.

43. Words Matter: Examination of language use in a case of pediatric obesity

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Introduction: Language used by medical professionals has the power to positively or negatively affect their patients. Failure to recognize this power can have a profound impact on patient health by potentially obstructing care, fostering mistrust, and disseminating bias. Using an objective structured clinical examination focused on a pediatric patient with an obesity diagnosis, we examined the use of stigmatizing and non-stigmatizing language to determine the educational needs of physicians in patient communication.

Methods/Project Description: Sixty-five pediatric interns completed an Objective Structured Clinical Examination (OSCE) and patient note with a standardized mother whose daughter was evaluated for an elevated BMI and primary concern of bullying. Encounter videos and patient notes were analyzed for positive (empathetic) and negative (stigmatizing) language. Terms were identified using the mindful language toolkit from Stanford University School of Medicine Words Matter workshop as well as in-depth PubMed related searches. Stigmatizing words included "obese" and "large" with non-stigmatizing terms being "BMI" and "weight". Positive approaches to patient care were documented if providers were approving, personalizing the patient, or promoting bilateral decision making. Encounters were further categorized as either: 1. Therapeutic, where the resident focused on the patient's mental health and school bullying; 2. Medical, where the focus was the patient's physical health and weight; or 3. Mixed Therapeutic/Emotional.

Results/Outcomes: All residents utilized positive phrasing in both written and oral communication. Forty-six residents (70.76%) utilized negative verbal phrasing while fifty residents (84%) utilized negative written phrasing. Common negative terms included "obese" and "overweight". Common positive terms included "weight" and "BMI". The most common positive approaches to patient care were bilateral decision making, and patient personalization. More than half of the residents (45) utilized a Therapeutic approach during the encounter.

Conclusions: While positive phrasing had a high occurrence, negative language use carried a high prevalence as well. This illustrates a need in patient care and physician education that may not be limited to our residency program, but programs nationally. We hope to bring awareness to this problem as physician's words hold the power to affect children's health, development, provider relationship and outlook on the healthcare system.

References:

1. Raney J, Pal R, Lee T, et al. Words matter: an antibias workshop for health care professionals to reduce stigmatizing language. MedEdPORTAL. 2021;17:11115. https://doi.org/10.15766/mep_2374-8265.11115

44. Practical Use of AI To Enhance Medical School Lecture Audio

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Introduction: Medical school lectures have increasingly become digitally recorded, accelerated by the effects of COVID-19. While the production level of these lectures has undoubtedly improved on average across institutions as faculty and administrators have collectively adapted, the audio quality of lectures remains a difficult issue to address for several reasons. Faculty lecturers are not always provided with dedicated microphones and often use what is available- such as a laptop or cell phone. Lecturers often elect to record from wherever is most convenient for them, such as their home or office, even though these environments may be less than ideal for audio quality. Lectures are often recorded using virtual meeting software such as Zoom or Microsoft Teams, which often have poor encoding quality. Additionally, many lectures are recorded from in-person sessions where the audio is optimized for the in-room audience- not for digital recording. Previously, the only reliable way to address this issue, short of hiring an audio professional, was to provide quality recording devices and environments, which is costly and may add extra burden on lecturers. Recently, multiple AI softwares have become available that can substantially improve audio quality without high cost or technical expertise.

Methods/Project Description: This project tested a widely available AI audio enhancement software (Adobe Podcast) to assess the viability of improving medical school lectures. Audio from real lectures was obtained from various recording environments, including home, office, and auditorium, as well as various recording tools (laptop, desktop, lapel microphones) and enhanced using this software. The process required approximately 20 minutes to enhance an hour of lecture audio and does not require any notable technical expertise.

Results/Outcomes: Overall, the adjusted recordings increased the clarity of articulated words, removed background noise, and enhanced the volume levels to be more regular throughout the lectures.

Conclusions: This process is highly viable in its current state and can be applied to any existing lecture recordings to increase the audio quality in a substantial way. While this process requires time and a monetary subscription, these requirements are relatively low compared to purchasing additional audio equipment and thus should be further evaluated for feasibility by medical school institutions. Institutions should include questions regarding lecture audio quality to further assess this issue amongst their learners to determine if it may enhance student engagement with recorded materials.

45. Building Empathy: Implementing Community Engagement in a Complex Care Medical Education Rotation

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Introduction: It is widely recognized that physicians face challenges when it comes to effectively caring for individuals with disabilities. There exists a knowledge gap regarding the needs of differently abled individuals primarily due to societal and medical unawareness of the experiences they face. (1) Community-driven experiences are known to reinforce physicians' sense of purpose and provide more insight to the social realities of their patients. (2) To examine this assertion, students in the UTMB Pediatric Complex Care Acting Internship (AI) gained the opportunity to engage in community experiences with an organization that serves differently abled individuals.

Methods/Project Description: Students enrolled in the complex care AI engage in a robust 4-week internship focusing on caring for patients with a variety of special health care needs. Weekly, AI students go to the Sunshine Center, a local establishment for people with varying levels of abilities to refine communication and life skills once they have aged out of attending public school services. During the internship experience, participants engage in a variety of activities with their buddy, such as ceramics, gardening, arts/crafts, cooking, and board games. They also travel with the staff and their buddy on field trips to a local community attraction, where they assist the staff to reinforce the joy and safety of clients on the field trip.

Results/Outcomes: On the concluding day of the AI, we collect formal written feedback from the students to gain insights into their experience and identify areas of enhancement. In our preliminary surveys, two students provided valuable input and expressed that they found the experience rewarding. They provided initial feedback on how to better outline the tasks/goals of each day at the Sunshine Center. As we progress through the academic year, we plan to continue to collect feedback, and make refinements to continually enrich the experience for future participants.

Conclusions: The community engagement portion of this AI is adaptable and can be implemented/integrated at any institution within a community where established organizations work with individuals with disabilities. This framework can bring a unique dimension to medical education, while fostering empathy and enriching the learning experience for both students and the community.

References:

1. Lagu, T., Haywood, C., Reimold, K., Dejong, C., Sterling, R. W., & Iezzoni, L. I. (2022). 'I Am Not The Doctor For You': Physicians' Attitudes About Caring For People With Disabilities. Health Affairs, 41(10), 1387–1395. https://doi.org/10.1377/hlthaff.2022.00475

2. C, C., G, A., & NS, C. (2016). Enhancing Community Health by Improving Physician Participation. Journal of Community Medicine & Health Education, 06(05). https://doi.org/10.4172/2161-0711.1000470

46. Perceptions of Faculty and Standardized Patients in the Use of the Interprofessional Collaborator Assessment Rubric (ICAR) in an intra-professional clinical simulation in the School of Nursing

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Introduction: Collaboration and teamwork are identified as core competencies for nurses of all educational backgrounds by Quality Safety and Education for Nurses (QSEN) and the American Association of Colleges of Nursing (AACN). There is paucity of research in the use of evaluation tools of intra-professional simulation experiences between nursing professionals with different educational backgrounds. "Objectives: The objectives of the project were: 1) to implement a training program for standardized patients (SPs) and faculty members at the Cizik School of Nursing in the use of the Interprofessional Collaborator Assessment Rubric (ICAR) tool in an intra-professional clinical simulation; 2) analyze SP and faculty perceptions of the training sessions and the ICAR. We received a Shine Academy Health Science Education Grant for this project.

Methods/Project Description: The research team modified the scripts of the existing 3 scenarios of the intra-professional simulation to incorporate errors and developed scripts. We recorded the scenarios as short vignettes depicting good and bad practices, created training manuals, and scheduled training sessions. Twelve SPs, and 12 faculty who have previously participated in this simulation attended the training sessions. Training included an orientation to the tool, and training manual which included definitions and simplified explanations of the terminology used in the ICAR. The participants were then shown the vignettes and evaluate each actor in the vignettes using the ICAR tool. Focus groups for the SPs and faculty were conducted to gather the SP and faculty perceptions of the training sessions and the ICAR tool.

Results/Outcomes: Faculty and SPs expressed satisfaction with the training process, and provided feedback regarding the tool. The common themes regarding the tool were ambiguity in terminology, lack of ease of use, redundancy, and length of the tool which made it very cumbersome to use in this simulation. Suggestions for improvement in utilization of the tool included simplifying the tool for use.

Conclusions: A training program for SPs and faculty was successfully implemented in the use of the ICAR tool. Perceptions of participants helped in understanding the utility of the tool for the simulation.

References:

1. American Association of Colleges of Nurses (AACN) (2021). The Essentials: Core Competencies for Professional Nursing Education. www.aacnnursing.org/Essentials.

2. Curran, V., Hollett, A., Casimiro, L. M., Mccarthy, P., Banfield, V., Hall, P., Lackie, K., Oandasan,I., Simmons, B., & Wagner, S. (2011). Development and validation of the interprofessional collaborator assessment rubric (ICAR). Journal of interprofessional care, 25(5), 339–344. https://doi.org/10.3109/13561820.2011.589542

3. Registered Nurses' Association of Ontario (RNAO) (2016). Intra-professional Collaborative Practice among Nurses, Second Edition. Toronto, Ontario: Registered Nurses' Association of Ontario.

4. Shrader, S., Farland, M. Z., Danielson, J., Sicat, B., & Umland, E. M. (2017). A Systematic Review of Assessment Tools Measuring Interprofessional Education Outcomes Relevant to Pharmacy Education. American journal of pharmaceutical education, 81(6), 119. https://doi.org/10.5688/ajpe816119

47. Transitioning from Classroom to Practice: A Para-Clinical Interprofessional Education Pilot

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Introduction: While critical to improving learning and health outcomes, large-scale clinical interprofessional education (IPE) within authentic clinical learning environments (CLEs) remains challenging. As a bridge to transition from preclinical to clinical IPE, our team designed and piloted a self-guided, para-clinical IPE experience that will allow interprofessional student groups to apply IPEC-derived teamwork concepts to their individual experiences within CLEs. Results from this para-clinical IPE pilot, completed in summer 2023, are informing implementation to over 900 students in academic year 2023-2024.

Methods/Project Description: Our interprofessional team designed a para-clinical IPE experience consisting of two synchronous online modules addressing patient safety, learner shame, and domains of the CLE. Modules were designed to be completed sequentially by interprofessional groups of 3-4 students during the clinical phase of each student's professional program. Groups first met to work through a simulated root cause analysis, examine patient safety and learner shame through an illustrated case study, and explore the Institute for Healthcare Improvement (IHI) Clinical Microsystem Assessment tool. After individually applying the IHI tool to their own CLEs, groups met again to share observations, debrief experiences, and explore faculty perspectives.

Results/Outcomes: We piloted our para-clinical IPE experience with 38 students representing 12 health professions. Twenty-eight of 38 students completed all post-module surveys yielding a 73.6% response rate. Pilot evaluation consisted of post-module and overall experience feedback including a 27-item survey using a 5-point Likert scale with several open-ended questions. Mean scores ranged from 4.11 to 4.67. Students reported that the experience was beneficial to their professional development (4.54, SD 0.68), prepared them for future clinical activities (4.50, SD 0.73), and strengthened their appreciation for the importance of individual and team performance (4.43, SD 0.82) and diverse points of view (4.50, SD 0.78). Written comments highlighted opportunities to strengthen logistical and technological aspects of the experience.

Conclusions: Our pilot demonstrated the feasibility of implementing a self-guided, para-clinical IPE experience at a large academic health center. Temporally situating clinical IPE-relevant activities within students' individual CLEs to help them prepare for interprofessional clinical teamwork holds promise as a critical step to support students' transitions from classroom- to practice-based IPE.

48. Enhancing Psychiatric Medical School Curriculum with Real-World Mental Health Clinical Experience in Austin

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Introduction: In this elective, medical students work with mental health professionals at the local community center for mental health crises to observe and participate in community psychiatry work over four weeks. Patients seen at this center have various mental health needs that are further complicated by socioeconomic factors, which students have the opportunity to learn from.

Methods/Project Description: Students spend two days a week working with psychiatrists at the crisis center, helping assess patients and develop treatment plans. They spend another two days per week working at community mental health clinics in Austin, including a center for bipolar disorder treatment and an intensive outpatient clinic.

Results/Outcomes: Feedback on this elective includes students feeling like they come out better equipped to understand their patients and the system within which they are receiving treatment. They report having greater knowledge of barriers to care and health disparities in the community and a greater degree of empathy toward their patients.

Conclusions: This course on public mental health is essential to the formative education of future physicians, and other institutions would benefit from incorporating a similar course in their curriculum. Future iterations of this course will evaluate quantitative data that assesses health equity knowledge/experience and empathy through pre and post-course surveys.

49. The Art of Nursing Used to Enhance Therapeutic Communication

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Introduction: Nursing is commonly referred to as an art and a science (Peplau, 1988). Nursing science is rooted in scientific discovery focused on evidence-based practice and interventions. Over time, nursing students grow to understand the scientific basis of the profession. However, viewing the profession as an art form may be challenging. The art of nursing is primarily concerned with how the nurse builds patient/family connections, shows compassion, and utilizes therapeutic communication. An innovative, art-based activity was created to help students improve therapeutic communication skills and learn how to incorporate art into their nursing practice.

Methods/Project Description: Students enrolled in a mental health nursing course (N= 26) participated in the art-based activity. The activity consisted of a two-hour guided tour at the Blanton Museum of Art. Students were asked to analyze paintings and sculptures and discuss how each piece related to therapeutic communication and the healthcare environment. Prompts were given to students to elicit specific responses. For example: a) What do you notice about this artwork? b) How does this artwork relate to nursing/patient care? c) What do you think the artist is trying to communicate to others? Other activities included continuous line drawing, poetry development, and the creation of an original work of art. Using a Visual Analog Scale (0 = “not confident” to 100 = “very confident”), students were asked to rate their confidence in using therapeutic communication techniques before and after participating in the activity.

Results/Outcomes: The activity helped to facilitate active learning. There was a significant improvement in students' perceived confidence in using therapeutic communication techniques following the art-based activity, $t(25) = -7.21$, $p < .001$. In addition, students were able to discover ways to incorporate art into their nursing practice. Students stated, “Art helps me understand and pay closer attention to facial expressions and body language.” “I liked hearing different perspectives that were different from my initial impressions, we cannot make assumptions about others' feelings.” “I want my patient to feel heard.”

Conclusions: Implementing art-based learning activities into coursework is helpful. Art-based activities can be used to enhance nursing practice and improve therapeutic communication.

References:

1. Peplau, H. E. (1988). The art and science of nursing: Similarities, differences, and relations. Nursing Science Quarterly, 1(1), 8-15. doi.10.1177/089431848800100105

50. RIME on a Dime: Embracing technology to capture real-time feedback in health professions education

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Innovation 2023 GRANT AWARDEE

Introduction
Optimal medical education requires learners receive frequent feedback, but numerous barriers exist. Feedback remains challenging in complex clinical learning environments where multiple tenets of effective feedback are in tension with both feasibility and high-stakes assessment. RIME, a mnemonic for Reporter, Interpreter, Manager, and Educator, allows educators and learners to develop a shared mental model of both performance and next steps for improvement.

Project Description
We designed and piloted RIME on a Dime as a web application which leverages short message service or SMS messages to start the feedback/low-stakes assessment process. SMS messages connect users to RIME on a Dime and facilitate requesting and logging feedback. Once feedback is entered, it can be reviewed via a secure website.

Outcomes
We used blended methods to inform and evaluate our pilot. First, we surveyed internal medicine (IM) residents regarding their understanding of RIME. Of residents surveyed, 69% (30/43) were familiar, very familiar, or extremely familiar with RIME. 58% (23/43) of residents surveyed reported providing feedback to medical students 0 to 1 time per week. As we developed RIME on a Dime, we engaged IM residents and IM faculty in small groups. 83% (10/12) of faculty and 69% (18/26) of residents felt it was either very important or extremely important for students to receive low-stakes feedback. 75% (9/12) of faculty would be willing to receive between 1-3 SMS messages per week. Finally, we engaged faculty and residents with our RIME on a Dime prototype. Thiry-six volunteers participated and received three SMS requests over a week's time. SMS messages were sent at 11:00am, 6:00pm and 8:30am with response rates of 42%, 28%, and 31%, respectively. 53% (19/36) of participants submitted written feedback at least once. 17% (6/36) submitted feedback in addition to RIME level once, 25% (9/36) submitted feedback twice, and 11% (4/36) submitted feedback in response to all three SMS messages.

Conclusions
Implementing secure technology to capture real-time feedback proved technically feasible, but issues with response rates are similar to other modalities. Further research will be needed to see if utilizing SMS technology overcomes these barriers with further refining and resident and faculty development.

51. Doctorate in Health Informatics Translational Project Outcomes

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Introduction: The healthcare industry needs transformational change in the education required for executive-level health informaticists who practice at the most advanced levels. The 2019 Health Information Management Systems Society (HIMSS) Leadership and Workforce Survey found that 84% of all respondents reported being in a management role, with 47% associating themselves with an ""Executive Management"" position.

DHI Organizational Project/ Translational Project Outcome

Machine Learning to Improve Clinical Diagnosis 25.9% of diagnoses were correct without suggestions; an additional 9.1% improvement were correct after consultation.

Clinical Decision Support Reducing Co-Prescribing of Opioids and/or Benzodiazepines. The overall co-prescribing rate decreased by 1.56%. Recommendations were implemented.

Telemedicine to Reduce No-Shows : One of three telemedicine clinics post-implementation has a no-show rate reduction of approximately 5%.

Methods/Project Description: In 2016, the McWilliams School of Biomedical Informatics faculty approved the development of a new degree, the professional doctorate in health informatics (DHI). The professional practice doctorate provides informatics leaders with the advanced education required to translate evidence from original research, evaluate current practices, and utilize critical thinking to accelerate the adoption of best informatics practices in clinical and healthcare organizations. The program requires a large-scale translational, practice-based project rather than a dissertation.

Results/Outcomes: Seven of the eight candidates from the initial cohort have completed projects to improve organizational outcomes. Each project demonstrates tangible aspects of foundational translational science skills defined by the National Center for Advancing Translational Sciences2. Table 1 is a sample of the organizational outcomes for three translation projects. The remaining projects will be discussed at the conference:

1. DHI Organizational Project- Machine Learning to Improve Clinical Diagnosis: Translational Project Outcome- 25.9% of diagnoses were correct without suggestions additional 9.1% improvement was correct after consultation.

2. DHI Organizational Project-Clinical Decision Support Reducing Co-Prescribing of Opioids and/or Benzodiazepines.: Translational Project Outcome- The overall co-prescribing rate decreased by 1.56%. Recommendations were implemented.

3. DHI Organizational Project- Telemedicine to Reduce No-Shows: Translational Project Outcome - One of three telemedicine clinics post-implementation has a no-show rate reduction of approximately 5%.

Conclusions: Health Informatics executives are integral to the health care team, providing the foundational technology infrastructure to support health care. The recommendation that health informatics executives practicing at the highest levels should receive doctoral-level preparation emerges from multiple factors evident by the expansion of scientific knowledge in health informatics, the increased use of technology, growing concerns regarding patient safety, and the continued need for improved patient outcomes. Therefore, the executive-level health informatics professional must be educated and prepared to manage complex organizations across the continuum of care and throughout the healthcare industry.

References:

1. HIMSS, 2019 HIMSS U.S. Leadership and Workforce Survey, HIMSS, Chicago, IL, 2019. https://www.himss.org/sites/himssorg/files/u132196/2019_HIMSS_US_LEADERSHIP_WORKFORCE_SURVEY _Final_Report.pdf (accessed March 25, 2019)

2. C. Taylor Gilliland, Julia White, Barry Gee, Rosan Kreeftmeijer-Vegter, Florence Bietrix, Anton E. Ussi, Marian Hajduch, Petr Kocis, Nobuyoshi Chiba, Ryutaro Hirasawa, Makoto Suematsu, Justin Bryans, Stuart Newman, Matthew D. Hall, and Christopher P. AustinThe Fundamental Characteristics of a Translational Scientist ACS Pharmacology & Translational Science 2019 2 (3), 213-216DOI: 10.1021/acsptsci.9b00022

52. Enhancing Dental Hygienists' Skills: A Survey Study About Specialty Training

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Introduction: Most dental hygiene programs in the United States only cover foundational subject areas that prepare dental hygienists to enter general clinical practice, with only a limited number of programs that offer specialty tracks or training opportunities. To support the needs of specialized care in a growing population, it is essential that dental hygiene students are competent and confident enough to fulfill their obligation to the public and their employers in traditional and non-traditional treatments and settings. As roles and professional requirements continue to expand in all healthcare settings to meet the unique needs of patients; it is vital for dental hygiene programs to be up to the task of preparing students for specialty tracks. This study examines the necessity and advantages of post-graduate specialty training for dental hygienists. Unfortunately, few studies address the need for specialized training and potential barriers in securing employment in specialty practices for dental hygienists.

Methods/Project Description: An electronic survey with a series of questions utilizing a five-point Likert scale was distributed to 188 registered dental hygienists in 2022. This survey consisted of fourteen questions assessing dental hygienists' confidence levels in clinical skills post-graduation and their views on the need for additional training. Comparisons between groups were analyzed using Kruskal-Wallis or ANOVA tests.

Results/Outcomes: The study achieved a 17% response rate (n=32). Findings show that 45.2% of respondents felt unprepared for specialty practice post-graduation, 71% recognized the benefits of further specialty training, and 83.4% agreed that dental hygiene programs should provide such training. Statistical analysis found no significant links between years in practice and preparedness, desire for more training, or opinions on training in dental hygiene programs. However, a notable correlation ($p = 0.02$) was observed between degree level and preparedness for specialty practice.

Conclusions: This study revealed the perceived need for specialty programs by registered dental hygienists. Further studies are needed to assess the perception of graduating dental hygiene students for preparedness to enter a specialty practice. The implications for allied dental education support the need for focused specialty training.

References:

1. Serving Disadvantaged Populations [Internet]. Dimensions of Dental Hygiene | Magazine. 2014 [cited 2023 Aug 7]. Available from: https://dimensionsofdentalhygiene.com/article/serving-disadvantaged-populations/

2. Lavigne SE. The multiple faces of dental hygiene. Can J Dent Hyg. 2019 Feb 1;53(1):3–4.

3. Simonian WZ, Brame JL, Hunt LC, Wilder RS. Practicum Experiences: Effects on Clinical Self-Confidence of Senior Dental Hygiene Students. J Dent Hyg. 2015 Jun;89(3):152–61.

4. Theile CW. Strengths and Weaknesses of the Current Dental Hygiene Educational System. J Dent Educ. 2017 Sep;81(9):eS38–44.

5. Battrell A, Lynch A, Steinbach P, Bessner S, Snyder J, Majeski J. Advancing education in dental hygiene. J Evid Based Dent Pract. 2014 Jun;14 Suppl:209-221.e1.

6. Isman BA, Farrell CM. Are dental hygienists prepared to work in the changing public health environment? J Evid Based Dent Pract. 2014 Jun;14 Suppl:183–90.

7. Butters J, Vaught R. The effect of an extramural education program on the perceived clinical competence of dental hygiene students. Journal of Dental Education. 1999;63(5):415–20.

8. Sunell S, Laronde DM, Kanji Z. Fourth-year dental hygiene students' educational preparedness: Self-confidence ratings of the Canadian Dental Hygienists Association baccalaureate competencies (2017-2019). J Dent Educ. 2021 Jun;85(6):768–77.

9. Yoon MN, Compton SM. Building professional competence in dental hygiene students through a community-based practicum. Int J Dent Hyg. 2017 Nov;15(4):e119–27.

10. Ledford JM, Wilder RS, Chichester SR, George MC. Practice trends of dental hygiene students completing specialty tracks. J Dent Hyg. 2004;78(3):4.

11. Gaunkar RB, Basavarajappa P, Raheel SA, Kujan OB. Perception of Dental Public Health Competency among recent graduates. J Int Soc Prev Community Dent. 2016 Aug;6(Suppl 2):S137-142.

12. Gurenlian JR, Williams R. Dental Hygiene Program Directors' Perceptions of Advances in Accreditation Standards. J Dent Hyg. 2020 Feb;94(1):21–31.

13. Dehaitem MJ, Ridley K, Kerschbaum WE, Inglehart MR. Dental hygiene education about patients with special needs: a survey of U.S. programs. J Dent Educ. 2008 Sep;72(9):1010–9.

14. R Core Team (2020). R: A language and environment for statistical computing. R Foundation for Statistical Computing, Vienna, Austria. [Internet]. Vienna Austria; 2020. Available from: https://Rproject.org/

15. Inukai J, Sakurai M, Nakagaki H, Matsui K, Matsuda H, Tamura K, et al. Comparison of clinical practice education in dental hygiene schools in eight countries. Int Dent J. 2012 Jun;62(3):122–6.

16. The Dental Hygiene Periodontal Residency Program: A Novel Program Developing Future Leaders of Tomorrow [Internet]. Oral Health Group. 2017 [cited 2023 Aug 7]. Available from: https://www.oralhealthgroup.com/features/dental-hygiene-periodontal-residency-program-novel-program-developing-future-leaders-tomorrow/

17. Bickley SR. Dental hygienists' attitudes towards dental care for people with a mental handicap and their perceptions of the adequacy of their training. Br Dent J. 1990 May 5;168(9):361–4.

18. Williams KB, Burgardt GJ, Rapley JW, Bray KK, Cobb CM. Referring Periodontal Patients: Clinical Decision Making by Dental and Dental Hygiene Students. Journal of Dental Education. 2014;78(3):445–53.

19. Dao LP, Zwetchkenbaum S, Inglehart MR. General dentists and special needs patients: does dental education matter? J Dent Educ. 2005 Oct;69(10):1107–15.

20. Rd K, Dj S. Assessment of student attitude and confidence in a program of dental education in care of the disabled. Journal of dental education [Internet]. 1979 May [cited 2023 Aug 7];43(5). Available from: https://pubmed.ncbi.nlm.nih.gov/155706/

21. Stoltenberg JL, Walker PO. Student dental hygienists' and dental hygiene educators' attitudes toward the handicapped. J Dent Hyg. 1989;63(3):117–23.

22. Recognized Dental Specialties | National Commission on Recognition of Dental Specialties and Certifying

53. Applying Contribution Analysis to a Competency-Based Medical Education Program: Building one layer of the contribution story

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Introduction: SEA-CHange was a pilot competency-based medical curriculum track that was deployed at UTMB from 2016-2018. To analyze lessons learned from this short-lived pilot, we embark on a retrospective curriculum evaluation using a contribution analysis framework. This is to our knowledge the first application of contribution analysis to competency-based medical curriculum.

Methods/Project Description: Contribution analysis has been proposed as a valuable method to evaluate competency-based medical education programs, as it accounts for complexity and acknowledges that multiple factors contribute to achieving program outcomes. It uses a systematic approach to evaluate the evidence and claims that program activities are linked to desired program outcomes. Using planning and program documents, curriculum maps, student reflections and assessments, and focus group transcripts, we are examining how the SEA-CHange curriculum influenced the development of compassionate lifelong learners and competent physicians.

Results/Outcomes: We have developed a postulated theory of change, a program logic linking outputs, immediate outcomes, intermediate outcomes, and final outcomes. At each link in the chain, underlying assumptions, risks, and external influences are identified. SEA- CHange outputs are curricular elements promoting early clinical immersion, explicit integration of foundational and clinical sciences, professional identity formation and communication skills. Immediate outcomes address learner progress towards defined competencies during the two-year pilot curriculum. Intermediate outcomes refer to learner milestones achieved after two subsequent years in the standard curriculum clerkship phase.

We report the development of a fragment of the overall contribution story, analyzing likely impact of output [curricular elements favoring integration of foundational science and clinical skills] on an immediate outcome [learners who can apply foundational science to clinical decision making.]

Conclusions: Contribution analysis is well suited to evaluation of SEA-CHange, and will require a rigorous, iterative and collaborative process testing links in the theory of change in order to build plausible associations between intervention and impacts.

References:

1. Mayne J. Contribution Analysis: An approach to exploring cause and effect. ILAC brief 16, May 2008.

2. Van Melle, E. et al. Using Contribution Analysis to Evaluate Competency-Based Medical Education Programs: It's All About Rigor in Thinking. Acad Med 2017, 92:752-758.

54. Perceptions of Clinical Teaching in Histotechnology Using the Cognitive Apprenticeship Theory: A Mixed-Methods Approach

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Background: Clinical teaching in the laboratory healthcare discipline of Histotechnology (HTL) requires instructing HTL student interns to be accomplished by Histotechs who serve as preceptors. However, preceptors mostly lack formalized training in educational practices, compounded by the absence of frameworks to structure their teaching practices. Yet, HTL preceptors facing teaching responsibilities while at work are relied upon to provide optimal learning experiences for students.

Purpose: This study aimed to identify an evidence-based framework of instruction that could be used for HTL clinical teaching that could be used as a prism to explore the perceptions and experiences of the student interns. The research question was: How do HTL interns experience the clinical teaching of their preceptors?

Methods: A convergent, mixed-methods approach was used. The instructional methods of the cognitive apprenticeship theory (CAT) were applied to the problem of practice. The Maastricht Clinical Teaching Questionnaire (MCTQ), which is explicitly built on the CAT, was the 15-item instrument used for evaluation. Descriptive statistical analysis was performed. A phenomenological approach was taken to conduct three focus groups employing vignettes and questions. Forty-two study participants took the MCTQ (Histotechs and HTL students). A total of 12 participants participated in the focus groups (HTL students only).

Results: The order of CAT instructional methods used was perceived as follows, from weakest to strongest: articulation, exploration, coaching, modeling, and a safe learning environment. The overall judgment score of clinical teaching was seven, on a scale of one to 10. Additionally, eight themes emerged to include assumptions, affective domain, preceptor role clarity, feedback mechanisms practice and learning, self-initiative, and good clinical teaching.

Conclusion: Results of the MCTQ showed that HTL preceptors need improvement in the cognitive realm of the instructional methods, while methods in the traditional realm of apprenticeship were the strongest. The CAT offers a viable framework to structure clinical teaching. Overarching themes were preceptor role clarity and self-initiative. Compelling evidence found links between students' values of a clinical teacher, expectations of an internship, and views of a good clinical teacher.

55. Using an Adaptive Approach to Integrating Health System Science and Community Service into Medical Education Curricula

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Introduction: As basic and clinical sciences have dominated the ethos of medical education for decades(1), curricula addressing critical competencies essential for future physicians, who may become health system leaders to plan for and deliver patient-centered, high-value care, have been underdeveloped(2). We have integrated the "Health Systems Science & Community Service" (HSS) course into the medical curriculum to close this gap.

Methods/Project Description: We offer HSS as a required, longitudinal course for fourth-year medical students, allowing them to take a bird's eye view of how health systems work and how health care is delivered. The required course incorporates three components: 1) community service with a service-learning component, 2) assignments with online modules and selectives, and 3) NBME HSS exam. For selectives, students choose from a variety of options, including a webinar series, lifestyle coaching course, anti-racism journal club, patient & health care discussions, and additional community service or modules.

We adopted an adaptive approach in designing the course, depending on collecting periodic feedback from students to inform continuous changes and improvements, including 2 short feedback surveys, a mid-year evaluation, and an end-year evaluation.

Results/Outcomes: Students commented positively on the flexible nature of the course, the value of different course components (IHI modules, community services, H2H, and selectives), the variety of selectives options, and the rapid and effective communication from the course management team.

We categorized areas for improvement into:

• For immediate action: More structured discussions on health system-related issues, web-based course calendar, more frequent reminders (of the deadlines),

• For discussion: reduce the course workload, increase spots in each selective, and spread the course activities over more than one year in the medical school.

Conclusions: The adaptive approach and the periodic feedback from students inform improvement that enhances the learning environment.

References:

1. Price S. (2021). Systematic Learning: Health Systems Science Shapes Med Ed. Texas Medical Association. Available: https://www.texmed.org/Template.aspx?id=57076. Accessed: October 26, 2023.

2. Mann s. (2019). Health Systems Science: The future of medical education and the solution to improving health care. Harvard Macy Institute, Harvard Medical School. Available: https://harvardmacy.org/blog/health-systems-science. Accessed: October 26, 2023.

56. Expanding Education Development Initiatives

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Introduction: Creating a program to support education development for healthcare professions is challenging in a diverse institution such as The University of Texas at MD Anderson Cancer Center. This session is designed to review the last two years of initiatives to create a foundation of education development and innovation for institutional members in a variety of educational roles. The session will review 3 main activities: over fifty new internal education trainings, a partnership with UT Systems Office and ACUE, and Magna Digital Library.

Methods/Project Description: The office of Education Development & Innovation (EDI) provides monthly education development sessions tailored to a wide audience of educators. Each session is themed to a specific, yet wide range of educational initiatives. Additionally, in 2021, MD Anderson became one of the UT institutions to partner with The Association of College and University Educators (ACUE) through a UT System initiative to support educators, and one of two healthcare institutions to join this partnership. The ACUE program has provided valuable support and learning opportunities to faculty/ educators. Additionally, the program has allowed educators from vastly different areas of the institution to engage in a robust online cohort. Last, Magna Digital is another educational support that EDI invested in during 2023. This tool has allowed on-demand access to educational support of over 400 plus webinars. The implementation of these three initiatives has provided educators across MD Anderson Cancer Center a wealth of opportunity to advance their education skills.

Results/Outcomes: This presentation will present an overall view of the data collected over that last two years regarding the internal education development sessions, review of ACUE data and Magna Digital Library. This data will include participant surveys, program review and completion data, interaction, and growth.

Conclusions: As the EDI department continues to grow educational initiatives, the data from these three initiatives will be important to support the investment of additional tools and programs. EDI heavily relies on education need surveys, learner feedback and institutional needs to drive educational planning.

57. Expanding Horizons: A Comprehensive Approach to Surgical Specialties

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Introduction: The Student Surgical Association (SSA) is an organization founded to expose preclinical students to a variety of surgical specialties early in their medical careers.

With the hyperfixation of specialty specific clubs, medical students early in their careers can have a difficult time being exposed to surgical specialties that may interest them. Combined with the increased pressure to shadow, produce research papers and volunteer in specialties, students are at an increased risk of never being exposed to a surgical specialty that would interest them.

Methods/Project Description: The goal of the SSA is to assist preclinical students in making informed decisions about their future surgical career path. Choosing a surgical specialty is a significant decision that requires careful consideration. By offering exposure to various surgical specialties, the SSA helps students explore their options, understand the nuances of each field, and identify which one aligns best with their interests and career goals.

A lecture series was developed to expose students to various surgical specialties. Each physician is asked to present their experiences and their surgical subspecialties along with the pros and cons of their field. A questionnaire is asked at the end of each lecture to better gauge the students interest in each field, and what questions they would like answered.

Results/Outcomes: Since August 2023, the SSA has had 103 preclinical students independently become members, with an average of 33 students in attendance at each lecture. Feedback from students has been extremely positive, with students ranking the initial lectures a 5/5 experience in all but two surveys. Thus, we expect students to view the upcoming lectures as positively as our first few.

Conclusions: The Student Surgical Association has provided preclinical students with an interest in surgery the opportunity to explore various surgical specialties through membership in an all encompassing organization. The positive feedback received from our current members has shown the importance of an organization that focuses on exposing its members to as many surgical subspecialties as possible. Due to the exponential increase in subspecialty clubs and residencies, we believe SSA provides the preclinical link required not only at McGovern, but through medical schools nationwide.

58. The Role of Situated Learning-Guided Participation as an Educational Framework in Head and Neck Anatomy - Infratemporal Fossa and Retromandibular Region

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Introduction: The spatially limited nature of head and neck anatomy coupled with its delicate structures make the anatomy of this region difficult for student learning. Regarding gross anatomy, discussions on the use of cadaveric dissection vs cadaveric prosections as appropriate teaching modalities are ongoing. However, although much of the literature favors the use of cadaveric dissections for learning of gross anatomy in general, the data is limited on the teaching modalities best suited for complex anatomical regions as in head and neck.

Aims:

To evaluate the effectiveness of an instructor-guided workshop using cadaveric prosections on student learning of the infratemporal fossa and retromandibular region. To evaluate students' stress levels during the prosection-centered workshop.

Methods/Project Description: First-year medical students enrolled in the Human Structure course at UT Southwestern were recruited for the IRB-exempt study. This pre-test/post-test study occurred in the anatomy laboratory, a week after students' dissection of the investigatory head and neck regions. Twenty-four students (n = 24) participated with each student serving as their own control. All participants completed a 12-item pre-test. Following the pre-test, randomized groups of 3-5 participants completed a 40-minute instructor-facilitated workshop using cadaveric prosections. Immediately after the intervention, all participants completed a 12-item post-test and survey consisting of both Likert-scale and self-reported responses. Analysis was completed using a t-test: paired two sample for means with statistical significance of ($p<0.05$) for the objective data and survey responses.

Results/Outcomes: Participation in the workshop significantly improved student learning of intricate head and neck anatomical subregions with $p < 4.9 \times 10\text{-}8$ and 95% CI (8.12, 9.38). The pre-test mean score was 4.79 + 2.62 and the post-test mean score was 8.75 + 1.48. About 86% of participants reported mild to no stress during the workshop and 60% of participants reported wanting more time.

Conclusions: The educational intervention was overall successful as demonstrated by the significant improvement in post-test scores and the minimal to no stress reported by the majority of the participants. The study is limited by its small sample size. However, our findings suggest that a prosection-centered workshop is an effective modality for student learning of head and neck anatomy.

59. QuizToo: Leveraging AI and Large Language Models to Reduce Faculty Burden by Automating Question Generation for Health Science Education Content

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Introduction: Healthcare and medical education content is consistently evolving at a rapidly increasing pace. Precision Medical Education (PME) is a methodology for providing just-in-time education while meeting the learners where they are. PME involves the four Ps in its framework: 1) Proactive, 2) Personalized, 3) Participatory, and 4) Predictive [Triola 2023]. However, adopting PME is only the first step. Next, the content must be created and disseminated to learners. Physician burnout [Rothenberger 2017] and faculty burden [Rockwell 2009] are widely acknowledged and recognized, and this is only exacerbated when incorporating teaching. The ubiquity of AI tools like ChatGPT, Large Language Models (LLM), and Natural Language Processing can help educators and learners in new ways. We have developed an innovative platform, QuizToo, that leverages AI to automatically create questions/answers from learning content and delivers that to the learners' smartphones using an inquiry-based learning paradigm.

Methods/Project Description: QuizToo was developed by Toufeeq Syed, PhD, MS, Associate Professor at McGovern Medical School. QuizToo delivers quizzes to learners via text message or email at set times and provides instant feedback and learning resources. In QuizToo, faculty can upload content to be generated into questions and answers (multiple choice, yes/no, true/false, multiple select). Depending on the preference, faculty can set the day and time for delivering questions. Learners respond to SMS/text messages more quickly than other modalities, such as email. If the learner answers the question correctly, they are provided feedback instantly. If the learner answers the question incorrectly, they are provided feedback immediately as well as additional resources to help them understand the correct answer. Additionally, faculty can track individual responses to questions, download response data, and create a Question/Answer bank to collaborate with other faculty.

Results/Outcomes: First, assessment creation is time-consuming, and QuizToo's use of AI and LLM tools will alleviate some of this burden. Second, by delivering just-in-time learning in a spaced-repetition fashion, QuizToo helps learners retain knowledge [Karpicke 2012].

Conclusions: Our innovative platform leverages AI to provide precision education to each learner in a personalized way while significantly reducing faculty burden around course assessment and delivery.

References:

1. Triola, M. M., & Burk-Rafel, J. (2023). Precision Medical Education. Academic medicine: journal of the Association of American Medical Colleges, 98(7), 775–781. https://doi.org/10.1097/ACM.0000000000005227

2. Rothenberger D. A. (2017). Physician Burnout and Well-Being: A Systematic Review and Framework for Action. Diseases of the colon and rectum, 60(6), 567–576. https://doi.org/10.1097/DCR.0000000000000844

3. Rockwell S. (2009). The FDP Faculty Burden Survey. Research management review, 16(2), 29–44.

4. Karpicke, J. D. (2012). Retrieval-based learning. Current Directions in Psychological Science, 21(3), 157–163. https://doi.org/10.1177/0963721412443552

60. Shifting the Focus to Excellence in Professionalism: An Institutional Initiative

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Introduction: Our institutional Professionalism Committee provides education and guidance to support to the students, faculty, and staff in our clinical, research, and academic enterprise. Committee goals include supporting a culture of professionalism by identifying and addressing behaviors that are not in keeping with institutional expectations.(1,2) "Professionalism Concern" notes can be submitted by any student, faculty, or staff member; each identified incident is handled through a process that respects the confidentiality of the individual(s) involved. While we have had a parallel program allowing recognition of behavioral excellence in place for years, it was not being utilized. We describe our recent reinvigoration of this latter program and early outcomes.

Methods/Project Description: Through institutional announcements and posters, we drew widespread attention to our Recognizing Professionalism in the Workplace program. The program allows anyone to nominate an individual for displaying behaviors aligned with our institutional Professionalism Charter. (3) The web-based form requires the nominator to describe the reason for the nomination. These are reviewed by the Professionalism Committee executive team and, if appropriate, the nominee's supervisor is notified. Committee representatives coordinate with the supervisor to appear unexpectedly and celebrate the individual with a framed certificate. Photos are posted on the Professionalism Committee website.

Results/Outcomes: Over the past 6 months, 39 individuals have been celebrated from many areas including clinic and office staff, nursing, occupational therapy, transportation services, and correctional managed care. The program has recognized employees on our main campus as well as in several clinical settings in the surrounding region.

Conclusions: While it is crucial to identify and remediate unprofessional behavior, we believe this program draws attention to valued behaviors, highlights institutional ideals, and allows individuals to be publicly recognized for modeling these principles. Recognizing and supporting excellence contributes to a positive work and learning environment which is essential for our patients, staff, and learners. The program has also re-energized Professionalism Committee members' involvement in activities including facilitation of educational offerings. The program requires minimal resources and would be easy for other institutions to adapt. Supporting and inspiring colleagues to excel in their growth as professionals is vital for shaping the future of healthcare.

References:

1. Brennan MD, Monson V. Professionalism: good for patients and health care organizations. Mayo Clinic Proceedings 2014; 89(5) 644-652

2. Guo L, Ryan B, Leditschke IA, Haines KJ, Cook K, Eriksson L, Olusanya O, Selak T, Shekar K, Ramanan M. Impact of unacceptable behaviour between healthcare workers on clinical performance and patient outcomes: a systematic review. BMJ quality & safety. 2022;31(9):679-87.

3. The UTMB Professionalism Charter https://www.utmb.edu/Professionalism/ accessed 20 Oct 2023

61. Increasing engagement in pediatric global health: preliminary findings of an interactive off-campus dinner curriculum

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Introduction: Global Health practice often occurs in austere, resource-limited locations where practitioners need to be familiar with distinct technical skills and prepared for unique ethical considerations. An interactive dinner curriculum, the "Global Health Supper Club", was developed to provide skill sessions, simulation training, and ethics curriculum prior to global health clinical work.

Methods/Project Description: The Global Health Supper Club series consists of monthly off-campus dinner sessions open to all pediatric trainees and faculty. In each session, a catered dinner is followed by an interactive skill session or simulation case and a "Heart Pause" discussing global health ethical considerations. Pre- and post-session questionnaires, as well as longitudinal follow-up questions, are conducted to assess knowledge and retention. The curriculum began in July 2023. A total of 14 sessions are planned over an 18-month period.

Results/Outcomes: Four sessions have been completed to date. A total of 36 unique participants, including 23 residents (22%), 3 fellows (5%), 7 faculty members, and 3 additional participants have attended. These sessions were the first time that 24 of the participants engaged with any aspect of our global health program, signifying a 2-fold increase in the number of people engaging in global health. A third of participants (13/36) attended multiple sessions.

The average pre-and post-session questionnaire scores were 52% and 80%, respectively, with an average improvement of 29%, demonstrating the format's effectiveness at increasing participant knowledge of global health topics, including ethical considerations. The average score for longitudinal follow-up questions administered 2 weeks after each session was 89%, demonstrating good retention of the global health knowledge presented in this format.

Conclusions: Preliminary data demonstrates that this interactive dinner curriculum has significantly increased engagement in our global health program amongst residents, fellows, and faculty. This curriculum approach appears effective for increasing participants' knowledge of global health topics, including ethical considerations, in an interactive format. Offering curriculum in non-traditional settings and time frames is a feasible approach to incorporating supplemental curriculum into training and has been enthusiastically received in our practice.

62. Facilitating Self-Assessment and Reflection on Effective Communication Performance

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Introduction: Reflective practice is a valuable approach to learning, in which the practitioner critically examines their experiences in order to improve practice. Yet, health care practitioner students need to develop self-assessment skills to be able to engage in reflective practice. The purpose of this presentation it to examine the use of recordings of students' interactions with patients or simulated patients, which can provide an opportunity for improving students' self-assessment and reflection on effective communication performance.

Methods/Project Description: As part of a health promotion clinical, students use peers and standardized patients to practice motivational interviewing, which progressively develops competencies for case studies in weight management and smoking cessation. Using a specific rubric that requires students to identify which competencies they are demonstrating (e.g., eliciting change talk) along with an example illustrating the competency, students review their recording. Students then reflect and develop a performance improvement plan based on their self-assessment.

Results/Outcomes: Advanced Practice Clinical Nurse Specialist students (n=16) were surveyed at course completion, using 1-5 Likert type scale to determine importance of reflective activities to development of motivational interviewing and coaching skills to help patients make lifestyle changes. Ratings on importance of reflective practice activities included: (1) Having specific criteria to self-assess performance (M=4.19; SD = 1.11); (2) Listening or watching their own performance (M = 3.56; SD = 0.96); and (3) Completing self-assessment with plan for improvement (M = 3.69; SD = 0.95). Faculty satisfaction with students' communication performance in clinical with patients was greater compared to prior semesters without the use of self-assessment and reflective activities.

Conclusions: Reflective practice activities which included self-assessment of recorded lifestyle coaching and motivational interviewing performance were rated by students as moderately important. Having specific criteria to use in self-assessment was rated more important to development of their competencies. Training students to deliberately use reflective practice with self-assessments to improve competencies may be an important teaching strategy, especially for competency-based education.

63. Impact of Psychiatric Pharmacist-led Psychopharmacology Didactics for Psychiatry Residents

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Introduction: Board-certified psychiatric pharmacists (BCPPs) are a uniquely qualified subspecialty of pharmacists that undergo extensive training and experience in psychiatric pharmacy practice. While the Accreditation Council for Graduate Medical Education (ACGME) mandates psychiatry residents gain competency with collaborative, interprofessional teamwork, not all training experiences incorporate a clinical pharmacist into their learning experiences. There is a substantial need to expand residency training capacity and create more psychiatry residency positions to address the growing psychiatrist shortage. Incorporating BCPPs into psychiatry residency training programs may be an innovative way to strengthen psychiatry residency capacity and quality. The purpose of this study is to explore the impact of BCPP-led psychopharmacology lectures to psychiatry residents and fellows.

Methods/Project Description: Surveys were administered to psychiatry residents and geriatric psychiatry fellows at two teaching institutions. Surveys were administered between Fall 2021 through Spring 2023, including two distinct residency programs and one fellowship program. The survey consisted of three quantitative questions and one qualitative question soliciting open-ended constructive feedback.

Results/Outcomes: Of 39 participants (response rate: 80.0%), 100% strongly agreed that learning from a BCPP enhanced their learning of psychopharmacology concepts. Additionally, 100% strongly agreed they would recommend psychopharmacology lectures from a BCPP to other psychiatry residents and that concepts taught by the BCPP were applicable to their clinical practice. Qualitative feedback indicated valuing pharmacist input and stated preference to learn from medication-experts on psychopharmacology topics. Additionally, participants voiced appreciation for the pharmacist's approachability and availability for consultation on complex cases.

Conclusions: Integrating BCPPs into psychiatry resident/fellow didactic training is well-received by psychiatry residents and may simultaneously enhance education of psychopharmacologic concepts in addition to enrichment of interprofessional experiences by increased routine exposure to working directly with a clinical pharmacist. Program directors are encouraged to meet with BCPPs to discuss opportunities for collaboration. Future studies should investigate the impact of incorporating BCPPs into training programs for other mental health providers, as these findings may be applicable to other health science disciplines where enhanced education of psychopharmacologic principles and clinical application are needed.

64. Measuring Effectiveness of Curriculum in Transgender Medicine for a Family Medicine Residency Program

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Introduction: Primary care physicians are the first point of contact in the healthcare system for a large proportion of the United States population, including transgender patients. However, transgender patients are less likely to have a primary care provider if they feel the provider is not "trans-affirming," meaning they do not feel that the provider is equipped or knowledgeable about their particular needs. Transgender care in the United States is a complex subject to teach to healthcare providers, not just due to its medical complexity but because of its social and political nature. This can be particularly true for Family Medicine residents, who during their residency training might not get exposure to patients of this population.

Methods/Project Description: For this project, I developed a comprehensive curriculum that would increase awareness on transgender medicine in primary care. I emphasized how to approach a patient encounter with a patient that identified as transgender and how to both medically and legally manage this patient. To test whether the curriculum was effective, I would have a pre-test survey that would be completed prior to the lecture. I would then compare the results to those of a post-test survey to gauge whether there was any improvement in score. The survey would distinguish between educational status of the person taking the survey.

Results/Outcomes: I presented the project during Grand Rounds in October 2023, to a crowd of medical students, residents and attendings. I had 28 pre-test surveys and 26 post-test surveys completed. The data showed that there was an overall increase in comfort level across all educational levels, with a more pronounce changed the earlier the stage in the survey-taker's career.

Conclusions: This project showed that curriculum aimed at increasing comfort level regarding transgender medicine in primary care is effective.

As evidenced, medical students saw the biggest benefit, followed by residents and lastly, attendings. We can infer that younger generations are more inclined to be comfortable with LGBTQ+ patient populations as previous research has shown. This could also be due to more experienced physicians are less likely to change their practices, especially when dealing with new topics that are outside of their comfort level."

References:

1. Factora, J. "A Guide to Primary Care for Transgender Patients." The Paper Gown (June 2021).

2. Delfin Castillo, J, et al. "PCP-transgender patient relationships need improvement." Healio News (November 2018).

3. Goldhammer, H, et al. "Communicating With Patients Who Have Nonbinary Gender Identities," Annals of Family Medicine (November 2018).

4. Shires DA, et al. "Primary Care Clinicians' Willingness to Care for Transgender Patients." Annals of Family Medicine (November 2018).

65. Charting a New Course: Transforming Problem-based Learning (PBL) Cases to Online Learning Modules in MS2 Medical Education

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Introduction: PBL traditionally revolves around student review of individual patient cases guided by in-person facilitators and designed to build clinical decision-making skills. In response to the heightened demand for self-learning among medical students during COVID-19, medical educators innovated teaching methods particularly in the PBL arena. This presentation outlines the conversion of five face-to-face PBL cases to interactive online cases at McGovern Medical School during the fall of 2022. The conversion process, while challenging, was well received by students and created opportunities for self-paced learning and improved weekly structured review.

Methods/Project Description: The Canvas Learning Management System was selected to facilitate the transition from in-person to online PBL activities. Its module feature enabled content organization, Cidi Lab's DesignPlus tools enhanced interactivity, the quiz tool allowed performance tracking. These features assisted module directors in tailoring review sessions based on student needs. In traditional PBL, learning objectives are disclosed at the session's end. Online adaptation necessitated clear, measurable objectives that wouldn't reveal diagnoses prematurely. Cases and explanations were streamlined to prevent students from being overwhelmed by complex narratives and redundant details. These online cases were delivered to over 200 second-year students in spring 2023, followed by mandatory end-of-course surveys in reproductive medicine and musculoskeletal/ dermatology modules.

Results/Outcomes: Student feedback yielded valuable insights into the self-paced online modules. Approximately 75% of students found the online cases "somewhat or extremely" helpful in understanding material across both modules. Over 70% of students preferred the online case-based format over in-person or virtual PBL. Feedback also revealed areas for improvement, subsequently implemented for the 2024 academic year. Online module changes include improving access to evolving patient information, limiting complex and essay style questions in online modules, and addressing student expectations regarding grading.

Conclusions: The shift from in-person PBL to online problem-solving exercises received positive student reception, with a clear preference for this format over traditional in-person and synchronous virtual learning. Feedback highlights the necessity to further streamline cases and provide additional patient information for review. This innovative approach underscores the adaptability of medical education in response to evolving educational landscapes, especially in the context of the COVID-19 pandemic.

References:

1. McLean, S. F. (2016). Case-Based Learning and its Application in Medical and Health-Care Fields: A Review of Worldwide Literature. Journal of Medical Education and Curricular Development, 2016(3), JMECD.S20377–49. https://doi.org/10.4137/JMECD.S20377

2. Goodman, M. C., Chesner, J. H., Pourmand, K., Farouk, S. S., Shah, B. J., & Rao, B. B. (2023). Developing a Novel Case-Based Gastroenterology/Hepatology Online Resource for Enhanced Education During and After the COVID-19 Pandemic. Digestive Diseases and Sciences, 68(6), 2370–2378. https://doi.org/10.1007/s10620-023-07910-8

66. The Power of Storytelling: A Novel Curriculum Strategy to Re-engage Physician Interns, Residents, and Fellows in the Art of Medicine

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Introduction: When faced with illness, trauma, or death, storytelling facilitates meaning-making and brings coherence.1 Sometimes equipped with humanities-based narrative training during medical school, over time, physicians often learn to ignore or discount humanizing personal narratives of health and disease in favor of standardized medical templates and jargon, even when processing their own experiences which may jeopardize empathy and clinical wellbeing. This novel Graduate Medical Education (GME) elective seeks to bring physician stories to the fore through peer-supported engagement and analysis of published narratives while developing their own writing practices.

Methods/Project Description: Physician Storytelling is a non-clinical, GME elective at the University of Texas at Austin Dell Medical School, focused on developing physicians' storytelling expertise. These skills have the potential to improve clinician self-care and lead to more empathetic patient care. In this two-week writers' workshop, learners explore various media for creative expression, including prose, poetry, song, visual art, and graphic medicine. Learners are encouraged to draw inspiration from various clinical and non-clinical settings and experiences by situating them in differing temporal and spatial environments. Participants develop competency in effective peer feedback and hone their craft through constructive criticism, reflection, and revision, eventually producing pieces of original writing for publication or performance. The pilot cohort consisted of residents and fellows across three medical specialties. Upon conclusion, participants are encouraged to incorporate creative expression and a regular writing practice.

Results/Outcomes: The primary outcome is to evaluate the feasibility and acceptability of the course. Semi-structured interviews will be conducted to understand acceptability. The secondary outcomes are to explore the potential impact on participants' empathy and well-being over time. Surveys will be collected pre-course, immediately post-course, and one-month post. Completed data collection expected December 2023.

Conclusions: This project builds on current research into the pedagogical and psychological effectiveness of narrative-based components for physician learners.2 GME learners are often less equipped with tools from the humanities to help them cope with the weight of life and death and burdensome clinical decision-making. Physician storytelling uniquely targets this high-risk group to facilitate personal expression, foster well-being, and improve patient care by enhancing the art of medicine.

References:

1. Charon R, Hermann N, Devlin MJ. Close Reading and Creative Writing in Clinical Education: Teaching Attention, Representation, and Affiliation. Acad Med J Assoc Am Med Coll. 2016;91(3):345-350. doi:10.1097/ACM.0000000000000827

2. Edwards LM, Kim Y, Stevenson M, et al. When it's needed most: a blueprint for resident creative writing workshops during inpatient rotations. BMC Med Educ. 2021;21(1):535. doi:10.1186/s12909-021-02935-x

67. Creative Tools for Educating Faculty and Mentors about Academic Career Planning Context

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Introduction: Integrating academic career planning and mentoring from onboarding new faculty through annual evaluation processes has become increasingly important in solidifying identity development as an academic faculty member, defining clear pathways to career success in education, service and research, and ultimately, contributing to faculty engagement and retention. Mentoring guides new faculty careers, but confidence in mentoring others often also needs support and development. A framework for career development has been developed with the intended result of faculty being more satisfied with their career progress, more likely to be retained by our institution, and more likely to mentor other faculty in the same way.

Methods/Project Description: Innovative career development tools and rubrics were developed specific to educating new faculty members and mentors regarding how to focus on context as the guiding framework for academic medicine career development, and thus boosting intentionality and strategizing to career discussions. Springboarding from initial SMART goals and mentor mapping, an innovative 'Evaluating Your Mentor' checklist and 'WHAM Mentoring' (Why and How Aligned Mentoring) tool are applied as the scholarship strength areas for promotion and tenure are defined as Teaching, Research and/or Service to align with the related Board of Regents' Rules-delineated campus and school-level Guidelines. Mentoring is further supported and guided by applying innovative 'Venues Documents' aligned to specialty-specific Teaching, Research and/or Service scholarship strength areas in order to reveal achievable and contextual career targets for documentable achievements and funding. Faculty are taught in single or group context to self-mentor or mentor others using a series of tools that keep the career planning focus on context, timeline, and purpose or goal that produces a measurable result.

Results/Outcomes: Faculty using this method have reported greater satisfaction with career planning from such as greater sense of career clarity and progress, as well as lower stress from career 'unknowns.' The intentionality and strategizing around contextual targets are felt to be strengths leading to greater engagement from feeling more supported, more confident, and more 'on target.'

Conclusions: Teaching intentional career planning using a context-focused framework has been successful in building faculty identity, confidence and career clarity at our institution.

68. Imposter Syndrome and its Associated Factors in a Multisite National Sample of Female Physician Trainees

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Introduction: Recent studies have shown a higher rate of impostor syndrome (IS) in female physicians compared with their male counterparts in graduate medical education (GME), as well as higher rates of burnout, depression, and suicide.1,2 While IS has been well described as a phenomenon, there is little data on contributing or protective factors to IS, limiting effective intervention strategies. We investigated the prevalence of IS and its associated factors in a national sample of female physician trainees.

Methods/Project Description: A baseline survey was administered to 1,017 female trainees who volunteered to participate in a professional coaching program across 26 GME training programs in September 2022.3 The survey included demographics, the Young Impostor Syndrome Scale (YISS), the Self-Compassion Scale-Short Form (SCS-SF), the Trauma Symptoms of Discrimination Scale (TSDS), the Maslach Burnout Inventory, the Moral Injury Symptom Scale for Healthcare Providers (MISS-HP), and the Secure Flourishing Index (SFI). A univariate analysis was run on YISS and demographic factors. Multivariable analyses were run on YISS (binary) with the following as independent factors: SCS-SF, TSDS, Burnout Depersonalization (DP), Burnout Emotional Exhaustion (EE), Burnout Personal Accomplishment (PA), MISS-HP, and SFI.

Results/Outcomes: Of the 1,017 trainees enrolled in the program, 784 (77.1%) completed the YISS instrument. Of those, 598/784 (76.3%) were positive for IS (YISS score ≥ 5). The data revealed no significant correlations between any measured sociodemographic characteristics and IS. A multivariate analysis showed that participants with lower self-compassion had 11% higher odds of IS (OR=0.89, CI=0.86-0.92). Participants with higher TSDS scores had 2% higher odds of IS (OR=1.02, CI=1.00-1.04). No significant association was noted with Burnout DP (p=0.106), Burnout EE (p=0.457), Burnout PA (p=0.786), MISS-HP (p=0.353), or SFI (p=0.558).

Conclusions: Among female resident physicians, lower self-compassion was strongly associated with IS. The self-compassion deficit in physicians is likely multifactorial, stemming from a culture which often asks physicians to do more with less and normalizes self-sacrifice.4 Fortunately, we know from previous research that self-compassion can be improved through interventions such as compassion-focused therapy, mindfulness-based focused treatments, and coaching.5 Professional coaching is a promising intervention to both increase self-compassion and decrease IS.6

References:

1. Madden K, Burns JP. Reading the Smoke Signals: What Is the Meaning of Burnout Among Pediatric Critical Care Physicians? Crit Care Med. 2018;46(1):168-170. doi:10.1097/CCM.0000000000002820

2. Malouf P, Quinlan E, Mohi S. Predicting burnout in Australian mental health professionals: uncertainty tolerance, impostorism and psychological inflexibility. Clin Psychol. 2023;27(2):186-195. doi:10.1080/13284207.2022.2163159

3. Mann A, Shah AN, Thibodeau PS, et al. Online Well-Being Group Coaching Program for Women Physician Trainees: A Randomized Clinical Trial. JAMA Network Open. 2023;6(10):e2335541. doi:10.1001/jamanetworkopen.2023.35541

4. McClintock AH. 15 Weeks and 4 Days. JAMA. 2022;327(24):2395-2396. doi:10.1001/jama.2022.10006

5. Neff KD. Self-Compassion: Theory, Method, Research, and Intervention. Annu Rev Psychol. 2023;74(1):193-218. doi:10.1146/annurev-psych-032420-031047

6. Fainstad T, Mann A, Suresh K, et al. Effect of a Novel Online Group-Coaching Program to Reduce Burnout in Female Resident Physicians: A Randomized Clinical Trial. JAMA Netw Open. 2022;5(5):e2210752. doi:10.1001/jamanetworkopen.2022.10752

69. Curricular Integration of Population Health through Interprofessional Community Engagement

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Introduction: Improving health outcomes requires a population health perspective in addition to providing person-centered care. Interprofessional collaboration is essential to addressing complex health care needs in the continuum of care. The University of Texas at Austin College of Pharmacy utilizes a novel approach to prepare student pharmacists to practice as a contributing member of a health care team with specialized training in addressing community-identified health priorities using an interprofessional, team-centered approach with layered mentoring.

Methods/Project Description: As part of our integrated interprofessional education (IPE) curriculum, third year student pharmacists (P3s) are required to complete a real-world project in teams in collaboration with community organizations and institutions to address their health priorities. The development of this P3 Population Health Program required agreement between regional campuses, programmatic approval, and support from community stakeholders. The program has five critical elements: team mentoring, interprofessional immersion, value and sustainability, deliverables and accountability, and scholarship. The course blends project-based learning with the improvement model from the Institute for Healthcare Improvement as the learning pedagogy. Development of team effectiveness, leadership, and project management skills are emphasized. A layered mentoring approach is crucial to team learning outcomes. Each team is mentored by community partners, pharmacy faculty, course directors, and near-peer mentors (NPMs). NPMs are fourth-year students who completed their projects in an exceptional manner and return to mentor P3 project teams.

Results/Outcomes: Over 5 years, teams have completed 108 real-world projects, contributing over 30,000 student hours and impacting 629,821 direct beneficiaries. These accomplishments were supported by 30 community partners, 20 faculty, 24 NPMs, and two course directors. Examples of project categories included health promotion, health empowerment, access to health and social services, program evaluation, health innovations, and quality improvement. Targeted populations included under-resourced communities, youths, seniors, college students, teachers, community health workers, and health professionals. Project deliverables varied substantially.

Conclusions: Curricular integration of population health through interprofessional community engagement required extensive planning and coordination, sufficient faculty support, and community ownership. Students developed skills in real-world problem solving, entrepreneurship, leadership, and scholarship. Projects allowed students to develop an appreciation of the significance of interprofessional collaboration in the continuum of care.

Oral Abstracts

Concurrent Session 4:

Group 1 Creation of an Artificial Intelligence (AI) Powered Virtual Standardized Teenage Patient for Enhanced History Taking Practice During Well Visits

ChatGPT-3.5 vs. Search Engine: Comparative Case Study of Self-directed Learning

Group 2 "Meet The Family": Working with caregivers to teach medical students about caring for children with intellectual and developmental disabilities

Empowering Fifth Grade Girls: Enhancing Mental Health Awareness and Coping Skills through a School-Based Program

Preparing Future Physicians for Holistic Disability Care: A Novel Curriculum in the Introduction to Clerkships Course

Group 3 Creating An Effective At-Risk Identification and Support System

The Fortify Resilience Initiative

Setting Students up for Success: Career Development and The Match

Group 4 Effects of an Innovative Community Based Participatory Research Curriculum on Medical Students' Professional Identity Formation

Identifying Critical Course Elements in the Formation of Interprofessional Identity

Advocacy 101 and Medical-Legal Partnerships Learning Modules to Educate Health Professional Students about How to Initiate Positive Change: A UTHealth Houston Quality Enhancement Project (QEP)

Concurrent Session 7

Group 1 Bridging mentorship gaps in scientific communication through a workshop for postdocs

Enhancing Workforce Preparation: Interdisciplinary Case Study Implementation

Creating a Culture Document to Improve Well-Being

Group 2 Catalyzing Interprofessional Team Development Through Outcomes-Driven, Project-Based Learning

Texas-Sized Innovation: The Texas IPE Consortium

Developing tomorrow's leaders, today: An Interprofessional Leadership Fellowship for Allied Health Professions

Group 3 Advancing Medical Education through Hands-On Ultrasound Teaching Sessions at McGovern Medical School

Teaching Trainees about an Ideal Crisis Care Continuum: A Case-Based Learning Activity

An Active Approach to Professional and Ethical Education: Using an Objective Standardized Clinical Examination to Evaluate Pediatric Residents Ethical Competency

Group 4 Self Directed Learning: A Heutagogical Approach – Do Learners Like This?

Clinical Teaching Toolkit for Clinical Faculty and Preceptors

Caught, Taught, Sought: Creating a Longitudinal Faculty Development Program on Character

(Note: all authors listed with full abstract on following pages. Blue highlight: first author designated self as a student or trainee)

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Silva, Gayani	Creation of an Artificial Intelligence (AI) Powered Virtual Standardized Teenage Patient for Enhanced History Taking Practice During Well Visits
Tuttle, Jared	ChatGPT-3.5 vs. Search Engine: Comparative Case Study of Self-directed Learning
Patel, Shreeya	"Meet The Family": Working with caregivers to teach medical students about caring for children with intellectual and developmental disabilities
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Murphy, Christine	Preparing Future Physicians for Holistic Disability Care: A Novel Curriculum in the Introduction to Clerkships Course
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Wise, Jessica	Advocacy 101 and Medical-Legal Partnerships Learning Modules to Educate Health Professional Students about How to Initiate Positive Change: A UTHealth Houston Quality Enhancement Project (QEP)
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Wilkerson, LuAnn	Caught, Taught, Sought: Creating a Longitudinal Faculty Development Program on Character

4.1A Performance of ChatGPT on Residency in Training Exam (PRITE)

NOTE: (unable to attend/present)

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Introduction: Artificial intelligence (AI) recently garnered attention in medical education after ChatGPT, a popular AI chatbot developed by OpenAI, passed the 3 USMLE Step Examinations. ChatGPT has not yet been tested in many graduate medical education examinations, including the Psychiatry Residency in Training Exam (PRITE). This study seeks to determine ChatGPT's performance on the PRITE examination.

Methods/Project Description: Methods were adapted from Performance of ChatGPT on USMLE: Potential for AI-assisted medical education using large language models from Kung et al. 2023. The 2022 version of the PRITE exam was purchased from the American College of Psychiatrists. Each question was inputted in multiple choice (MC), multiple choice with forced explanation (MCE), and open-ended (OE) formats by 2 testers. Questions including images were omitted. Questions were then graded for accuracy and concordance.

Results/Outcomes: Accuracy was graded based on a key included with the purchased PRITE examination. For MCE questions, answers were deemed concordant if the explanations affirmed the generated answer, provided reasoning for why all other answer choices were incorrect, and did not contradict the generated answer. For OE questions, answers were deemed concordant if the explanation affirmed the generated answer and did not contradict the generated answer. MC questions were not graded for concordance. Among the 283 questions, 71.55% were accurate when answered in the MC format, 72.26% when in the MCE format, and 57.60% when in the OE format. Concordance for MCE questions was 77.03% and was 98.35% for OE questions.

Conclusions: Analysis of ChatGPT's accuracy shows that it performed with relative consistency when answering MC and MCE question formats but was over 10% less accurate when answering the OE question format. Additionally, concordance for MCE questions was over 20% lower than the OE format, suggesting that ChatGPT struggled with providing consistent higher-level reasoning for negating other choices as opposed to open ended reasoning. Taken together, ChatGPT has shown to be a powerful tool in its ability to correctly answer and reason through a substantial proportion of a graduate medical examination.

References:

1. Kung TH, Cheatham M, Medenilla A, Sillos C, De Leon L, Elepaño C, Madriaga M, Aggabao R, Diaz-Candido G, Maningo J, Tseng V. Performance of ChatGPT on USMLE: Potential for AI-assisted medical education using large language models. PLOS Digit Health. 2023 Feb 9;2(2):e0000198. doi: 10.1371/journal.pdig.0000198. PMID: 36812645; PMCID: PMC9931230.

2. OpenAI (n.d.). OpenAI. Retrieved April 9, 2023, from OpenAI.com/product

3. The American College of Psychiatrists (n.d.). The Psychiatry Resident-In-Training Examination® (PRITE®). Retrieved April 9, 2023, from https://www.acpsych.org/prite

4.1B Creation of an Artificial Intelligence (AI) Powered Virtual Standardized Teenage Patient for Enhanced History Taking Practice During Well Visits

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Introduction: The Objective of this innovative activity was to offer students the opportunity to practice history taking and communication skills relevant to a pediatric adolescent well visit within a virtual environment and allow faculty to review the chat transcripts to give student feedback.

Historically, standardized patients have played a vital role in medical education, offering a controlled setting for students to practice communication skills. This activity bridges a gap in the standardized patient recruitment of pediatric patients, which is lacking. In addition, it enhances flexibility and offers replacement for clinical placement hours, assessments, and summative/formative feedback. Virtual simulations allow students opportunities to practice in a safe environment and receive feedback.

Methods/Project Description: A virtual human case/script was programmed using a virtual reality platform, and an avatar portrayed a 15-year-old female, identifying as bisexual, presenting for a well visit and sports clearance. An adolescent well visit checklist was created for students to guide their history taking. Faculty reviewed the chat transcripts and provided student feedback on history taking and counseling.

Results/Outcomes: Student experience was evaluated using four 5-point Likert scale items. Seventy-seven students participated in the survey. Effectiveness of helping practice adolescent history taking was rated with a mean of 2.87 (SD1.20). Effectiveness of the checklist was rated as 4.12 (SD 0.99), and effectiveness of the faculty feedback in improving adolescent history taking was rated as 3.412(SD1.24). Likelihood of using a virtual patient for future interview practice was rated as a 2.29 (SD 1.24) with 5 being very likely.

Conclusions: Based on student comments, the effectiveness of the virtual reality experience in helping practice adolescent history taking is hindered by the avatar's ability to provide responses that are similar to a typical adolescent. Improvements in artificial intelligence is necessary to create a more authentic experience. However, the technology provides a comfortable learning environment and faculty feedback was found valuable. This innovative technology can easily be adapted by other institutions, potentially offering an effective alternative to standardized patients. It also offers flexibility in communication skills training and cost effectiveness compared to the use of standardized patients.

References:

1. Morrow E, Zidaru T, Ross F, Mason C, Patel KD, Ream M, Stockley R. Artificial intelligence technologies and compassion in healthcare: A systematic scoping review. Front Psychol. 2023 Jan 17;13:971044. doi: 10.3389/fpsyg.2022.971044. PMID: 36733854; PMCID: PMC9887144. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9887144/

2. Stamer T, Steinhäuser J, Flägel K. Artificial Intelligence Supporting the Training of Communication Skills in the Education of Health Care Professions: Scoping Review. J Med Internet Res. 2023 Jun 19;25:e43311. doi: 10.2196/43311. PMID: 37335593; PMCID: PMC10337453. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC10337453/

3. von Gerich H, Moen H, Block LJ, Chu CH, DeForest H, Hobensack M, Michalowski M, Mitchell J, Nibber R, Olalia MA, Pruinelli L, Ronquillo CE, Topaz M, Peltonen LM. Artificial Intelligence -based technologies in nursing: A scoping literature review of the evidence. Int J Nurs Stud. 2022 Mar;127:104153. doi: 10.1016/j.ijnurstu.2021.104153. Epub 2021 Dec 7. PMID: 35092870. https://www.sciencedirect.com/science/article/pii/S0020748921002984?via%3Dihub

4. Wynn ST. Using Virtual Standardized Patients in Behavioral Health Interprofessional Education. J Nurs Educ. 2020 Oct 1;59(10):599-600. doi: 10.3928/01484834-20200921-14. PMID: 33002171. https://journals.healio.com/doi/10.3928/01484834-20200921-14?url_ver=Z39.88-2003&rfr_id=ori:rid:crossref.org&rfr_dat=cr_pub%20%200pubmed

5. Adamo G. Simulated and standardized patients in OSCEs: achievements and challenges 1992-2003. Med Teach. 2003 May;25(3):262-70. doi: 10.1080/0142159031000100300. PMID: 12881047. https://journals.healio.com/doi/10.3928/01484834-20200921-14?url_ver=Z39.88-2003&rfr_id=ori:rid:crossref.org&rfr_dat=cr_pub%20%200pubmed

6. Thomson H. Immersive virtual reality to promote leadership among health professions students. J Med Imaging Radiat Sci. 2023 Mar;54(1):28-34. doi: 10.1016/j.jmir.2022.11.005. Epub 2022 Dec 2. PMID: 36470839

7. Wallace, J., Rao, R., & Haslam, R. (2002). Simulated patients and objective structured clinical examinations: Review of their use in medical education. Advances in Psychiatric Treatment, 8(5), 342-348. doi:10.1192/apt.8.5.342

8. Bokken, Lonneke MD, PhD; Rethans, Jan-Joost MD, PhD; van Heurn, Lonneke MD; Duvivier, Robbert; Scherpbier, Albert MD, PhD; van der Vleuten, Cees PhD. Students' Views on the Use of Real Patients and Simulated Patients in Undergraduate Medical Education. Academic Medicine 84(7):p 958-963, July 2009. | DOI: 10.1097/ACM.0b013e3181a814a3

4.1C ChatGPT-3.5 vs. Search Engine: Comparative Case Study of Self-directed Learning

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Introduction: With the rapid advancement of technology, artificial intelligence (AI) models such as OpenAI's ChatGPT-3.5 have emerged as potentially valuable tools for medical student self-guided learning. However, the ability of these platforms to effectively and accurately relay information on niche and complex medical topics (e.g., Randleman criteria in Ophthalmology) remains largely unexplored. This study aims to evaluate and compare the reliability and accuracy of information concerning the Randleman criteria provided by ChatGPT-3.5 and independent internet search.

Methods/Project Description: Eighteen medical students gathered information on “the Randleman criteria.” Each student was allocated ten minutes to interact with ChatGPT-3.5 and another ten minutes to search the internet independently. Students provided a succinct summary of their findings. The ChatGPT-3.5 conversation thread, student summaries, and internet references were subsequently assessed for accessibility, accuracy, efficiency, and clinical relevance.

Results/Outcomes: ChatGPT-3.5 provided the correct definition for 33.3% of students (6/18, 95% confidence interval: 11-55%), while independent internet search resulted in sources containing the correct definition for 100% of students (18/18, $p = 0.00053$). ChatGPT-3.5 correctly identified the Randleman criteria as a pre-operative risk stratification tool for 33.3% of students (6/18), incorrectly identified it as a disease classification system for 22.2% of students (4/18), gave a fictitious definition for 5.6% of students (1/18), and gave no usable definition for 38.9% of students (7/18). Within conversation threads giving a definition (11/18), a median of 2 of the 5 correct parameters were provided along with a median of 2 additional falsified parameters.

Conclusions: The findings of this study suggest that while AI platforms like ChatGPT-3.5 present an innovative and interactive avenue for independent learning, they may not be as reliable as traditional search engines in relaying intricate and specialized medical knowledge such as the Randleman criteria. The results emphasize the need for learners to exercise discernment when using AI chatbots for medical education and indicate a requirement for further fine-tuning of AI systems for educational use, particularly in complex, fact-dependent domains like ophthalmology and medicine. Future studies might explore the implementation of prompt engineering training or a synergistic combination of self-directed learning tools to augment medical education.

4.2A Meet The Family": Working with caregivers to teach medical students about caring for children with intellectual and developmental disabilities

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Introduction: According to the CDC, ~17% of children, ages 3-17, were diagnosed with intellectual and developmental disability (IDD) between 2009 – 2017. This percentage has been increasing steadily over the past couple years. Children with IDD have been noted to have higher mortality rates with lower life expectancy and increased hospitalizations. Considering this data along with the concern for unmet health needs of children with IDD, it is imperative to ensure that physician trainees feel capable in caring for this patient demographic.

Methods/Project Description: Our goal was to create a new educational program that would provide a holistic view of the care of children with IDD through the lens of their families, increasing trainee comfort level in caring for and knowledge base regarding children with IDD. A cross-sectional study was conducted with the implementation of a virtual educational program. Students met virtually with the caregiver of a child with IDD, who provided an overview of navigating through the healthcare system and resources for children with IDD. Study population included fourth year medical students on pediatric outpatient rotation from September 2022 - March 2023 (n= 8). The primary outcome measured was medical student comfort level and knowledge in caring for patients with IDD. Efficacy was assessed by comparing pre and post intervention survey results.

Results/Outcomes: An independent two sample t-test demonstrated a significant increase in comfort level in conversing with families with children with IDD (p-value 0.0002). Although there was an increase in knowledge base, it was not statistically significant.

Conclusions: The virtual "meet the family" intervention demonstrates potential in increasing trainee comfort in caring for children with IDD. 100% of the study population found the "meet the family" session informative. Increasing the study population size will assist in demonstrating more standardized data. Expanding on a structured curriculum for IDD resources will be beneficial addressing the knowledge base.

4.2B Empowering Fifth Grade Girls: Enhancing Mental Health Awareness and Coping Skills through a School-Based Program

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Introduction: While 96% of public schools report offering at least one type of mental health service to their students there is a limited number of curriculums that integrate mental health into their typical classroom lesson plan where the service is offered to every student1. Most mental health services are offered on a case-by-case basis and only 34% focus on screening all children for mental health needs, despite the incidence of mental health diagnosis in adolescent populations increasing over the past few decades1,2. Early recognition and intervention of mental health needs could improve the negative health outcomes that impact children into adulthood. The goal of our program is to highlight the importance of mental health among adolescents who do not receive mental health services by focusing on factors that impact one's mental health and implement healthy stress outlets early in life.

Methods/Project Description: A 9 week program of 8-12 5th grade girls was created with collaboration of various professionals to provide lessons regarding impacting factors of mental health. We conducted a pre and post-survey to assess students' understanding of the various factors that impact their mental health. At the end of each lesson, we facilitate an activity that helps students relieve their stress.

Results/Outcomes: The survey results collected prior to the program and at conclusion of the program showed an increase in confidence in every survey question, reflecting that students understand how to handle their stress, improved self confidence and esteem, and know how to manage their negative emotions.

Conclusions: With the rise in incidence of mental health diagnoses amongst the adolescent population, early awareness in mental health needs is crucial. Implementation of mental health awareness would be beneficial to integrate into school curriculum. The early recognition and implementation of healthy stress outlets can be sustained throughout adulthood, leading to better health outcomes.

References:

1. Panchal N, Cox C, Rudowitz R. The Landscape of School-Based Mental Health Services. KFF. 06Sep2022.

4.2C Preparing Future Physicians for Holistic Disability Care: A Novel Curriculum in the Introduction to Clerkships Course

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Introduction: Lack of adequate disability training for physicians directly results in dangerous healthcare disparities for 61 million Americans with disabilities (1). However, traditional medical school education typically lacks dedicated training for the care of persons with disabilities (PWD), averaging only eleven minutes exposure over four years (2, 3). Calls to include disabilities competencies in physician residency training address the issue partially, but the fundamental gap in medical school education remains unresolved (4).

Methods/Project Description: In response, a specialized curriculum was developed for rising third-year medical students within the Introduction to Clerkships and Clinical Skills transition course. Over four days, students engaged with a young adult with cerebral palsy through a longitudinal case study approach. Teaching used diverse methods, including small and large group case discussion, role play, individual and group quizzes, procedural skills practice (e.g. gastrostomy and tracheostomy tube care and exchange), and a literature review assignment. Topics covered included routine and preventative care, disease-appropriate anticipatory guidance and palliation, evaluation and management of disease secondary sequelae, life-sustaining technology use, caregiver and patient rights for persons with intellectual disabilities, guardianship, special education services, therapy intervention, and team-based care.

Results/Outcomes: The curriculum required a total of eleven hours to deliver, and another three hours of student preparation. All students who completed course requirements passed the course, and no student did not pass the specialized case-study curriculum. Students demonstrated competence generally through formative assessments in both cognitive and bedside procedural skills. For bedside skills, students received immediate feedback and retesting opportunities to ensure skill mastery.

Students noted appreciation for the unique training for complex patient care, which they had not received previously, and positive end-of-course evaluations highlighted satisfaction for dedicated procedural skills training. Informal verbal student feedback noted improved attitudes and reduced fear when caring for these patients. While long-term outcomes are pending after this first year of curriculum use, the intervention exhibits promising results.

Conclusions: Addressing gaps in complex care education is essential. This curriculum enhances student preparedness and empowers future physicians to deliver holistic care, thereby promoting improved patient outcomes and satisfaction. Globally integrating similar initiatives in medical education is paramount for healthcare excellence.

References:

1. Marzolf, B. A., Plegue, M. A., Okanlami, O., Meyer, D., & Harper, D. M. (2022). Are medical students adequately trained to care for persons with disabilities?. PRiMER, 6, 34. https://doi.org/10.22454/PRiMER.2022.878147

2. Chardavoyne, P. C., Henry, A. M., & Sprow Forté, K. (2022). Understanding medical students' attitudes towards and experiences with persons with disabilities and disability education. Disability and Health Journal, 15(2), 101267. https://doi.org/10.1016/j.dhjo.2021.101267

3. Institute for Exceptional Care. (2023). A national roadmap for disability-inclusive healthcare. https://higherlogicdownload.s3.amazonaws.com/IM/fecab58a-0e31-416b-8e56-46fc9eda5c37/UploadedImages/Documents/advocacy/ABC3_National_Roadmap_for_Disability-Inclusive_Healthcare.pdf

4. Epstein, J. A., & Wu, A. W. (2021). Delivering complex care: Designing for patients and physicians. Journal of General Internal Medicine, 36(3), 772-774. https://doi.org/10.1007/s11606-020-06212-3

4.3A Creating An Effective At-Risk Identification and Support System

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(will be presented by Pierre Banks, EdD)

Introduction: More recently, medical schools have begun identifying at-risk incoming students to provide strategic and practical academic support for a successful first year. Through a highly collaborative process between Admissions and Recruitment (A&R) and Academic Support and Career Counseling (ASCC) at the University of Texas Medical Branch (UTMB), the John Sealy School of Medicine (JSSOM) Office of Student Affairs and Admissions developed the Incoming Student Supplemental Success Program (ISSSP) to better identify at-risk students and provide students with pragmatic academic resources.

Methods/Project Description: The ISSSP recruitment process begins using incoming students' data (first-generation status and recommended course completion) collected from a matriculation survey by A&R. The ASCC then conducts a risk assessment on all 230 incoming students to identify which would benefit most enhanced support. A multi-faceted approach is used to identify candidates for the ISSS program, incorporating MCAT score, undergraduate Science GPA, and completion of recommended (but not required) courses.

Results/Outcomes: Of the 230 matriculants, 40 students were invited to participate in ISSSP. 30 students accepted the invitation. 18 out of the 40 students invited (45%) experienced some academic difficulties during their first year. 80% (24) of ISSSP participants had no academic difficulties and 90% (27) of participants were successfully promoted to year two. In contrast, only 20% (2) of the invited students who opted out avoided academic difficulty and only 50% (5) were successfully promoted to year 2.

Conclusions: The algorithm successfully predicted 78% (14) of incoming students with year-one academic difficulties. The ISSSP has proven effective in both identifying at-risk students and providing academic intervention for at-risk students. Two years of additional data will also be disseminated regarding program effectiveness.

4.3B The Fortify Resilience Initiative

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Introduction: The Fortify Resilience Initiative focuses on building and sustaining a culture of wellbeing in The University of Texas Rio Grande Valley (UTRGV) School of Medicine's Graduate Medical Education residency programs. To address the multitude of threats to physician wellness and mitigate the silent, but pernicious effects of burnout on these physician learners serving in the RGV, this initiative has strengthened existing wellbeing pathways while expanding additional solutions that work to sustain wellness and resilience.

Methods/Project Description: This initiative maintains three key drivers (Access Strategy, Empowerment Initiatives, and System Redesign) that all work to address and enhance components central to wellbeing management. The premier driver provides continuous access to direct online clinical/coaching services, annual wellness check-ins, monthly live-online-learning sessions with skill development practical labs to all medical residents and clinical faculty of the institution. The "Fortify Resilience" wellbeing mobile application, allowing users to periodically self-assess and receive suggestions to improve self-management has entered its pilot phase, while establishment of program-specific Wellness Committees through our focus group informed guide "Promoting Well-being & Preventing Ill-being within Program Committees: A Team-Based Toolkit for Well-being Champions," continues as the project's second driver. A faculty development pathway to train faculty to full competency over current wellbeing methodologies is underway with an inaugural cohort, which aims at securing a lasting presence of institutional expertise, represents the third driver.

Results/Outcomes: Following the introduction of these interventions, positive trends are observed in the individual well-being items of the annual provider wellness surveys for 2022 and 2023. Service utilization and attendance rates continue to grow per academic annum, with a rise in provider satisfaction rates, as insights into the adoption rates of individual medical specialties/program-specific responses to the interventions have been discerned through the project's rapid cycle quality improvement process.

Conclusions: This initiative aims to signal a divergence from the practice of simply measuring the level of provider burnout present in the system, to reinforce a focus on cultivating a systemic culture that advances the proponents of what actively and passively promotes provider wellbeing through prevention/promotion/protection intervention strategies targeted at individual, program, and system levels to address existing gaps that spread risk and vulnerability.

References:

1. Eckleberry-Hunt, J., Van Dyke A., Lick, D., & Tucciarone, J. (2009). Changing the conversation from burnout to wellness: Physician well-being in residency training programs. Journal of Graduate Medical education. 1(2): 225–230. doi: 10.4300/JGME-D-09-00026.1

2. Dyrbye L, Shanafelt T. (2016) A narrative review on burnout experienced by medical students and residents. Med Educ.;50(1):132-149. doi:10.1111/medu.12927

3. Shanafelt T, Goh J, Sinsky C. (2017) The Business Case for Investing in Physician Well-being. JAMA Intern Med.177(12):1826–1832. doi:10.1001/jamainternmed.2017.4340

4. Dyrbye LN, Burke SE, Hardeman RR, et al. (2018) Association of Clinical Specialty With Symptoms of Burnout and Career Choice Regret Among US Resident Physicians. JAMA.;320(11):1114–1130. doi:10.1001/jama.2018.12615

5. Weiner, Stacy (2021) Doctors forgo mental health care during pandemic over concerns about licensing, stigma. Association of American Medical Colleges. Retrieved from: https://www.aamc.org/news-insights/doctors-forgomental-health-care-during-pandemic-over-concerns-about-licensing-stigma

4.3C Setting Students up for Success: Career Development and The Match

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Introduction: The National Residency Matching Program has become increasingly competitive, requiring extensive research and networking efforts [1]. Exposure to specialties later in one's medical education limits students from engaging in specialty-specific research and hinders their capacity to establish meaningful connections with physicians in their chosen field. The pressing need to engage in research and identify mentors in a timely manner has prompted more students to invest in dedicated research years to enhance their prospects of securing a position in their desired specialty [2].

Methods/Project Description: We implemented a lecture series featuring physicians from diverse specialties who shared insights with preclinical students. These lectures aimed to equip students with information about each specialty, including pathologies treated, patient demographics, daily routines, available subspecialties, and lifestyle considerations. Each lecture provided guidance on maximizing the likelihood of matching within the field. Importantly, these sessions allowed students to explore specialties not typically learned about in preclinical education and facilitated connections with mentors in the field.

To evaluate efficacy, we administered surveys before and after each lecture. The pre-lecture surveys assessed interest in the specialty, existing knowledge of the field, likelihood of seeking additional opportunities, and understanding of the day-to-day aspects of the specialty. Post-lecture surveys repeated these assessments while also gauging satisfaction and perceived impact on career development.

Results/Outcomes: Analysis revealed that the average satisfaction rating for the lecture series was 4.1 out of 5, while the average perceived career value was 4.2 out of 5. Furthermore, a statistically significant increase was observed in students' perceived interest in the specialties, their knowledge of those specialties, and their understanding of the daily routines associated with them.

Conclusions: The lecture series has proven to be an effective means of exposing preclinical students to various medical specialties they may not encounter otherwise. On average, students expressed satisfaction with the lectures and found them valuable for their career development. The increases in interest, knowledge, and daily routines suggest that students acquired substantial insights from these lectures. This lecture series equipped students with knowledge of diverse specialties and connected them with mentors in each field, offering valuable resources for their future endeavors.

References:

1. Charting Outcomes in the Match: Senior Students of U.S. MD Medical Schools Characteristics of U.S. MD Seniors Who Matched to Their Preferred Specialty in the 2022 Main Residency Match 3rd Edition.; 2022. https://www.nrmp.org/wp-content/uploads/2022/07/Charting-Outcomes-MD-Seniors-2022_Final. pdf

2. Pathipati AS, Taleghani N. Research in Medical School: A Survey Evaluating Why Medical Students Take Research Years. Cureus. 2016;8(8):e741. Published 2016 Aug 18. doi:10.7759/cureus.741

4.4A Effects of an Innovative Community Based Participatory Research Curriculum on Medical Students' Professional Identity Formation

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Introduction: Professional identity formation (PIF) is the transformative process through which "the characteristics, values, and norms of the medical profession are negotiated and internalized, resulting in an individual thinking, acting and feeling like a physician." [1]

Sarraf-Yazdi et al suggest viewing PIF through the lens of the "ring theory of personhood" where curricular experiences may impact each of the four "rings" that compose a person's identity: innate, personal, relational, societal rings. [2]

Holden et al have suggested that curricular innovations be examined for their impact on PIF.[3] The curricular framework for service-learning at our medical school is situated in community-based participatory research (CBPR.) CBPR is a collaborative approach to addressing a community health issue that emphasizes bidirectional learning between the community and academic partners and asks the academic partner to empower the community to direct the goals and interventions of the project to address the community health issue. [4]

Methods/Project Description: Third year medical students were asked to write written reflections of their service-learning experience. Two investigators (KK and JL) coded the written reflections independently and then came together to discuss their codes, resolving any differences through discussion, and creating a codebook. A deductive thematic analysis was utilized in order to answer the research question: How does a CBPR curriculum affect the professional identify formation of medical students?

Theme #1 (Individual Ring): The process of perspective-taking promotes becoming an empathetic physician. Enabling factors are empathy with stakeholders and seeing oneself as a future change agent.

Theme #2 (Relational Ring): The process of perspective-taking and reconciliation of learner/ stakeholder beliefs with a goal of unifying around a common mission was expressed in several different ways:

(1) Bidirectional learning (Both learner and stakeholder beliefs are incorporated into the final goal)

(2) Learner pivots from their original belief to stakeholder's belief

(3) Learner keeps original beliefs

Enabling factors are empathy, humility, and discernment.

Conclusions: This work highlights the importance of perspective-taking in the professional identity formation of medical students as well as the potential influence of a curricular framework that emphasizes bidirectional learning and empowerment of community stakeholders.

References:

1. Cruess et al. "Reframing medical education to support professional identity formation. Acad Med. 2014 Nov; 89 (11): 1446-51.

2. Sarraf-Yazdi, Shiva, et al. A Scoping Review of Professional Identity Formation in Undergraduate Medical Education. J Gen Intern Med. 2021 Nov;36(11):3511-3521.

3. Holden, Mark, et al. Professional Identity Formation: Creating a Longitudinal Framework Through TIME (Transformation in Medical Education). Acad Med. 2015 Jun;90(6):761-767.

4. Ward M, Schulz AJ, Israel BA, Rice K, Martenies SE, Markarian E. A conceptual framework for evaluating health equity promotion within community-based participatory research partnerships. Eval Program Plann. 2018 Oct;70:25-34. doi: 10.1016/j.evalprogplan.2018.04.014. Epub 2018 Apr 30. PMID: 29894902; PMCID: PMC6077092.

4.4B Identifying Critical Course Elements in the Formation of Interprofessional Identity

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Introduction: Dual identity development has been proposed to be central to interprofessional collaborative practice. This requires the formation of an interprofessional identity along with professional identity development. Existing literature suggests longitudinal, integrated interprofessional programs may enhance interprofessional identity formation, but further research to determine critical learning modalities in these programs is needed.

Methods/Project Description: Our institution conducts a 2-semester, interprofessional foundational course for students in medicine, nursing, pharmacy, and social work. Students were asked to rate the importance of 13 different course elements to their interprofessional identity formation using a 5-point Likert scale. Students were informed their interprofessional identities include a sense of belonging to an interprofessional team, contribution and accountability to the team and its work, commitment to do their best in support of their team members, and respectful and empathetic interactions with team members.

Results/Outcomes: Three years of evaluation data (n=498) were compared which represented three different modalities of course offering from 2021-2023 (online, hybrid, and in-person, respectively). The categories of extremely and very important were combined, as well as the categories of slightly and not at all important. Categories were then ranked to determine patterns for the most and least important elements to interprofessional identity formation. Since the top four most important and the two least important elements were consistent across all 3 years of evaluation, the data were combined for analysis.

The top four most important elements reported by students were interprofessional faculty facilitators (79.5%), observing interprofessional role modeling by faculty (79.5%), class role play activities (79.3%), and the capstone telehealth simulation (78.1%). These top four elements were ranked higher than other types of team activities (66.9%) and team discussions (71.7%). Only two elements were rated by less than 50% of students as being extremely or very important. The two least important elements were one-minute reflections (25%) and team communication outside of class (48.5%). Although the reflections scored the lowest, the value of the reflections may be more related to self-assessment of content acquisition than interprofessional identity formation.

Conclusions: Our findings clarify which course elements are important for interprofessional identity formation. These findings are used to guide course improvement to enhance learning outcomes.

4.4C Advocacy 101 and Medical-Legal Partnerships Learning Modules to Educate Health Professional Students about How to Initiate Positive Change: A UTHealth Houston Quality Enhancement Project (QEP)

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Introduction: UTHealth Houston's students lack understanding of health policy-making and policy's influence on their professions, according to an institutional baseline survey and literature review. The goal of our Quality Enhancement Plan is for health sciences students to gain knowledge about health policy. More specifically, we developed and implemented the Advocacy 101 module and an advanced advocacy module, Medical-Legal Partnerships (MLP), to provide students with tools to initiate positive changes for patients and within their health professions.

Methods/Project Description: A competency-based approach and an inter-professional focus guided development of Advocacy 101 and MLP curricula to implement across six health professional schools —biomedical informatics, biomedical sciences, dentistry, medicine, nursing, and public health. Module content incorporated examples and scenarios relevant to each health profession. Outcomes, objectives, and assessments were developed using Bloom's taxonomy and adult learning principles. The instructional mode is asynchronous and online in Canvas, including instructor resources to use as a flipped classroom. Readings, videos, and low-stakes assessments are designed to engage students in advocacy.

Results/Outcomes: To evaluate students' performance on learning outcomes and objectives, assessments included multiple-choice, matching, and open-ended questions. Students evaluated their learning and the modules via a post-survey. The pilot included 232 medical students. Students achieved 75% or higher on Advocacy 101 and 80% or higher on MLP assessments. Pre-post comparisons demonstrated statistically significant knowledge-gains with large effect ($p < .001$). Students rated 9 attributes about Advocacy 101 and 3 attributes about MLP with favorable results. Mean ratings ranged from 3.64 (SD = 1.23) for completion time to 4.17 (SD = 0.88) for MLP improving their understanding of social determinants of health (5-point scale: 1-strongly disagree to 5-strongly agree). Most students agreed or strongly agreed with all 12 attributes.

Conclusions: From the Fall 2023 pilot, our students exhibited knowledge-gain overall and for both learning outcomes. This result was consistent across both modules. Evaluative feedback suggests the activity was well-received with students sharing the activity was valuable as an introduction to advocacy and improved their understanding of health professionals' roles in medical-legal partnerships. Pilot results will inform revision as the modules are expanded and scaled-up to reach our six health professional schools.

7.1A Bridging mentorship gaps in scientific communication through a workshop for postdocs

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Introduction: Scientific communication skills are critical for professional development in the biomedical sciences. Given their importance, the "Scientific Communication Advances Research Excellence" (R25 GM125640, 'SCOARE') workshop was developed to teach the 'why' and 'how' of mentoring scientific communication skills to faculty. However, student skill development is also influenced by daily interactions with postdoctoral researchers (postdocs), who typically lack formal training in this critical role. The purpose of this project was to ascertain the effectiveness of the SCOARE workshop tailored for postdocs.

Methods/Project Description: The SCOARE workshop on developing and implementing mentoring skills was given to two cohorts of postdoc participants between February 2023 and July 2023. The content and format of the existing two-day faculty SCOARE workshop was tailored to address the challenges and needs of postdocs and consisted of didactic presentations and small group work. Anonymous surveys were administered immediately after the workshop and six months later to assess the workshop's effectiveness.

Results/Outcomes: Of the 34 postdocs who completed the workshop, 85% participated in the initial evaluation survey. Most respondents expressed they gained significant insights, with the most notable increase observed in understanding engagement strategies for scientific writing. Qualitative responses indicated that creating opportunities for engagement would be the most difficult to implement because of limited time and resources. Based on earlier feedback, we anticipate that the incorporation of more hands-on activities and resources for identifying one's mentoring style, building confidence as a new mentor, and mentoring up and/or peer mentoring are instrumental in enhancing the effectiveness of the program. The comprehensive results of the project will be presented, which will guide us in tailoring the workshop to better suit the specific needs of future postdoc audiences.

Conclusions: Overall, the SCOARE workshop was well-received. The evaluation results suggest that the workshop had a significant effect on participants' intent to apply new and various techniques in their own work and with mentees. The results also reveal areas in which adjustments are needed to make the workshop more relevant to those in a postdoc position. This information will be used to refine the learning objectives and workshop content for a postdoc audience.

7.1B Enhancing Workforce Preparation: Interdisciplinary Case Study Implementation

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Introduction: The School of Health Professions (SHP) at The University of Texas MD Anderson Cancer Center offers 10 undergraduate programs and 3 graduate programs. Interprofessional education (IPE) in the SHP includes an interdisciplinary case study (IDCS). The purpose of the IDCS is to provide students practical experience with the concepts of IPE. This project is created and supported in collaboration between Education Development and Innovations (EDI) and SHP.

Methods/Project Description: The IDCS brings seniors from the 10 undergraduate programs together to complete a case related to cancer care involving each program. The case study is designed by interprofessional SHP faculty and educators with support from the EDI team. All undergraduate seniors are invited and expected to attend. The event usually has 10-16 interprofessional groups and about 170-190 attendees. Students work together to complete a cancer case, engage in teaming and introduction of new programs. Since the first IDCS was held during the COVID pandemic, the event has been held virtually via Zoom. The SHP faculty and educators serve as the moderators for each student group and, using a facilitator guide, guide students through the process. The 2.5-hour event includes engaging in icebreaker activities, taking the IPAS survey, learning about the other undergraduate programs in SHP, completing the IDCS and debriefing. The actual case study includes discussion about the patient's treatment plan, including treatment history, treatment options, treatment issues/ concerns, professionals involved in the treatment, and patient/ family values. Both students and faculty/ educators are surveyed at the end of the event.

Results/Outcomes: This session will review the processes over the last 2 years and discuss lessons learned. Additionally, we will share the data collected from the events which include pre and post IPAS results, actual results of the IDCS, as well as participant feedback. Using the lessons learned, the third event in April 2024 will be held in a HyFlex format.

Conclusions: The IDCS is an innovative and successful interprofessional activity for health professions students in the diverse programs relating to cancer diagnosis and treatment.

7.1C Creating a Culture Document to Improve Well-Being

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Introduction: The University of Texas MD Anderson Cancer Center has a strong organizational mission, vision and goals that guide more than 24,000 employees. As the institution reimagines the workplace and transitions much of its Division of Education & Training (E&T) to remote or hybrid work, division leaders recognized the importance of understanding who we are and who we aspire to be. This became a motivator to research and understand the life experiences of the staff and faculty of E&T to better define and influence a strong organizational culture within the division. The end goal was to create a culture document that reflects the guiding principles that are essential for the employees to embody and emphasize on a regular basis.

Methods/Project Description: Quantitative data from the institution's 2021 Employee Engagement Survey provided a foundational understanding regarding the E&T's status. Using this information to establish a baseline, division leaders undertook a qualitative study to understand employees' perceptions and desires for the division's enhanced and improved culture. Using a 17-question culture document interview guide, a total of 27 E&T employees volunteered and were organized into three focus groups according to job title classification. Additionally, the results from the quantitative 2023 Employee Engagement Survey were included.

Results/Outcomes: The qualitative study contained 17 questions surrounding four organizational subconstructs. Major positive prevailing themes were: opportunities for impact, supportive environment, supportive of employee growth, employees are comfortable, perception of department's integrity, and participants' feelings of having the ability to make change happen or opportunities for change. Areas of improvement included holding employees accountable for errors, a need for increased transparency, and voicing of opinions at all levels.

Since we have intentionally placed the culture document at the center of our division, comparing the 2021 and the 2023 Employee Engagement Survey demonstrated several measurable areas of improvement.

Conclusions: Education & Training's culture is built on the foundation of MD Anderson's Core Values. The E&T Culture document is about that culture, and how we can continuously improve as a team to better serve our members. This presentation will review the quantitative and qualitative data from the E&T Culture Document and division planning.

7.2A Catalyzing Interprofessional Team Development Through Outcomes-Driven, Project-Based Learning

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Introduction: Optimization of the interprofessional clinical learning environment (CLE) necessitates novel approaches to prepare a health care workforce for collaborative practice. The interprofessional learning continuum is a framework from the National Academy of Medicine that emphasizes learning from pre- to post-licensure. Team-based professional development is one model of training clinician educators and administrators to develop innovative initiatives to advance the interprofessional CLE at their universities and health systems.

Methods/Project Description: The Center for Health Interprofessional Practice and Education at UT Austin partners with the national Train-the-Trainer Interprofessional Team Development Program to lead professional development for institutional teams of clinician educators and administrators. Teams with members representing at least two different professions are immersed in a 3.5-day training. Core to the program is the integration of project-based learning as part of the learning pedagogy. Teams apply the concepts and skills gained each day to develop the interprofessional project they identified as priority for their institutions. Project-based learning, applied in a rapid, outcomes-driven timeline, accelerates the team building needed to promote problem-solving in a collaborative environment. Initiating this program during the pandemic, UT redesigned the programming for virtual synchronous delivery while adhering to the core principles and team-centered approach.

Results/Outcomes: Five virtual trainings were conducted over 2 years for 23 teams from 21 institutions, representing 24 professions. Most participants (98%) rated the overall experience as excellent or good. The program has nine primary learning outcomes: curricular design, evaluation, scholarship, leadership, team dynamics, innovation, implementation and sustainability, communication, and peer network. All participants reported the team training met all learning outcomes. Additionally, 93% planned to make changes in their practice as a result of this training while 7% reported it affirmed their current behavior. About 78% reported the virtual format was either more effective than in-person or equally effective for team building and collaboration.

Conclusions: Professional development was catalyzed using a project-based, team-centered, outcomes-driven approach to advance team initiatives aimed at optimizing interprofessional CLE. Online delivery of a complex, multi-day program requires team commitment and intentional instructional design with immersive experiences. The impact continues beyond training as participants return to their institutions with a plan.

References:

1. Institute of Medicine Committee on Measuring the Impact of Interprofessional Education and on Collaborative Practice and Patient Outcomes. Washington, D.C.: The National Academics Press; 2015.

7.2B Texas-Sized Innovation: The Texas IPE Consortium

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Introduction: In 2015, the State of Texas Legislature's House Committee on Public Health asked the presidents from health-related institutions to share and consolidate resources. This request resulted in the Texas Interprofessional Education (IPE) Task Force, renamed the Texas Interprofessional Practice and Education (IPE) Consortium in 2018. The main purpose of the Consortium is to foster inter-institutional collaboration to expand learning opportunities and reinforce the value of IPE as a critical aspect of health professions education.1

Methods/Project Description: The Consortium has an overarching goal to facilitate widespread IPE in Texas to prepare all health professional students for deliberately and collaboratively working together to reach a common goal of coordinated, high quality, patient-centered care for all Texans. To achieve this, the Consortium conducts faculty and practitioner development that emphasizes IPE innovations in curricular and experiential learning, team training, and opportunities for collaborative networking.

Results/Outcomes: The Consortium currently has 36 institutional members (31 in-state, 5 out-of-state). It has conducted numerous IPE programming, including two annual meetings, seven biannual meetings with focused IPE themes, and three virtual interactive workshops known as "Conversations in IPE", started during the pandemic initially to support educators in transitioning their in-person IPE activities to virtual. The consortium organized and hosted the first regional IPE summit, "IPE Connect", to convene regional and statewide IPE organizations across the country to network and explore cross collaborations. The Consortium offers TeamSTEPPS® Master Training for clinician educators, with 452 individuals (369 in-state, 83 out-of-state) trained to date, representing 28 different professions from 74 unique institutions. The Consortium developed the IPE Facilitation Certificate Course in 2022, which has been completed by 159 individuals (123 in-state, 36 out-of-state), representing 24 different professions from 53 unique institutions. Program evaluations are positive, with respondents indicating participation improved programming at their home institutions and increased collaboration with other institutions. The consortium has presented at state, national, and international conferences and has been recognized as an exemplar for its excellence in IPE.

Conclusions: Through collaborative innovations, the Texas IPE Consortium is achieving its strategic goals to advance IPE across health-related institutions and consolidate resources to support IPE across Texas.

References:

1. Hoggatt Krumwiede K, Bogschutz R, Farmer D, Young V, Kaunas C. Building a statewide consortium to advance interprofessional practice and education: Lessons from the lone star state. Journal of Interprofessional Education and Practice, September 2021. https://doi.org/10.1016/j.xjep.2021.100443

7.2C Developing tomorrow's leaders, today: An Interprofessional Leadership Fellowship for Allied Health Professions

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Introduction: UTHealthLeads is a student fellowship program to develop tomorrow's leaders in healthcare, today. Like many other professions, health care students are not taught how to lead despite the need and importance of this skill in the health field. We have developed and implemented UTHealthLeads program to teach students how to lead themselves, lead others, and lead in systems.

Methods/Project Description: The primary objective of the program is to increase UTHealth Houston student leadership skills and confidence. All six UTHealth Houston Schools had one Dean oversee a selection committee that nominated 4 students to represent their school that they felt had the potential to grow as a leader in the health field. The student time commitment for UTHealthLeads begins in August with a Kick-off event and ends in April with a finale. For the other 7 months, students alternatively meet monthly for a 1-hr lunch-and-learn with a leadership coach and 1-hr Q&A session with guest speakers that hold an executive leadership role. There is a required capstone project at the end of the program involving an informational interview of the Dean and two additional leaders of the student's school.

Results/Outcomes: We assessed whether or not the objective has been met by comparing cumulative scores for each question pre-program and post-program. This study was completed at the first meeting of the cohort and the last meeting of the cohort electronically using Qualtrics. After the completion of the program, we found that for the last two years students increased their leadership skills up to 17%. Study results were compared by question and section on the average score. Given that the post-program overall scores are higher, the program was determined successful in 2022 and 2023. In addition, students also stated, "this was a fantastic program, I really learned a lot and got a lot of benefits from it," and "this was one of the most powerful and life changing experiences," among other feedback.

Conclusions: Overall, selected fellows gained a better understanding of leadership competencies, leadership styles, leadership roles in healthcare and academic medical centers, the correlation between professional identity and leadership, and conflict resolution.

References:

https://graduate.northeastern.edu/resources/what-is-healthcare-leadership/#:~:text=Improves%20Quality%20of%20Care&text=Great%20leaders%20facilitate%20communication%2C%20boost,communication%20and%20efficiency%20are%20vital.

https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5746707/

7.3A Advancing Medical Education through Hands-On Ultrasound Teaching Sessions at McGovern Medical School

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Introduction: Ultrasound technology is pivotal in modern medicine and is essential for healthcare practitioners. McGovern Medical School recognized the need to enhance ultrasound education for its medical students and radiology residents, ultimately fostering their competence and confidence in diagnostic imaging. To address this, we introduced hands-on ultrasound teaching sessions to provide a transformative educational experience.

Methods/Project Description: Our initiative involved the development and implementation of comprehensive hands-on ultrasound teaching sessions. These sessions were designed to empower medical students and radiology residents with practical skills in ultrasound image acquisition and interpretation. The curriculum included theoretical knowledge, hands-on practice, and guided mentorship, ensuring a well-rounded learning experience.

Results/Outcomes: The outcomes of our initiative demonstrated significant educational benefits. Ultrasound exposure was an excellent opportunity to introduce ultrasound to medical students and reinforce their understanding and familiarity. Multiple direct benefits were also noted. First, participants showed remarkable improvement in their ultrasound proficiency, as evidenced by pre- and post-session assessments. Second, the sessions fostered an environment of mentorship, encouraging collaborative learning and facilitating a strong sense of professional development. Third, the initiative promoted interdisciplinary collaboration between medical students and radiology residents, fostering a culture of knowledge sharing and peer mentorship, leading to multiple students demonstrating long-term interest in radiology.

Additionally, quantitative data collected during the sessions revealed a substantial increase in participant confidence levels regarding ultrasound use in clinical practice. This data will be presented to underscore the effectiveness of our approach further.

Conclusions: Implementing hands-on ultrasound teaching sessions at McGovern Medical School has improved the ultrasound skills of medical students and radiology residents and strengthened our institution's mentorship culture. These outcomes align with the conference theme, emphasizing the role of mentorship in healthcare education. Our experience underscores the importance of innovative educational approaches and highlights the potential for change when mentorship is integrated into curricular activities.

In summary, our initiative presents a model for enhancing ultrasound education and fostering mentorship in healthcare education. We look forward to sharing our insights, outcomes, and data at the 2024 Innovations in Health Science Education Conference to inspire similar initiatives across the medical education community.

7.3B Teaching Trainees about an Ideal Crisis Care Continuum: A Case-Based Learning Activity

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Introduction: Behavioral health crisis services have been the source of criticism in recent years [1, 2]. Medical schools have the opportunity to inspire students towards change and provide them with the tools to think innovatively about possible solutions. The Psychiatry and the Community Committee with the Group for Advancement of Psychiatry (of which the senior author is a member) developed a roadmap to the ideal behavioral health crisis system that emphasizes the importance of a continuum of services aimed at crisis prevention [3]. The group has also developed educational curricula to educate trainees about ideal crisis services. One of the modules developed by the group (and one of the trainee coauthors) aims to teach trainees about the individual components of the ideal continuum of care in an interactive way using case-based learning. This module was integrated into the medical student clerkship curriculum at one medical school beginning in July 2023.

Methods/Project Description: Students were surveyed before and after the educational activity using an Institutional SurveyMonkey tool. This protocol was reviewed by our institution's IRB office and determined to not meet the definition of research.

Students were asked about their familiarity with behavioral health crisis services, their satisfaction with behavioral health crisis services, their familiarity with the core principles of an ideal behavioral health crisis system, their confidence in referring patients undergoing behavioral health crises to the appropriate resources, and whether they felt that knowing this information about the behavioral health crisis continuum was important regardless of specialty. Surveys will be analyzed in a collated fashion to look for changes in survey responses pre- and post-educational activity.

Results/Outcomes: Initial raw data indicates improvements in students' familiarity with behavioral health crisis services in Dallas County and components of the ideal behavioral health crisis continuum. There were also improvements in students' beliefs that familiarity with the behavioral crisis continuum was important regardless of specialty and their confidence in referring patients experiencing behavioral health crisis to appropriate resources.

Conclusions: After participation in the activity, there were improvements in students' knowledge about behavioral health crisis systems along with greater confidence in referring patients experiencing behavioral health crises to appropriate resources.

References:

1. Fuller DA, Lamb HR, Biasotti Mi, and Snook J. Overlooked in the Undercounted: The Role of Behavioral Illness in Fatal Law Enforcement Encounter. Treatment Advocacy Center, December 2015, https://www.treatmentadvocacycenter.org/storage/documents/overlooked-in-the-undercounted.pdf

2. Pinals, D. A., & Fuller, D. A. (2020). The vital role of a full continuum of psychiatric care beyond beds. Psychiatric Services, 71(7), 713- 721. https://doi.org/10.1176/appi.ps.201900516

3. Minkoff K, Feldman JM, Adams C, Baker S, Balfour M, Chen X, Dragatsi D, Flaum M, Hackman A, Leifman S, LeMelle S, Munetz, Myrick K, Osher F, Panzer P, Parks J, Santopietro J, Yang Y. Roadmap to the Ideal Crisis System: Essential Elements, Measurable Standards and Best Practices for Behavioral Health Crisis Response, Publication from the Committee on Psychiatry and the Community for the Group for the Advancement of Psychiatry and National Council for Behavioral Health, 2021, available at: https://www.thenationalcouncil.org/wp content/uploads/2021/03/031121_GAP_Crisis-Report_Final.pdf?daf=375ateTbd56.

7.3C An Active Approach to Professional and Ethical Education: Using an Objective Standardized Clinical Examination to Evaluate Pediatric Residents Ethical Competency

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Introduction: Amidst continually evolving medical advances and professional guidance, clinical decision-making is a complex endeavor, complicating the ethical education of young physicians. Particularly, pediatricians who care for minors must also consider the values of their legal decision maker, as well as values of other stakeholders involved. Ethics education in training is thus not only a necessity but is also formative; it supports professional identity formation by providing the necessary tools for decisions in contemporary medical practice[1].

Since 1997 the Accreditation Council for Graduate Medical Education requires ethics education for medical trainees[2]. Despite this mandate, many residency programs lack a formalized ethics curriculum[3]. We introduced an ethical-moral dilemma as an Objective Standardized Clinical Examination (OSCE) for both first- and third-year residents.

Methods/Project Description: The OSCE scenario was created by interprofessional faculty to include multi-dimensional ethical, professional and legal considerations. The case was based on an adolescent who with the support of a parent, refused lifesaving chemotherapy. Our goal was to evaluate ethical knowledge of residents with the a priori hypothesis that third year residents would have better overall performance based on experiential learning[4].

Results/Outcomes: 32 first- and 12 third-year residents participated in the OSCE. Both first- and third-year trainees similarly embraced empathic practice skills (mean 4.4 vs 4.3 respectively on a 5-point Likert scale, p value= 0.46). However, both classes similarly struggled balancing professional and ethical obligations in communicating to parents the standard of decision-making for children (low scores on physician accountability and legal duties, p value= 0.1). Trainees also emphasized patient autonomy at the cost of other ethical obligations (22/32 (69%) vs 10/12 (83%) first- and third-year residents respectively).

Conclusions: Our OSCE was a successful modality for innovative ethics education. It was applied to assess knowledge and experiential growth of ethics knowledge. Our results showed that morally complex cases challenge both first- and third-year residents. Assessing the gaps in ethical knowledge provides the foundation of devising sensible ethical education for trainees. The practical adaptation of this commonly used medical assessment tool (OSCE) is sustainable and can be easily incorporated into any residency program curriculum to assess ethical knowledge.

1. Carrese, Joseph A. MD, MPH; Malek, Janet PhD; Watson, Katie JD; Lehmann, Lisa Soleymani MD, PhD; Green, Michael J. MD, MS; McCullough, Laurence B. PhD; Geller, Gail ScD, MHS; Braddock, Clarence H. III MD, MPH; Doukas, David J. MD. The Essential Role of Medical Ethics Education in Achieving Professionalism: The Romanell Report. Academic Medicine 90(6):p 744-752, June 2015. | DOI: 10.1097/ACM.0000000000000715

2. https://www.acgme.org/specialties/pediatrics/program-requirements-and-faqs-and-applications/ Accessed Aug 1, 2022.

3. Waltz M, Davis A, Cadigan RJ, Jaswaney R, Smith M, Joyner B. Professionalism and Ethics: A Standardized Patient Observed Standardized Clinical Examination to Assess ACGME Pediatric Professionalism Milestones. MedEdPORTAL. 2020;16:10873. https://doi.org/10.15766/mep_2374-8265.10873

4. Gisondi, M. A., Smith-Coggins, R., Harter, P. M., Soltysik, R. C., & Yarnold, P. R. (2004). Assessment of resident professionalism using high-fidelity simulation of ethical dilemmas. Academic emergency medicine: official journal of the Society for Academic Emergency Medicine, 11(9), 931–937. https://doi.org/10.1197/j.aem.2004.04.005

7.4A Self Directed Learning: A Heutagogical Approach – Do Learners Like This?

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Introduction: Learning in clinical settings and group didactics is important but insufficient for residents to become excellent practitioners and pass board exams. Self-directed learning must also occur. Yet telling learners to "read more" is ineffective.

Constructivism learning theory posits that, with minimal instructor steering, learners can construct knowledge rather than passively absorb information1,2. Heutagogy (or self-determined learning) is a constructivist instructional approach, using student-centered strategies to learn-how-to-learn 3,4.

We developed the Health & Development curriculum for pediatric residents, grounded in constructivism learning theory, using heutagogical methods. We hypothesized that residents could build self-constructed knowledge sets without 'spoon fed' content. We present here results of 2-year mixed-methods evaluation.

Methods/Project Description: The 4-week curriculum includes twelve modules, each with objectives to focus effort, question-sets to answer, no content knowledge provided, but resources suggested (e.g., textbooks, articles, websites). Three clinical activities support application of skills, and time is built-in for brief individualized interactions with Rotation Director and Faculty Readers.

From July 2020 – June 2022, we conducted systematic mixed methods quantitative and qualitative evaluation of the curriculum using pre-and-post-rotation surveys. The evaluation plan included (a) Likert-scaled evaluation of self-directed learning, (b) Likert-scaled and free-text evaluations of the curriculum, and (c) Likert-scaled self-assessment of confidence for pediatric tasks.

Results/Outcomes: Over two years, 28 residents completed the curriculum. Matched pre-post-rotation data was available from 17 (response rate 61%); end-of-rotation data was available from 23 (response rate 82%). All residents supported self-directed learning as an effective method. End-of-rotation evaluations were above-average on 10 measures. Chi-square tests show significant improvement in self-confidence for 7/8 tasks.

Conclusions: Instructional methods for this curriculum support our belief in heutagogy - that learners can construct their new knowledge through exploration, with minimal faculty time. Residents were confident that self-directed learning is a productive way to learn and were positive about the content and methods. Residents appreciated the autonomy, with just enough faculty support. We believe that using this framework of constructivism and heutagogy adds to retention of learning and to self-efficacy of the learner.

References:

1. Bruner J. Toward a theory of instruction. Harvard University Press; 1966.

2. Piaget J. The origin of intelligence in the child. 1953

3. Blaschke L. A Review of Heutagogical Practice and Self-Determined Learning. The International Review of Research in Open and Distance Learning. 2012;13 (1)(Jan):56-71.

7.4B Clinical Teaching Toolkit for Clinical Faculty and Preceptors

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Introduction: Health care professions' education requires a clinical teaching component that centers on actual patient care or real-life patient care scenarios and decision-making. Clinical teaching occurs with preceptors, health care team members, and clinical faculty. Those engaged in clinical teaching require support to optimize their teaching and develop confidence in handling common challenges.

Methods/Project Description: The goal of this project was to develop a Clinical Teaching Toolkit to support and enhance the skills of preceptors and clinical faculty. The toolkit includes information resources (e.g., frequently asked questions, teaching-learning methods, strategies to develop clinical reasoning, work-life balance, etc.); simulations and role plays to improve clinical teaching (e.g., handling incivility, evaluating competency and providing feedback, coaching students to receive feedback, and talking to student unhappy with their evaluation); and video vignettes of how to address common challenges in precepting and clinical teaching (e.g., providing feedback, incivility, managing under- and over-confident students, coaching time management and managing stress). The Clinical Teaching Toolkit uses a website for dissemination to make the content easy to access for busy health care professionals https://nursing.utexas.edu/clinical-teaching-resources.

Results/Outcomes: The website was launched August 2023, and over 915 preceptors, clinical agencies, and nursing schools were emailed the link. As of 9/18/23, the google analytics report indicated 1,627 page views of the website and 362 views of the video vignettes addressing common clinical teaching challenges. Feedback from those preceptors who have reviewed the resources and videos has been positive.

Conclusions: Resources that enhance clinical teaching are needed and should be widely available to support and advance preceptors and clinical teachers' confidence and skills. The Clinical Teaching Toolkit developed here meets some of these needs. Further dissemination of the content and evaluation of its usefulness is needed.

7.4C Caught, Taught, Sought: Creating a Longitudinal Faculty Development Program on Character

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Introduction: Historically, medical education has selected students and residents based on academic qualities and skills and has excelled in equipping them with the knowledge and technical skills to be competent practitioners. Medical education has not placed the same emphasis on selecting trainees with high character or purposefully supporting character development and expression. An intentional focus on character will require faculty members prepared to help mobilize character development and expression in order to ensure that future physicians are best positioned to flourish personally and professionally.

Methods/Project Description: With funding from the Kern National Network for Flourishing in Medicine, three schools collaborated in developing and implementing a 6-session longitudinal faculty development program, Mobilizing Character, designed to strengthen faculty members' skills in integrating a focus on the development, expression, and reinforcement of good character into their teaching, mentoring, and leadership strategies. We began by conducting a needs assessment study consisting of interviews with faculty members identified as influential role models for good character, a student essay competition about influential experiences in character formation, and responses to The Good Physician Survey from a sample of residents and students. Data were collected at the three schools and analyzed for common themes.

Results/Outcomes: Across the three schools, we completed 20 semi-structured interviews with faculty. Fifteen students submitted character essays, and 192 students and 30 residents completed the Good Physician Survey. Using content analysis, we identified three themes: intentional teaching practices that highlight character such as purposeful role modeling, storytelling, reflection-in-action and on-action; perspective taking and empathic compassion; personal qualities such as thoughtfulness, humility, mattering-focus, and persistence. We developed and implemented six workshops: The Character Landscape, Borrowed Shoes and Perspectives, The Language of Character for Communication and Connection, Character on the Catwalk, Leading with Character, and Sustaining Excellence of Character.

Conclusions: Over 65 faculty members have participated to date in the Mobilizing Character workshops. Facilitator training has led to adoption of the program at three additional institutions. Materials are available by request.

References:

1. G. Michael Leffel, Ross A. Oakes Mueller, Sandra A. Ham, Farr A. Curlin & John D. Yoon. Project on the Good Physician: A Proposal for a Moral Intuitionist Model of Virtuous Caring, Teaching and Learning in Medicine, 29:1, 75-84, 2017.

2. Kerry Patterson, Joseph Grenny, David Maxfield, Ron McMillan & Al Switzler. Influencer: The Power To Change Anything. McGraw Hill, 2007.

3. Isaac Prilleltensky & Ora Prilleltensky. How People Matter: Why It Affects Health, Happiness, Love, Work, and Society. Cambridge University Press, 2021.

4. Helen Riess & Liz Neporent. The Empathy Effect: Seven Neuroscience-Based Keys for Transforming the Way We Live, Love, Work, and Connect Across Differences. Sounds True, 2018.

5. Barry Schwartz & Kenneth Sharpe. Practical Wisdom: The Right Way to Do the Right Thing. Riverhead Books, Penguin, 2010.