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Medical Students Perception of Plastic and Reconstructive Surgery and the Impact of Social Media Influencing their Opinion

Fara Dayani¹, and Paymon Rahgozar²¹UCSF School of Medicine; ²UCSF Department of Plastic and Reconstructive Surgery

OBJECTIVES/GOALS: The discipline of plastic and reconstructive surgery (PRS) is poorly understood by the public, primary care physicians, and nurses. The aim of our study is to assess medical students' knowledge and perceptions of PRS as a discipline and explore factors influencing these opinions. **METHODS/STUDY POPULATION:** To assess medical student's knowledge and perception of PRS, we distributed an online survey to all medical students at all training levels (i.e. first year to fourth year) enrolled at UCSF School of Medicine, San Francisco, CA during 2019-2020 academic year. In the survey, participants were asked to match 12 surgical subspecialties with 36 operative procedure scenarios. In addition, the survey included questions investigating the most common social medical platform used by medical students and the role of medical social media accounts in contributing to their knowledge of surgical subspecialties. **RESULTS/ANTICIPATED RESULTS:** Medical students demonstrated a profound gap in knowledge in plastic surgery. The majority of respondents correctly identified plastic surgeons as the primary surgeons performing the cosmetic procedures listed (abdominoplasty, facelift, and liposuction). PRS was identified as the primary specialty involved in breast reconstruction (94.4%) and burns surgery (88.9%). There was poor understanding of the role of plastic surgeons in hand surgery(16.6%), craniofacial surgery(14.8%), and head and neck cancer surgery(9.3%). 52.4% of respondents follow medical social media accounts and 45.6% of respondents indicated that social media contributed to their knowledge of surgical subspecialties. **DISCUSSION/SIGNIFICANCE OF IMPACT:** Medical students, who form the next generation of doctors, have limited knowledge regarding versatile applications of PRS. Misconceptions about the discipline of PRS negatively impacts resource allocation and hinders the delivery of care to patients that would profoundly benefit from this specialty. **CONFLICT OF INTEREST DESCRIPTION:** No authors have financial disclosures or conflicts of interest to declare.

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New module supporting Community Engaged Research added to COALESCE (teamscience.net) online training for interdisciplinary research teams

Bonnie Spring¹, Megha Patel², and Angela F Pfammatter¹¹Northwestern University; ²Northwestern University Feinberg School of Medicine

OBJECTIVES/GOALS: A new researcher-facing module to support community engaged research has been added to the updated COALESCE website and user traffic was tracked since last reporting. We describe the process of development and the features of the new module, past 2-year traffic, and plans to develop a community facing module. **METHODS/STUDY POPULATION:** We monitored the number of unique users of COALESCE (teamscience.net) between 2017 and 2019 to determine if traffic slowed, stayed the same, or increased since teamscience.net was physically updated to function on mobile devices. In December 2019, a new

module was launched to introduce researchers to the stages of team science community engaged research. To develop the module, we collaborated with academic partners at University of Illinois-Chicago to identify 3 local historic research case studies in and to characterize how each exemplified a team science stage: assembly, launch, or maturation. After interviewing key team members from each study, we iterated storyboards and scripts in collaboration with community engaged research experts and case study team members. The module was built, tested, and launched. **RESULTS/ANTICIPATED RESULTS:** In the 6 years between 2011 through 2017, the site attracted 16,016 unique visitors (approximately 2699 per year). In 2 years from 2017 through 2019, since the modernization of the website, user traffic has held steady or grown, attracting 6992 unique visitors (approximately 3496 per year). Our newly posted researcher-facing module highlights team assembly in the case a task force charged with reducing disparity in breast cancer outcomes in Chicago, team launch in a study to improve asthma management in a local FQHC, and team maturation in a study comparing clinic-based to public school-based treatment of disruptive behavior. We will soon create a companion community-facing module and resources to address identified needs for community partners engaging in research with academic institutions. **DISCUSSION/SIGNIFICANCE OF IMPACT:** COALESCE (teamscience.net) remains the first and only open-access, online training in team science for health professionals. Recent updates have improved usability and expanded available resources. We launched a comprehensive module for academics interested in community engaged research; future work will develop parallel community facing resources.

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Pediatrician Readiness to Participate in Clinical Trials: Roles of interest, barriers and interventions

Beatrice Boateng¹, Jessica Snowden, MD, Diana Munoz-Mendoza, MD, Clare Nesmith, MD, Frederick Barr, MD, Laura James, MD, and Tamara Perry¹¹University of Arkansas Translational Research Institute

OBJECTIVES/GOALS: Clinical trials are the gold standard for developing evidence-based medicine. However, 20% of pediatric randomized clinical trials are discontinued and about 30% of completed trials go unpublished. (Pica and Bourgeois, 2016) Although patient recruitment is the most cited barrier to completing clinical trials, trials funded by academia are more likely discontinued compared to those funded by industry. This study is an attempt to gain additional insights into clinical trials in academic pediatrics. **METHODS/STUDY POPULATION:** Junior pediatrics faculty (Instructors and Assistant Professors) were recruited to participate in an online survey through RedCAP. The physicians were asked if they had prior experiences with clinical trials and whether they have interest in participating in clinical trials. Those interested were asked three additional questions: what role they were interested in, barriers to participating and interventions they thought would educate them about participating in clinical trials. **RESULTS/ANTICIPATED RESULTS:** Ninety two (92) out of 119 (77%) junior pediatrics faculty completed the survey. Twenty (20) pediatric subspecialties were represented and respondents were on various academic pathways. A third of the respondents (35%) had previously participated in clinical trials. A majority of the faculty respondents (84; 70%) are on the clinical educator pathway. The 13 respondents who were not interested in clinical trials indicated their preference for patient care,

education and quality improvement. Of those interested in clinical trials, the top three preferred roles were site co-investigator (68%), help designing future protocol (47%) and site principal investigator (44%). Other than time, the top barriers to participation were a lack of awareness of what it takes to lead or engage in clinical trials (53%) and a lack of training on clinical trials (45%). Mentoring from an experienced clinical trialist emerged as the top preferred intervention (78%). **DISCUSSION/SIGNIFICANCE OF IMPACT:** Although limited to one institution, the findings of this study provide insights into pediatric faculty interest in clinical trials. If academic pediatricians are provided with mentoring, there could be an uptick in completed and published clinical trials involving pediatric populations.

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Public Health Ethics: Utilizing open education methods to foster interprofessional learning and practices

Jeffrey S Farroni¹, and Emma Tumilty²

¹UTMB Galveston; ²School of Medicine, Deakin University Waurn Ponds

OBJECTIVES/GOALS: Innovative educational approaches and training modalities are important for training a diverse workforce in the authentic skills needed to advance all phases of clinical and translational research. Endeavors to study and develop policies that promote the translational science spectrum are steeped in value judgments. Learning how to navigate moral ambiguity and ethical reasoning enlightens our understanding of stakeholder obligations, roles and responsibilities. Ethics education can be challenging if learners are insufficiently engaged in the necessary critical reflection. In this course, decision-making in public health is informed through the analysis of the ethical issues, developing alternative courses of action and providing justification for actions taken in response to real-world dilemmas. The course is provided to students with a variety of backgrounds (science, health, policy) in a Master of Public Health degree program. Course objective were to: 1) Identify ethical issues in public health policy, practice, and research using appropriate concepts and terms; 2) Recognize the full spectrum of determinants of health and related information needed to resolve ethical conflicts in public health policy, practice, and research; 3) Present varied and complex information in written and oral formats; 4) Assess potential solutions to ethical conflicts in public health policy, practice, and research and 5) Decide ethical courses of action for public health policy, practice, and research. We adopted an open pedagogy as a guiding praxis to inform public health ethics discourse amongst our learners. In this way, learner agency was maximized to develop course materials within a generalized framework and shared with each other through the perspectives of each individual. The goal was to not only analyze complex ethical dimensions of public health issues but also gain insights into the disciplinary lenses of one's peers. **METHODS/STUDY POPULATION:** Each week was divided into two sessions, a seminar and workshop. Course instructors introduce topics in a one-hour session and then allow students to decide what information is needed for a second session where the ethical issues of the topic will be discussed. Information-gathering tasks are then distributed amongst students in areas that are not their specialty, e.g. social history to be researched by learner with a biology background. The second session then involves the reporting back of background information by each student and a discussion of the ethical issues that arise. Through this process, the ability to communicate with others in different disciplines is supported, while exploring other disciplines and then engaging in ethical discussion and reasoning.

Topics were introduced during the seminar session each week over the span of five weeks: 1) global public health, 2) disease prevention & control, 3) environmental & occupational public health, 4) resource allocation & priority setting and 5) research ethics. Learners were tasked with identifying the needed information to address the ethical, policy, and research aspects of the public health question(s) presented in these seminars. Students independently submitted resources they discovered to course instructors prior to the workshop. The *following* session began with a workshop where learners briefly presented their findings and deliberated on specific facets of the public health issue from that previous seminar while discussing a specific case. Students were assessed on their preparation (submission of identified resources), workshop presentation and participation. **Research Preparation:** In each seminar, the class decided what key information would be required to support the discussion at the workshop, which revolved around a relevant case study on that week's topic. Course instructors facilitated the groups identification of material to be researched and the delegation of tasks within the group. Each student submitted a summary document (template provided) to course instructors prior to class for their area of research related to the case. **Research Presentation:** At the beginning of each workshop, each student was asked to present the research work to the rest of the class so that everyone has the same information for the case study discussion. These short (5-10 minutes) presentations followed the format of the preparation summary. **Participation/collaboration:** Both the seminar and the workshop asked students to be active learners within the class, participating in discussion, strategizing for information-gathering tasks, presenting researched material and arguments to others, and participating in case study discussion. Participation was assessed in relation to the value of the contributions made by students. **RESULTS/ANTICIPATED RESULTS:** The open pedagogy allowed the learners to construct the necessary materials to discuss issues with each other and develop not only a deeper understanding of the ethical dimension of public health issues but a shared understanding of each other's disciplinary lenses. Course feedback was generally very positive, with learners either agreeing (33%) or strongly agreeing (67%) that the course was effective overall. In asking what learners liked best about the course, some indicated the "open pedagogy learning style" and "I liked the discussion format." The positive comments mostly highlighted the discussion format. Areas for improvement noted by the learners included wanting "a longer course to cover more topics" and that the material was covered in "too short a time frame." Other comments included that the course "was a bit disorganized" or that "the discussions were not very structured." While the discussions by their very nature were unstructured, there is opportunity to refine this pedagogy to find right balance of learner agency. **DISCUSSION/SIGNIFICANCE OF IMPACT:** The goal of this teaching method was to empower the learner with the important critical thinking skills to navigate challenging ethical dilemmas in public health they may encounter in their careers. These skills include the identification of the ethical or moral conflict(s), collecting the necessary information to examine/resolve the dilemma, think creatively about the information that is unavailable and how to discuss/disseminate information to a broad constituency. This an educational model that is easily adaptable for learners working in other areas of the translational research spectrum, e.g. basic, pre-clinical, clinical and implementation sciences.