ported from the previous version of the platform. DISCUSSION/ SIGNIFICANCE: Results from this evaluation will suggest strategies to enhance engagement in current courses and identify opportunities for future course development. Increasing engagement in self-paced CTR education is an important complement to formal workforce development and training programs.

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## Effectiveness of an Academic Medical Center Clinical Research Coordinator Intern Program on Learning and Workforce Expansion

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OBJECTIVES/GOALS: The Clinical Research Coordinator (CRC) Intern Program was developed to increase knowledge and awareness of CRC's vital role in conducting clinical studies. Program outcomes are to provide students with marketable skills and knowledge leading to employment within the clinical research ecosystem. METHODS/ STUDY POPULATION: The CRC Intern Program is available to college students for health-related academic courses requiring an internship component. Didactic and experiential learning are incorporated into the program with students imbedded within well-established clinical research teams. Activities include attending IRB meetings, recruitment and enrollment, data collection and entry, and regulatory items. Students complete knowledge pre- and post-assessments (Competency Index for Clinical Research Professionals-CIRCP) via REDCap surveys to assess learner knowledge acquisition and program effectiveness. Demographic, program evaluation, and 3-month follow up survey data are analyzed using descriptive statistics. RESULTS/ANTICIPATED RESULTS: Beginning in Spring 2022, the Intern Program has accepted 9 students with 5 completing the program, with 2 of this 5 having been offered employment as CRCs. Preliminary CIRCP assessment data indicates increased CRC knowledge upon Intern Program completion. Demographic data shows that students are mostly female and non-white (43% African American, 29% Hispanic). Additional results from the current cohort will be shared upon program completion. Of note is the development of partnerships with local colleges, including community colleges, to build awareness of the CRC career path and to provide opportunities for CRC exploration resulting in expansion and diversification of the clinical research workforce. DISCUSSION/ SIGNIFICANCE: There is an industry wide shortage of CRCs. Our internship program has provided an effective method to expand and diversify the CRC workforce through knowledge acquisition and application building CRC skills and competencies. Lessons learned and future plans for intern expansion will be discussed.

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## **Empowering the Next Generation of Clinical & Translational Scientists**

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OBJECTIVES/GOALS: Biomedical research fields are facing the challenges of demand for skilled workers as well as challenges related to diversity in that workforce. It is important that the healthcare workforce reflect the population it serves. The Exposures

Internship seeks to address this by building pathways for youth to pursue careers in research and medicine. METHODS/STUDY POPULATION: In 2021, the Yale Cultural Ambassadors expressed concern about the lack of free high quality, educational offerings for youth that summer. They asked YCCI to consider developing a summer program for students aged 15 and older that focused on spurring interest in careers in healthcare, medicine, and clinical and translational research. The result was a 4-week virtual learning experience for 34 interns who met daily via Zoom and participated in course work, lectures, journal clubs, group projects, and virtual lunches with internationally renowned clinical research and healthcare leaders. Sessions were designed to help interns gain knowledge of and exposure to current topics in clinical and translational science and to observe the various steps of proposing, designing, undertaking, and analyzing clinical trials. RESULTS/ANTICIPATED RESULTS: YCCI received over 900 inquiries from around the world with more than 200 completed applications for participation in the internship for the pilot year. Since then, YCCI leadership has worked with community partners to engage young scholars from 17 different states, Canada, Mexico and Puerto Rico. Of those, we estimate 75% are minority, ~50% female and 20% from rural areas with limited similar opportunities. During the four weeks of the program these highly motivated students worked on projects aimed at increasing participation in pediatric research through a revised Informed consent and adolescent assent process and a youth centered awareness campaign. Interns were so inspired that they requested the program be continued beyond the initial four weeks. As such, YCCI continued to offer sessions throughout the year. DISCUSSION/ SIGNIFICANCE: In evaluation of the pilot program 95% of respondents strongly agreed that the program exposed them to new information about clinical and translational research. One intern shared, This program has unquestionably made me consider becoming a researcher in the future with the goal of becoming a principal investigator within my interest in medicine.

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## Evaluation of a grant writing workshop designed to increase submission and award rates for career development awards

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OBJECTIVES/GOALS: To improve early career faculty members' NIH grant writing skills, Clinical and Translational Science Awards (CTSA) hubs have developed a variety of workshop-style programs. However, few articles have evaluated the impact of grant writing workshops on NIH grant submission and award rates. METHODS/STUDY POPULATION: The K Writing program was developed by the Michigan Institute for Clinical and Health Research (MICHR) at the University of Michigan. Since 2012, 435 scholars have participated in the program. The MICHR K Writing program is a three-part workshop series that prepares scholars by providing them with guidelines to write all sections of a career development grant application. Each session focuses on different sections of the K award proposal. During the workshop sessions, participants break into small groups and exchange drafts of their proposal sections and receive peer critique and feedback from senior faculty facilitators who have experience with NIH study sections. RESULTS/ANTICIPATED RESULTS: Between 2012-2018, 273 scholars participated and 57% were female. Our two primary outcomes of