

University of Washington's Dissemination and Implementation (D&I) Science Toolkit for TL1 Programs into the Tufts CTS Graduate Program, we used the Consolidated Framework for Implementation Research (CFIR). We developed an interview guide based on CFIR constructs or categories of factors that might influence implementation of the D&I Toolkit and interviewed 8 stakeholders including leadership, trainees and faculty. We compared D&I Toolkit content to the current curriculum on stakeholder engagement (SE) and research study quality improvement (QI) to identify how the D&I Toolkit could be adapted to fit trainee and program needs. RESULTS/ANTICIPATED RESULTS: Stakeholder interviews and review of the current curriculum identified facilitators and barriers to implementing the D&I Toolkit in the Tufts CTS Graduate Program. The program has a strong SE focus and fosters the use of research study QI methods. Interviews identified student and faculty desire to implement the D&I content yet time constraints and overlap with the current curriculum were identified. The following plan to adapt the D&I Toolkit content to fit contextual factors was developed and executed: 1. Adapt didactic content to fit into a 90-min session. 2. Highlight the synergy between the current SE curriculum and the role of stakeholders in D&I science. 3. Modify course materials to highlight examples of disseminating local research results. 4. Limit the experiential learning component to a SE plan. DISCUSSION/SIGNIFICANCE: TL1 training programs must balance competing demands in selecting curriculum content. The CFIR framework was used to systematically assess implementation barriers by engaging program faculty, students and leaders to identify implementation strategies. This process could be useful when evaluating the addition of other educational content.

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### DIAMOND 2.0: Updating a Pioneering Digital Platform for Study Team Workforce Development

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OBJECTIVES/GOALS: There is a critical need to provide quality training for study teams. Materials need to be flexible and available at the learner's preferred time and format. DIAMOND was developed to provide nimble education offerings that respond to the changing landscape of clinical and translational research. METHODS/STUDY POPULATION: In 2018 four CTSA institutions (the University of Michigan, the Ohio State University, Rochester University, and Tufts University) collaborated to launch the DIAMOND portal. Developed as a CTSA-wide web-based platform, DIAMOND allows members of clinical and translational research teams to widely share and access training and education resources. In 2022 a MICHHR-led update of DIAMOND used principles of user centered design to improve the platform. New features include updated search functions to quickly find and sort training materials, tagging training materials to the characteristics of a translational scientist, and development of user controlled customized playlists. RESULTS/ANTICIPATED RESULTS: DIAMOND currently includes 217 training resources developed by 30 CTSA hubs and private industry. The platform has over 600 page views per day from users across the U.S. and internationally. DIAMOND

includes an easy-to-use form to upload new materials to the platform. Contributors are asked to include key words and select competency domains and characteristics of a translational scientist that apply to their materials. Other new features include tagging materials to streamline and improve search results, the ability to sort materials by competency domain or characteristics of a translational scientist, and the ability for users to create and share customized, personalized playlists. DISCUSSION/SIGNIFICANCE: DIAMOND is an important tool to support workforce development for study teams. Updates to the flexible digital platform meet the needs and preferences of adult learners and busy health professionals. Lessons learned from the design process and future plans for the platform will be explored.

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### Introducing trainees to research using an online, asynchronous course

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OBJECTIVES/GOALS: Research is an important aspect of many students' training. However, most trainees do not complete a scholarly project, and formal research training is rarely included in a degree program's curriculum. Thus, we developed an online, asynchronous series of modules to introduce trainees to multiple topics that are relevant to the conduct of research. METHODS/STUDY POPULATION: Research 101 was utilized by first year medical students and undergraduate students conducting mentored research projects at the University of Cincinnati College of Medicine. Students' knowledge, confidence, and satisfaction were assessed using pre- and post-module surveys with 5-point Likert scaled questions, open-ended text responses, and a final quiz. RESULTS/ANTICIPATED RESULTS: Pre-module survey results showed that learners were most confident with the Conducting a literature search and Race and racism in medicine modules and least confident with the Submitting an Institutional Review Board (IRB) protocol at UC module. Post-module survey responses were significantly increased compared to pre-module results for all modules and questions ( $p < 0.0001$ ). The response to The content of this module met my needs was endorsed across all modules (84.9% yes responses). A final quiz of 25 multiple choice questions covering content from all required modules was completed by 92 students who had a median score of 21 (range: 15 to 25). DISCUSSION/SIGNIFICANCE: These data demonstrate significant learning resulting from completion of Research 101, as post-module survey scores were significantly higher than pre-module survey scores for all modules and questions. Final quiz scores were positive but also highlighted opportunity for additional student learning and will guide evolution of future modules.