the proportional hazards model was confirmed visually using log-log plots and goodness of fit assessment. RESULTS/ANTICIPATED RESULTS: A total of 413 patients were identified for inclusion in the study. The majority of patients (83%) were of non-White race. Bivariate analysis revealed no significant associations between age, BMI, or race with diagnosis of VTE (p = 0.75, 0.49, and 0.28, respectively). Patients who had more than 2 risk factors for VTE had a significantly increased likelihood of VTE diagnosis (p = 0.02). There was a highly significant association between stage of UO and diagnosis of VTE (p = 0.005). Patients with stage I and stage IV cancers were 2.4 and 3.5 times more likely to develop VTE than patients with stage I cancer (95% CI: 1.09–5.30, 1.74–6.83, respectively). Of the 70 patients who were diagnosed with VTE, most were not postoperative (64.3%) and a large proportion developed clots while receiving chemotherapy (35.7%). Patients who developed VTE while on chemotherapy had a median Khorana score of 1 (IQR: 1, 2). In logistic regression modeling examining association of VTE with potential risk factors, the Cox proportional hazard ratio (p = 0.03) for Cox proportional hazard modeling revealed that after adjustment for other covariates, only stage 4 disease (OR: 2.66, 95% CI: 1.53–4.64) and hypertension (OR: 2.90, 95% CI: 1.14–7.36) were associated with development of VTE and were included in the final model. No concerning violation of assumptions of logistic regression or interaction was identified. The Hosmer-Lemeshow goodness of fit test identified that the model was well-fit using 10 groups (p = 0.46). The diagnostic test accuracy of the model had acceptable discrimination with a ROC value of 0.7. The final model was found to classify 83.1% of participants correctly. Regression diagnostics identified 4 potentially influential covariate patterns. These patterns were eliminated from the model and no meaningful differences were noted. Patients contributed a total of 16,414 person months of analysis time under study follow-up. A negative, linear association was noted between stage of disease and time to failure. The Hosmer-Lemeshow goodness of fit test identified the model to classify 83.1% of participants correctly. Regression diagnostics identified 4 potentially influential covariate patterns. These patterns were eliminated from the model and no meaningful differences were noted. Patients contributed a total of 16,414 person months of analysis time under study follow-up. A negative, linear association was noted between stage of disease and time to failure. The Hosmer-Lemeshow goodness of fit test identified the model to classify 83.1% of participants correctly. Regression diagnostics identified 4 potentially influential covariate patterns. These patterns were eliminated from the model and no meaningful differences were noted. 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greatest benefit. DISCUSSION/SIGNIFICANCE OF IMPACT: In September 2017, CTSI launched a new web-based training tool exclusively for University of Minnesota clinical research professionals who work with human participants, and their supervisors. The Human Research Training Web site is a free, easy-to-use tool to help identify and maintain the appropriate training, certification, credentials, and immunizations needed to perform University of Minnesota research with human participants. The Web site offers the University’s first systematic way to identify which research training is necessary for each research professional, and a system to track and maintain training compliance. Training records and information from the University of Minnesota’s central databases are securely integrated into this tool. Our Web site tool enhances research compliance. Any given study team member’s training requirements vary based on several criteria such as: role at the University, role on the research study, type of funding, population being studied and responsibilities/duties on the research study. The research training Web site generates required and optional training based on individuals’ responses to these questions. This Web site also links to the training, which decreases error in taking the wrong training. Furthermore, it provides completion data for research training and is a repository for vital study information such as: medical licenses, CVs, and credentials. Supervisors are able to view training and credentials. They are alerted when one of their employee’s licenses or certificates are about to expire. Uses-to-date and evaluation feedback have informed the need for a second phase of Web site enhancements. This site will reside in both the CTSI Web site and the HRPP Web site. A link will be sent to all new University research employees upon hiring. The Human Research Training Web site will likely have applicability to other universities in addition to the University of Minnesota.

Behavioral clinical trials: Considerations for design and conduct using the new NIH study protocol template
Susan L. Murphy, Nancy Yovetich and Melissa Riddle
University of Michigan School of Medicine

OBJECTIVES/SPECIFIC AIMS: (1) To discuss key differences of behavioral clinical trials from trials involving drugs, devices, and biologics and (2) to discuss NIH efforts to provide a study protocol template for use by investigators conducting behavioral clinical trials. METHODS/STUDY POPULATION: A working group was convened by NIH to refine the commonly used protocol template required for investigators conducting Phase 2 or 3 NIH-funded clinical trials. The committee met by phone regularly for 4 months to review, discuss, and refine each section of the template as needed to include aspects relevant to behavioral trials. RESULTS/ANTICIPATED RESULTS: The behavioral trial protocol template draft has been created and is being further modified by feedback from the research community. DISCUSSION/SIGNIFICANCE OF IMPACT: Use of the NIH behavioral trial protocol template is expected to enhance the quality of any behavioral study, because the template and supporting materials were developed with the unique aspects of behavioral research in mind.

Building the next generation of translational researchers in health disparities
Carlamarie Noboa, Zulmarie de Pedro-Serbia, Lourdes E. Soto de Laurido and Arcelis H. Chardon
University of Puerto Rico-Medical Sciences Campus

OBJECTIVES/SPECIFIC AIMS: Translational research involves researchers’ teams working together to address health issues. However, successful translational researchers in health disparities require a set of competencies and skills. In order to increase the number of new minority investigators in translational research focused on health disparities, the Hispanics-in-Research University of Minnesota (SoH) and University of Puerto Rico Clinical and Translational Research Consortium designed and implemented a webinar series “Fostering the Next Generation of Researchers in Health Disparities.” METHODS/STUDY POPULATION: From March 31 to July 14, 2017, this webinar series offered the theoretical perspectives of health disparities, research methodology specific to its study, and intervention strategies to address health disparities in communities through minority investigators. National and local interdisciplinary experts were the presenters. Participants’ experience and impact were assessed through a self-administered questionnaire. RESULTS/ANTICIPATED RESULTS: A total of 78 minority investigators participated in this webinar. Overall, participants indicated that the webinar improved their knowledge and skills about health disparities research. DISCUSSION/SIGNIFICANCE OF IMPACT: Results guide the programs actions plans to enhance and support the translational researchers’ capacity. Diverse capacity building initiatives including peer-to-peer education, online course, tailored coaching, and other interventions have been designed to address researchers’ needs. This webinar was a pathway to build the next generation of translational researchers in health disparities.

Critical and creative thinking course: Fundamental for a junior researcher
Lourdes E. Soto de Laurido, Marie K. Norman and Doris Rubio
University of Puerto Rico-Medical Sciences Campus

OBJECTIVES/SPECIFIC AIMS: Explain the difference between creative and critical thinking. Practice and enhance the critical thinking skills. Display innovative thinking through creative solutions and insights. Critically evaluate evidence in research. Think imaginatively, actively seeking out new points of view. METHODS/STUDY POPULATION: Offer an online course in Critical and Creative Thinking to junior researchers to improve their capacity to think and transform their ideas in research questions and aims that bring new option to the field of clinical and translational research. Evaluate their improvement through evaluation forms and exercises that show their process to think imaginatively. RESULTS/ANTICIPATED RESULTS: The Scholars will understood the importance of critical and creative thinking in their careers, believed they could apply the insights and knowledge from the course in their grant and paper writing, recognized that they don’t always consider if they are being critical or creative in their thinking and actions. DISCUSSION/SIGNIFICANCE OF IMPACT: The course helped the participants to improve their capacity to think and saw a need to develop a more systematic thought processes in their life and work. The junior research will understand the difference between opinion, reasoned, judgment and fact and they will be able to judge the credibility of an information source using criteria such as authorship, currency and potential bias that can improve their grant submission and scientific writing skills.