

interest are submission rates and success rates (the number of grants awarded divided by the number of applications). We plan to examine the effects of several characteristics, including number of sessions attended, cohort year, and faculty vs. postdoctoral status. We will also examine whether there were differences in submission and success rates between female and male researchers and between underrepresented minority scholars and those who identified as white or Asian. Lastly, we will report submission and success rates for each grant mechanism and compare them to the national averages. **DISCUSSION/SIGNIFICANCE:** Obtaining external research funding is an important part of a faculty career, especially at its early stages. This research has important implications for the design of similar programs intended to increase submission and success rates for federal grant applications.

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### **Evaluation of a Simulation Curriculum to Improve Nursing-Led Early Physical Rehabilitation of Critically Ill Children**

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**OBJECTIVES/GOALS:** Early pediatric intensive care unit (PICU) mobilization is safe and associated with improved outcomes. Nursing-specific mobility training is desired and improves mobilization compliance. Thus, our aim is to implement a nurse-targeted, simulation-based early mobility curriculum to determine if it increases the frequency of PICU mobilizations. **METHODS/STUDY POPULATION:** We will conduct a single center pre-post interventional study of an in situ nurse-targeted, simulation-based early mobility curriculum. We will prospectively evaluate mobilization events in 100 patients admitted during the pre-intervention phase (n=50) and the post-intervention phase (n=50). Inclusion criteria are children ages 1 day to 17 years old admitted to the PICU for ≥3 days. Exclusion criteria include specific mobility contraindications. PICU-wide deployment will be complete when >80% of nurses have participated in the curriculum. Demographic and clinical information will be obtained. Mobility data obtained will include number of nursing-led mobilizations, highest level of mobility achieved, and potential safety events. Data will be collected from the EMR and the nurse caring for the patient. **RESULTS/ANTICIPATED RESULTS:** The primary endpoint will be the change in the number of nursing-led mobilization events per patient day. The secondary effectiveness outcome is the highest level of mobility achieved by patients during mobilization events in a day. A final secondary end point will be safety events defined as unplanned extubations, medical device dislodgement, falls, and cardiac arrests. Descriptive statistics for continuous variables will be presented as the median and interquartile range and categorical variables will be expressed as percentages. The effect of the simulation curriculum on the clinical outcomes will be assessed using mixed-effects models. Due to the lack of normality in number of nurse-led mobilizations and highest level of mobility achieved, the analysis will be performed using log-normal models. **DISCUSSION/SIGNIFICANCE:** We hypothesize that we will demonstrate the crucial importance of hands-on nursing education to improve and increase early mobility of critically ill children

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### **Evidence to impact: Developing a workforce of translational research professionals**

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**OBJECTIVES/GOALS:** The goal of the Translational Research Program (TRP) at the University of Toronto is to provide structured and adaptive competency-based training around the translation, mobilization, implementation, and commercialization of research for the current and future Canadian healthcare workforce. **METHODS/STUDY POPULATION:** Guided by the Toronto Translational Framework, the TRP is a two-year hybrid master's degree program that integrates courses, case-studies, mentorship, and experiential learning to facilitate real-world student-led translational projects. Focusing on skills development and competency-based assessment, the curriculum emphasizes ongoing reflection, interprofessional collaboration, and multidisciplinary problem-solving using human-centered principles. Learners identify problems using contextual inquiry to define unmet needs and frame design requirements. Systematic ideation is used to generate, select, and validate promising concepts for further iterative prototyping and evaluation. **RESULTS/ANTICIPATED RESULTS:** Throughout the program, students demonstrate a range of collaborative skills and activities around developing, assessing, and implementing new health interventions. Learners apply the Toronto Translational Framework and refine their professional competencies during the final year of the program in a student-led Capstone project. The unconventional combination of a guided framework and a learner-driven curriculum has produced over 120 graduates in a variety of careers within government, industry, clinical settings, and start-ups. The program's focus on problem-solving and lifelong learning is growing Canada's translational workforce and advancing translational health science education. **DISCUSSION/SIGNIFICANCE:** The TRP addresses the need to educate healthcare professionals in Canada about translational research and accelerate the transformation of scientific discoveries into tangible interventions that benefit human health, improve clinical medicine, and enhance patient care.

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### **Factors Associated with Confidence in Career Progression among Underrepresented Post-doctoral Fellows and Early-career Faculty**

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**OBJECTIVES/GOALS:** Underrepresented (UR) biomedical researchers leave research positions at a disproportionate rate. We