Fiscal Year:	FY 2016	**Task Last Updated:**	FY 08/19/2016
PI Name:	Yule, Steven J. Ph.D.		
Project Title:	Developing and Validating Specific Medical Event Management Training Protocols for Flight Crews on Deep Space, Long-Duration Space Exploration Missions		
Division Name:	Human Research		
Program/Discipline:			
Program/Discipline--Element/Subdiscipline:	NSBRI--Human Factors and Performance Team		
Joint Agency Name:		**TechPort:**	No
Human Research Program Elements:	(1) **HFBP**:Human Factors & Behavioral Performance (IRP Rev H)		
Human Research Program Risks:	(1) **HSIA**:Risk of Adverse Outcomes Due to Inadequate Human Systems Integration Architecture		
Space Biology Element:	None		
Space Biology Cross-Element Discipline:	None		
Space Biology Special Category:	None		
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City:	Boston	**State:**	MA
Zip Code:	02115-6110	**Congressional District:**	7
Comments:			
Project Type:	GROUND	**Solicitation / Funding Source:**	2015-16 HERO NNJ15ZSA001N-Crew Health (FLAGSHIP, NSBRI, OMNIBUS). Appendix A-Crew Health, Appendix B-NSBRI, Appendix C-Omnibus
Start Date:	06/01/2016	**End Date:**	05/31/2017
No. of Post Docs:		**No. of PhD Degrees:**	
No. of PhD Candidates:		**No. of Master' Degrees:**	
No. of Master's Candidates:		**No. of Bachelor's Degrees:**	
No. of Bachelor's Candidates:		**Monitoring Center:**	NSBRI
Contact Monitor:		**Contact Phone:**	
Contact Email:			
Flight Program:			
Flight Assignment:	NOTE: Element change to Human Factors & Behavioral Performance; previously Space Human Factors & Habitability (Ed., 1/19/17)		
Key Personnel Changes/Previous PI:			
COI Name (Institution):	Lipsitz, Stuart Sc.D. (Brigham And Women's Hospital/Harvard Medical School) Pozner, Charles M.D. (Brigham And Women's Hospital) Doyle, Thomas Ph.D. (Non-U.S. Co-PI: McMaster University, Canada) Musson, David M.D., Ph.D. (Non-U.S. Co-PI: Northern Ontario School of Medicine)		
Grant/Contract No.:	NCC 9-58-HFP04501		
Performance Goal No.:			
Performance Goal Text:			

Task Description:	Astronauts on long duration space exploration missions are vulnerable if they suffer from an acute medical emergency in space. Effective diagnosis, stabilization, treatment, and transport are reliant on the skills and ability of fellow crew members. Without adequate skills and training to handle such emergencies, mission objectives can be compromised to the extent that the mission may fail. Extensive research in healthcare is showing that specific skills, often termed non-technical skills (situation awareness, decision making, coordination, leadership) are critical in successfully managing medical events and in improving patient outcomes. The complexity of medical emergencies in space will pose unique challenges and demand context-specific non-technical skills training of the crew. Identifying the essential non-technical skills of the crew for managing medical emergencies, and associated objective measures of proficiency is an essential first step to building training curricula to fill the gap. In this proposal, we will gather data using mixed methods including literature review, focus groups, and Delphi panel to identify the essential medical non-technical skills for astronaut crew. We will do this in partnership with an expert panel of astronauts, scientists, and clinicians from NASA and extended networks. We will then develop and implement a series of simulations depicting medical emergencies in a ground-based spacecraft medical bay simulator. Video recordings of these scenarios will be analyzed to define and refine objective measures of non-technical skills proficiency for the management of medical emergencies in this spaceflight. The proposed study will form the basis of training curricula in medical non-technical skills, evaluation of training effectiveness and objective measurement of proficiency that will support crew health and safety, and reduce the likelihood of performance failures when managing medical emergencies in space.
Rationale for HRP Directed Research:	
Research Impact/Earth Benefits:	
Task Progress:	New project for FY2016.
Bibliography Type:	Description: (Last Updated: 11/09/2023)