

# HTIC's Prototype Team Fitness Tracker to be Piloted by the 48th CSH & Army National Guard-Maryland in Summer 2017

TATRC's Health Technology Innovation Center (HTIC) continues to develop the Team Fitness Tracker prototype application for pilot in the summer of 2017 by the 48th Combat Support Hospital, and selected Army National Guard (ARNG) Units in Maryland and Florida. The project is funded by Joint Program Committee-1, with oversight by the Congressionally Directed Medical Research Program Office. TATRC also continues to collaborate closely with the Uniformed Services University Health Sciences (USUHS), Consortium for Health and Military Performance (CHAMP) office and the System for Health Directorate, Deputy Chief of Staff for Public Health, Office of the Surgeon General on various aspects of this research.

Despite their proliferation in the market, the value proposition for physical activity trackers is still evolving, with high abandonment rates of 50% or more published. This TATRC-led research will investigate whether the use of personal activity trackers by service members, combined with an activity/fitness dashboard on a web portal, can encourage users to be more active and sustain their activity levels. Investigators are working from the premise that sustained levels of individual optimal activity will lead to improved fitness and readiness. Researchers will also pay close attention to over-exercise, as that may cause injury and result in less readiness. By introducing software that allows Command Leadership, Master Fitness Trainers, and/or Unit Fitness Coordinators to monitor their unit's activity, researchers propose that this will help the individuals and the unit to stay, which is one component affecting readiness to deploy.

Ms. Ollie Gray, HTIC's Lab Manager, collaborates closely with the TATRC software developers, Mr. Kirit Raja, and Mr. Chrisjan Matser to adapt an existing Team Fitness Tracker application that was originally developed for use by TATRC staff, for use in the pilot study. Functional stakeholders providing input on the Team Fitness Tracker application design include: Ms. Ashley Simon, Research Associate, USU CHAMP Office, and formerly Performance Triad Coordinator, System for Health Directorate, Deputy Chief of Staff for Public Health, Office of the Surgeon General, Sergeant First Class (SFC) David Rosen, USA, and SFC Brian Darden, also of the Office of the Surgeon General staff.

LTC Kathleen Genest, Nurse Coordinator, US Army Reserves, 48th Combat Support Hospital, Fort Meade has agreed to identify approximately 100 active reservists for participation in the study on a totally voluntary basis. Captain Faith Courville, ARNG-MD, will also identify approximately 100 additional ARNG-MD members for voluntary participation in the study.

TATRC is collaborating with Dr. Patricia Deuster, Director of the CHAMP Office, USUHS, to finalize the study design and submit the necessary human subject protection applications to the USU Institutional Review Board for 1st level review and approval. Second level review will take place at the Office of Human Research Protections, Fort Detrick, MD.

During the Team Fitness Tracker pilot, the PI, Ms. Ollie Gray, in conjunction with USU CHAMP, will assess the impact of the Tracker on various activity and fitness outcomes over time. Although the final study design is being refined at

this time, the Research Team will determine if a Team Fitness Tracker prototype can help the DoD to understand how individual activity tracker data can be interpreted, used, and grouped to help inform Unit Fitness Commanders on the activity, readiness, and performance of their personnel, and intervene, where necessary, to optimize individual and team fitness levels.

The study intends to provide users with the Fitbit Charge HR activity tracker, if they do not already have an activity tracker. Baseline data will be collected initially without giving users access to the Team Fitness Tracker portal application. After a period of time, researchers will introduce various Team Fitness Tracker application portal features to the user community. The study will determine which activity tracker features, when combined with associated activity tracker monitoring software, contribute to continued sustained use and improved activity levels. As one example, do software features that promote healthy competition among users, such as team competitions, leaderboards, gaming, and access to specific educational content on activity, sleep, and nutrition, lead to increased activity and thus improved physical fitness and readiness?

The pilot study will also help TATRC researchers determine if Unit Fitness Coordinators, Master Fitness Trainers, or other Command leadership, who monitor group activity, fitness, and readiness data, can benefit from the Team Fitness Tracker application, by monitoring individual and team activity, and by sending motivational messages to persuade individuals or groups to optimize their activity levels. The study will also examine how often messages should be sent and what type of content best motivates individuals to perform at an optimal level (just the right amount of activity to enhance fitness, and not over-exert or cause injury).

Ms. Ollie Gray, recently stated, "It has been a real pleasure and honor to collaborate with the Army Surgeon General's office and USUHS CHAMP on this research project. TATRC also wants to express its sincere appreciation and gratitude for the willingness of the 48th Combat Support Hospital and the ARNG-MD to participate in this research effort. We are confident that this research will yield significant knowledge to determine how we can improve and sustain physical activity and contribute to overall greater readiness to deploy."

Questions regarding the Team Fitness Tracker Study may be directed to Ms. Ollie Gray, [ollie.b.gray.civ@mail.mil](mailto:ollie.b.gray.civ@mail.mil). ☰

