

DEPARTMENT OF BIOMEDICAL INFORMATICS  
COLLEGE OF MEDICINE

SUMMER RESEARCH OPPORTUNITIES FOR UNDERGRADUATE students

APPLICATION DEADLINE: 02/25/2022

PROJECT TITLE: Exploring the Context of Fitbit data Use by Clinicians and College Students

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**Project Description**

Fitbit is an emerging technology used to track fitness and sleep. While the Fitbit wearable watch and the Fitbit app are amongst the popular consumer devices, its use in the clinical world remains sparse. According to a recent survey study (PMID: 30789439), there is a lack of accepted standards about how to implement wearable devices in clinical settings due to mismatched opinions about its application. Our overall objective is design and evaluate an informatics solution such as a dashboard that summarizes and standardizes patient-generated health data (PGHD) collected by Fitbit, promotes the meaningful use of PGHD, and further facilitates shared decision making between patients and their care providers. Our goals in this pilot study are twofold. First, we are interested in understanding the hesitation clinicians may have in using Fitbit to collect PGHD, especially sleep data, and how this data may be useful in clinic visits. Second, we are interested in understanding how Fitbit sleep data may complement the self-reported sleep quality by patients. The UPRISE student will conduct tasks under Dr. Wu's mentorship to achieve both aims in the summer.

In this pilot study, we are focused on the clinicians (e.g., sleep specialists) and patients in our institutions (UC and UC Health) so the study is limited in its generalizability. Moreover, we are focused on a specific group of potential patients, college students in the Medical Science Baccalaureate Program (MSBP) at the UC College of Medicine as part of the program improvement effort. Stress and Sleep issues are common in college students and may negatively affect each other (PMID: 29227897). Our MSBP pre-med students have rigorous curriculum and extensive workload in order to gain all-rounded experience for their medical school applications and therefore tend to have high level of stress with sleep issues. This research can

benefit both patients and clinicians in maximize the utility of PGHD for diagnosis and treatment planning in the long run.