<u>Project Title:</u> **Increasing Treatment Adherence and Self-Management in Metabolic Syndrome Patients**

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Abstract

One-third of U.S. adults meet the criteria for metabolic syndrome, which involves at least three of the following conditions: hypertension, abdominal obesity, high triglycerides, low levels of high-density lipoprotein cholesterol, and elevated blood glucose. Just one of these risk factors places an individual at greater risk for type 2 diabetes, heart disease, stroke, and cardiovascular disease. Metabolic syndrome patients who manage their diet, physical activity, and medication adherence can significantly reduce the risk of developing cardiovascular disease and diabetes; however, for many patients, unhealthy diet and exercise behaviors are embedded within their lifestyle, making it difficult to enact changes that could benefit their health. Given the prevalence of smartphone applications in U.S. households, as well as people's active use of smartphone technology, we propose to fuse psychological theory on behavior change methodologies with practical smartphone application (app) features. In this study, we draw upon our previous research as well as recent technological advances in apps for use in patient treatment adherence and self-management of metabolic syndrome by addressing the utility of an interactive app for treatment adherence and behavior change. A prototype app, referred to as *MetaboManage*, will be developed and used to assess features that are effective for sustainable metabolic syndrome treatment adherence. The MIRG grant will facilitate the identification and validation of features and communication strategies in the development of this interactive, social support network-based app for metabolic syndrome patients. This will enable the acquisition of pilot data for the resubmission of our highly ranked NIH proposal.