

ABSTRACT

The proposed pilot study is based on our previous work on integrating palliative care (i.e. supportive care) with specialized heart failure (HF) care, but in this study, we will test the feasibility of a similar intervention, Transitional Care Using Supportive Techniques for Advanced Heart Failure (*TRUST*), delivered via smartphone technology. The specific aims of the 12-month project are to: 1) design a manual of the *TRUST* intervention as a first step; 2) perform usability testing to refine the *TRUST* platform and apps; 3) refine the instrumentation and data collection procedures; and 4) pilot-test the study protocol in a subset of dyads suffering with advanced HF (i.e., stage C and D) in preparation for a randomized clinical trial. Proponents have emphasized that manualized programs systematize interventions, improve treatment fidelity, and facilitate well-designed treatment outcome research. Manuals are also increasingly present in clinical practice as changes in the health care system exert greater pressure on clinicians to define and evaluate the effectiveness of services they provide; operationalized treatments are also easily replicated across settings. To our knowledge this is the first study to demonstrate technical feasibility and usability of a smartphone app (i.e., *TRUST*) that address dyads with advanced HF as potential end-users through a patient-centered care approach. Conducting a usability evaluation of *TRUST* in this population will help identify problems or flaws in the system design and ensure that the technological demands fit the user's capabilities in preparation for a larger randomized clinical trial. We will use a mixed methods approach and back-end analytics to provide a better understanding of each feature and component of *TRUST* and will develop data analytics algorithms that would determine the most effective and context-aware educational feedback in real time as well as data cleaning and data transformation algorithms that will estimate patient outcomes.