# DGIM Project Summary

**Name of Project:**
Mobile Patient-Reported Outcomes for Value and Effectiveness (mPROVE)

**Investigator(s)**:Ida Sim; Ida.Sim@ucsf.edu

**Research question(s):**
The underlying hypotheses of mPROVE is that PROs can improve multiple chronic conditions (MCC) outcomes via two complementary pathways: 1) patient self-monitoring with PROs provides feedback and improves self-efficacy for self-management, and 2) PROs inform providers of their patients' heath experience and enables more patient-centered shared decision making. Intermediate outcomes include self-efficacy and shared decision-making. To address these hypotheses, we will develop and test the mPROVE system as an intervention on both patients and providers, develop, test, and document a robust implementation strategy, and evaluate our work using a Type 2 hybrid effectiveness-implementation study.

**Brief Background/Significance:**
Over half of Americans have at least one chronic disease, which include depression, diabetes, and hypertension. By definition, chronic diseases are 24/7 and impact all aspects of our patients' lives. It is thus patients themselves - through self-anagement of medication, lifestyle, exercise, and nutrition - who have the greatest potential to improve their disease states. Effective self-management requires timely and actionable feedback to patients on how their behavior impacts outcomes that are personally meaningful to them. Patient reported outcomes (PROs) of symptoms such as depression, anxiety, mood, sleep, and cognitive function are of interest and meaningful to almost all patients with chronic conditions. When shared with providers, such PRO information can provide a singular view of the patient's perspective to inform shared decision-making.

**Inclusion/exclusion criteria (list):**
Patient Inclusion Criteria. 1) age 18 or older; 2) speak English or Chinese (Cantonese); 3) have a faculty physician as PCP; and 4) have at least one the following in the last 12 months: diagnosis of depression, diabetes mellitus (DM) not at goal, or hypertension (HTN) not at goal at any time over the last 12 months. Cantonese is the most prevalent Chinese dialect in San Francisco. We restrict to faculty physicians to ease training and implementation. The diagnosis of depression is defined as a PHQ-8 score of 8 or higher or a diagnosis of depression, to capture depression in remission and patients who would qualify for a depression diagnosis on the basis of PHQ-8 scores. DM not at goal is defined as any A1c > 7 for age 18-64 or A1c >8.5 for age >65. HTN not at goal is defined as any BP >130/80 for age 18-59, >140/90 for age 60-79, and >150/90 for age 80+. Diagnosis codes are from the Elixhauser Comorbidity Index.

Exclusion criteria: Active Substance Use Disorder, Dementia or other conditions that prevent informed consent.

**Method of contact/recruitment (be specific):**
Patient will be be sent mychart message to assess interest and to set up recruitment call. At the recruitment call, after the patient has given verbal informed consent, a research team member will email the patient the following: 1) instructions for signing

the informed consent on Qualtrics; 2) instructions for going to the Apple App or Google Play store to download the mPROVE app and 3) instructions for setting up a UCSF MyChart account, or if they already have a MyChart account, to have their MyChart username and password available for the onboarding session. The research team member will schedule a Zoom video conference for the onboarding session.

**Benefits/burdens for participants (clearly identify potential for harm):**
See approved IRB description. Participants may experience burden from completing PRO's on their smartphone. They may also perceive reminders about PRO completion as burdensome. Prior to an appt with their PCP, pts may be asked to complete additional PRO's relevant to that visit. Pts may develop more self-efficacy as they participate more actively in disease management efforts.

**Benefits/burdens for DGIM practitioners and/or staff:**
PCP's will have more actionable data to use for shared decision making with patients around chronic disease management.

**Timeline for recruitment (include projected start and stop dates):**

- Pilot (n=up to 30): Start recruitment Nov. 15, 2022; stop Dec 15, 2022. Pilot duration is 2mo. [Note that pilot is primarily for tech testing and not the clinical intervention.]
- Clinical trial (n=40): Start recruitment Feb 15, 2023; Stop April 15, 2023. Duration is 6mo.

**Funding source(s):**
U18 AHRQ/NIH

**Potential for DGIM collaborators (e.g., we encourage DGIM resident and fellow involvement in particular):** Multiple Co-I's: Mitch Feldman, Jane Jih, Tung Nguyen, Jason Satterfield

**Do you agree to notify us when the study is completed?:**
Yes

**Date form completed**: 11/4/2022