

**Official Study Title:** PainTracker Self-Manager: a Web-based Platform to Promote and Track Chronic Pain Self-Management

**NCT Number:** NCT03045081

**Document Type:** Statistical Analysis Plan

**Document Date:** March 21, 2018 (date of most recent submission/review by *Journal of Pain*)

## ***Statistical Analysis Plan***

Data were analyzed using SPSS version 25 (IBM Corp, Armonk, NY).

Descriptive statistics and frequency distributions were calculated for sample characteristics.

Independent samples t-tests for continuous variables and  $\chi^2$  tests for categorical variables were used to evaluate for differences in demographic and clinical characteristics between the control and intervention groups. Given no statistically significant differences in demographic and clinical characteristics between the groups, the subsequent analyses (described below) did not adjust for any of these characteristics. A *P* value of <.05 was considered statistically significant. For all levels of analyses, adjustments were not made for missing data (i.e., no data imputations were performed).

Generalized estimating equations (GEE) were used to evaluate the effect of the intervention on primary (pain self-efficacy) and secondary (chronic pain acceptance, perceived efficacy in patient-provider interactions, pain intensity and interference, satisfaction with pain treatment) outcomes. GEE is an extension of generalized linear models that allows for the analysis of repeated measures with unknown covariance structure. GEE uses any and all available data that participants provide, even if follow-up data are missing (ie, intent-to-treat analysis). For all models, the main effect of group and time, and the Group  $\times$  Time interaction were evaluated. For this pilot study, Wald  $\chi^2$  statistics with *P* values <.05 for overall model effects were considered statistically significant. For models with significant Group  $\times$  Time interactions, the main effects of group or time were not reported. For models with only a significant main effect of time, models were rerun without the interaction term to obtain the more accurate main effect.

Of note, there was no significant difference in the proportion of participants who completed the study (baseline, 3 months, 6 months) between the control (88%, n=45) and intervention (77%, n=37) groups. In addition, no significant differences in demographic characteristics or outcome measures were observed between participants who did (82%, n=82) and did not (17%, n=17) complete the study. Therefore, GEE models for (1) the entire study sample (N=99) and for (2) study completers (N=82) were evaluated.