SCALE-UP Utah II: Community-Academic Partnership to Address COVID-19 Text Messaging Study

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The primary hypotheses for the Smartphone study were main effects for delivery mechanism (Chatbot > TM), main effects for PN (PN > No PN), and main effects for message frequency (10-day > 30-day). For the non-Smartphone study, the primary hypotheses were main effects for PN (PN > No PN) and main effects for message frequency (10-day > 30-day). These hypotheses were adjusted for multiple comparisons using the Bonferroni method at an alpha of .0167 for the Smartphone study to account for three co-primary comparisons, and .0250 for the non-Smartphone study to account for two co-primary comparisons.

Separate analyses were conducted for the Smartphone study and the non-Smartphone study. Log-binomial models were used to regress *Reach-Accept Testing* upon each of the three main effects in the Smartphone study, i.e. Chatbot (vs. TM), PN (vs. No PN), and outreach frequency (10 vs. 30 days); and two main effects in the non-Smartphone study, i.e. PN (vs. No PN) and outreach frequency (10 vs. 30 days). The log-binomial models included covariates to adjust for randomization stratification variables (rural vs. urban, CHC, randomization arm in our previous SCALE-UP I trial) and a categorical variable reflecting the calendar month when the participant received the first intervention message. Adjusted risk ratios (aRR) and confidence intervals were reported for each main effect. In preliminary analyses reported in the Online Supplement, the pairwise and 3-way interactions between the main effects were added to the log-binomial models described

above in order to assess for any effect modifications across interventions, but these analyses did not support the inclusion of the interactions.

We preliminarily estimated a model specification including the pairwise and 3-way interactions between the main effects and the smartphone ownership indicator in order to assess for any synergistic and/or antagonistic effect modifications across interventions. We have conducted these analyses for the primary outcome (Reach-Accept Testing) for both the smartphone and non-smartphone groups. In both analyses, the estimated coefficients on all interaction terms were not statistically significant at the 5% level. We have conducted an omnibus test (using the car::linearHypothesis function in R) and found that in each case, these coefficients were jointly not statistically significant.