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Full Title: Addressing Palliative Care Needs Among Intensive Care Unit Family Members

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Statistical Analysis Plan (Pro00090202)

Statistical Analysis Plan
The goal of the primary hypothesis was to determine the efficacy of the ICUconnect intervention versus usual care on reduction in unmet needs from T1 to T2. Unmet needs were assessed at T1, T2, and T3 with the total NEST score, a continuous, normally distributed measure. Because each family member was surveyed at multiple time points and the same ICU physician saw several patients, outcome variable measurements were not be independent. Therefore hierarchical linear models fit via PROC MIXED in SAS 9.4 (Cary, NC) were used as the primary analytic strategy they appropriately accounted for the multiple types of correlation inherent in our study design. The other continuous, longitudinal outcomes included: PHQ-9, GAD-7, PTSS, and QOC; hierarchical linear models were also used to estimate the treatment effect over time for these outcomes. The binary outcomes of goal concordant care and IPC (dichotomized due to ceiling effects) were analyzed via generalized linear models with a logit link and fit with generalized estimating equations (PROC GENMOD in SAS, 9.4). Finally, treatment group differences in hospital and ICU length of stay were examined with a Wilcoxon test.