

SUPPLEMENTARY METHODS

Study design and enrollment

Cohort 1:

As part of a different original study on clinician-family communication and prognostic concordance in medical and mixed medical-surgical ICUs, clinician-family meetings were recorded at the University of Pittsburgh Medical Center; University of California, San Francisco, Medical Center; University of California, Fresno, Medical Center; Baystate Medical Center; Harborview Medical Center; and University of North Carolina-Chapel Hill Medical Center between October 8, 2009 and October 24, 2012. All study participants provided written consent, and both surrogate and clinician participants received financial compensation for their time (\$10-20). A full description of study methods has been previously published(19). Briefly, to be eligible, patients were: ≥ 18 years old, lacked decision-making capacity, met diagnostic criteria for acute lung injury along with respiratory failure requiring mechanical ventilation, and had a score of ≥ 25 on the Acute Physiology and Chronic Health Evaluation II, predicting a 50% chance of long-term severe functional impairment. For our current analysis, we only included patients with a primary neurologic diagnosis.

Cohort 2:

Clinician-family meetings were recorded at the neuro-vascular/neuro-trauma ICU at the University of Massachusetts Medical School affiliated UMass Memorial Medical Center from May 1, 2019 – December 18, 2019. Study participants provided verbal consent after reviewing an IRB-approved fact sheet and using an IRB-approved verbal recruitment script, and did not receive financial compensation. Patient inclusion criteria were: ≥ 18 years old, incapacitated after

a neurological emergency requiring ICU admission; presence of a surrogate decision-maker ≥ 18 years old and physically available in the ICU to participate in the clinician-family meeting.

Quantitative Analysis

For the exploratory quantitative analysis, because multiple family members may have attended the meetings, we included all meetings that had at least one family member's data despite incomplete data for other family members in attendance. To identify independent predictors of clinicians' prognostication approaches, we performed multivariable multinomial logistic regression, using the most commonly used approach (Advisory) as the reference category. A priori, we included specific predictors of interest into the multivariable model (family member's race/ethnicity, clinician's race/ethnicity and clinician specialty), as well as characteristics associated with approach in the univariate analyses using $p \leq 0.2$ as a cut-off to add into the model. To explore independent associations of prognostication approach with WOLST, we applied multivariable binomial logistic regression, adding variables with $p \leq 0.2$ in the univariate analysis into the multivariable model. When data were missing for the included characteristics, meetings were excluded from the multivariable analysis (complete-case analysis). For both multivariable analyses, we applied a backwards elimination method, removing non-significant predictors while also evaluating the Akaike Information Criterion. Exponentiated model coefficients were presented as relative risk ratios for multinomial logistic regression, and odds ratios for binomial logistic regression. We intended to adjust our analysis for clustered data, e.g, clinicians who led multiple family meetings, families who attended several recorded meetings, and center with multiple recordings, but were unable to do so due to sample size

limits. P-values <0.05 were considered statistically significant. Because this study is comprised of a convenience sample, we calculated the sample size needed for future studies examining the relationship between communication approach and WOLST decision to achieve a medium effect size (Cohen's $w=0.3$) with 80% power and $\alpha=0.05$.