Published in final edited form as:
Crit Care Med. 2012 August ; 40(8): 2281–2286. doi:10.1097/CCM.0b013e3182533317.

Identifying family members who may struggle in the role of surrogate decision maker

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Abstract

Although acting as a surrogate decision maker can be highly distressing for some family members of intensive care unit patients, little is known about whether there are modifiable risk factors for the occurrence of such difficulties.

Objectives—To identify: 1) factors associated with lower levels of confidence among family members to function as surrogates and 2) whether the quality of clinician–family communication is associated with the timing of decisions to forego life support.

Methods—We conducted a prospective study of 230 surrogate decision makers for incapacitated, mechanically ventilated patients at high risk of death in four intensive care units at University of California San Francisco Medical Center from 2006 to 2007. Surrogates completed a questionnaire addressing their perceived ability to act as a surrogate and the quality of their communication with physicians. We used clustered multivariate logistic regression to identify predictors of low levels of perceived ability to act as a surrogate and a Cox proportional hazard model to determine whether quality of communication was associated with the timing of decisions to withdraw life support.

Results—There was substantial variability in family members' confidence to act as surrogate decision makers, with 27% rating their perceived ability as 7 or lower on a 10-point scale. Independent predictors of lower role confidence were the lack of prior experience as a surrogate (odds ratio 2.2, 95% confidence interval [1.04–4.46], $p = .04$), no prior discussions with the patient about treatment preferences (odds ratio 3.7, 95% confidence interval [1.79–7.76], $p < .001$), and poor quality of communication with the ICU physician (odds ratio 1.2, 95% confidence interval [1.09–1.35] $p < .001$). Higher quality physician–family communication was associated with a significantly shorter duration of life-sustaining treatment among patients who died ($\beta = 0.11$, $p = .001$).

Conclusions—Family members without prior experience as a surrogate and those who had not engaged in advanced discussions with the patient about treatment preferences were at higher risk to report less confidence in carrying out the surrogate role. Better-quality clinician–family communication was associated with both more confidence among family members to act as surrogates and a shorter duration of use of life support among patients who died.

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The remaining authors have not disclosed any potential conflict of interest.

Keywords

communication; end of life; surrogate decision making

Approximately 20% of all deaths in the United States occurs in intensive care units (ICUs), most of which involve decisions to forego life-sustaining treatments (1). Because most critically ill patients are unable to express their treatment preferences (2, 3), surrogate decision makers often play an active role in these complex decisions. A growing body of evidence suggests that the process of surrogate decision making in ICUs is fraught with emotional and cognitive difficulties for surrogates (4). Surrogates struggle to make decisions consistent with patients' preferences (5), and conflicts often arise around the decision to withdraw life-sustaining treatments (6). In addition, surrogates frequently experience a substantial emotional toll from participating in end-of-life decision making (4, 7–10).

However, little is known about whether there are identifiable risk factors for family members who are at higher risk to struggle with the role of surrogate decision maker. Several small qualitative studies have raised the possibility that the quality of communication (QOC) between clinicians and families is an important determinant of the families' perceived ability to function as surrogates (11, 12). However, larger, quantitative studies to determine the generalizability of this finding are lacking. The uncertainty about this point is problematic because it hinders efforts to develop targeted interventions to improve the quality of surrogate decision making in ICUs.

A related issue is whether improving the QOC with surrogates of patients with advanced illness will decrease the duration of use of invasive treatments in dying patients. The common-sense notion that better-quality clinician–family communication will lead to better decisions by surrogates has not been clearly established. The Study to Understand Prognoses and Preferences for Outcomes and Risks of Treatments trial, a large randomized controlled trial designed to improve communication and decision making for patients with advanced illness, had no impact on end-of-life decision making (13). In separate studies, Lilly and Daly tested an intervention involving regular, structured family meetings (14, 15). Although the intervention was associated with shorter length of stay in a single-center study, a subsequent multicenter study showed no changes in length of stay or treatment-limitation decisions. The Critical Care Family Needs Assessment Program sought to improve families' overall experiences in the ICU by increasing communication with clinicians, providing educational materials, and improving the physical environment of the ICU. In a before–after quasi-experimental study, family ratings of the QOC with ICU clinicians were not improved, nor was there evidence of change in ICU length of stay (16, 17).

These findings raise questions about whether better communication will lead to better decisions for patients with advanced critical illness. However, most studies on this topic have focused largely on increasing the amount of communication rather than the QOC. It is possible that what is important is not simply the amount of time spent communicating with families, but also what occurs during those conversations.

We therefore sought to quantitatively assess factors associated with lower levels of confidence among family members in their perceived ability to function as surrogate decision makers and whether the surrogate-assessed QOC is associated with the timing of decisions to forego life support.

METHODS AND METHODS

From January 2006 to October 2007, we performed a prospective cohort study of surrogate decision makers for critically ill patients in four ICUs at the University of California San Francisco Medical Center. Study methods have been previously described (18).

Study investigators identified eligible surrogates by screening patients daily in the ICU. The four ICUs included mixed patient populations, with one neurology ICU, one cardiac ICU, and two medical-surgical ICUs. We included as subjects the surrogate decision makers of incapacitated adult patients with respiratory failure requiring mechanical ventilation, an Acute Physiology and Chronic Health Evaluation II score of > 25, and lack of decision-making ability. We excluded patients on the transplant list, patients without surrogates, surrogates who did not speak English or were not physically able to complete the questionnaire. Patients dying within 48 hrs of initiating mechanical ventilation were not eligible per Institutional Review Board requirements.

If multiple family members shared responsibilities for surrogate decision making, we enrolled those individuals who self-identified as having a significant role in decision making; therefore, each patient could have more than one surrogate enrolled. Among families who consented to participate, all of the self-identified main surrogates agreed to participate. The study was conducted in California where, in contrast to many states, there is no legal hierarchy of surrogates. We therefore asked families to self-identify the individuals most involved in decision making. Surrogates who were <18 yrs old and were unable to speak or read English were excluded from the study. Before approaching potential subjects, we obtained permission from the patient's attending physician to do so. All subjects provided written consent to participate in the study. The Institutional Review Board at UCSF approved all study procedures.

Measurements

On the patient's fifth day of mechanical ventilation, subjects completed a written questionnaire addressing demographic information, past experiences as a surrogate, and whether they had discussed treatment preferences with the patient. To assess family members' self-perceived ability to function as a surrogate, we used the following question: "How well do you think you understand the treatments your loved one would want or would not want in his/her current medical situation?" The response element was a 10-point scale anchored on the left with "not well," and anchored on the right with "very well" for the question. There was no other associated text with the scale. Surrogates also completed the QOC scale (19). The QOC is a 15-item measure assessing the quality with which clinicians performed certain tasks that are important to informed decision making and family support. The individual questions on the QOC scale are listed in Table 1. Response options range from 0 to 10, with 0 meaning "the very worst" and 10 meaning "the very best." The QOC scale has been validated using actual audio-recorded clinician–family encounters in ICUs paired with completion of the QOC scale by surrogates after the conference (20). The validation of the QOC has mostly been construct validation relating to items obtained through surveys. Previous work has demonstrated a positive association between actual clinician behaviors during family conferences and QOC scores (19, 21).

Trust in physicians was measured with the validated physician trust scale (22). Clinician–family conflict was measured with a single-item conflict scale (6). Surrogates also completed a religiosity scale and the God Locus of Health Control Scale, a validated measure of how influential patients believe God is in their health, with higher scores indicating a stronger belief in God's role in health (23, 24). Written depression screening was performed with the Patient Health Questionnaire-2 (25). Dispositional optimism was measured with the Revised Life Orientation Test (26). The higher the Life Orientation Test score is, the more optimistic a person is. Subjects completed a validated measure of health literacy, the Short Test of Functional Health Literacy in Adults, as well a scale that captures views on patient and doctor roles, the Patient Provider Orientation Scale. The Patient Provider Orientation Scale is a mean score ranging from 1 to 6, with higher scores reflecting that the patient believes in a more “patient-centered” approach to health care (28). A measure of the patients’ prehospitalization function was obtained using the Katz Activities of Daily Living score: the higher the score, the more independent the patient was (29).

Analyses

All analyses were executed in SAS 9.2. Basic descriptive analyses were performed followed by statistical modeling. To identify factors associated with surrogates’ role confidence, we fit a hierarchical logistic regression model to account for the potential clustering at two levels: the first level being that of physician with multiple patients and the second level being that of patients with multiple surrogates. We used a hierarchical model to account for clustering at the level of the patient (i.e., some patients had more than one surrogate) and physician (e.g., some physicians took care of more than one patient), which more likely could skew the results if it was not accounted for in the analysis. Hierarchical modeling statistical estimates and adjusts for within-subject correlations. The outcome of interest was lower levels of confidence to act as a surrogate, defined as a score of ≤7 on a 10-point scale. First, models containing a single covariate were fit to the data to identify potential predictors of interest. Variables with a significance level of $p > .20$ were then excluded from further analysis. Variables were sequentially added to the model. In the setting where two covariates were highly correlated, only one of the two covariates was included in the model. Since the QOC scale and the Physician Trust Scale captured a similar clinical finding and were highly correlated, only QOC was included in the final model. The QOC score was used as a continuous predictor (in 5-point increments) for the model.

To assess whether the QOC is associated with the time to the withdraw life-prolonging treatments, the proportional hazards model was fit with a significance level of 0.20 being used to exclude variables from further analysis. Variables of interest were included sequentially in the model. The average QOC score of the surrogates per patient was used for the proportional hazards analysis.

RESULTS

Surrogates’ demographic characteristics and a summary of other covariates are shown in Table 2. Among eligible participants, 78% of surrogates agreed to participate in the study. There were no significant differences between enrolled and not-enrolled patient participants in age, sex, race, or Acute Physiology and Chronic Health Evaluation II score. In all instances in which the enrolled family indicated that more than one individual was acting as a surrogate, all family members agreed to participate in the study. More than half of the surrogates had prior experience as a surrogate decision maker for any patient (52%), and 60% had prior discussions with the current patient enrolled in the study about treatment preferences. One hundred and thirty-four patients had one surrogate, 30 patients had two surrogates and nine patients had three or more surrogates. The mean number of surrogates per patient was 1.3 (SD 0.61) with a range of 1 to 5.

Patient demographics are summarized in Table 3. Patients were on average 59 yrs of age (SD 18) and the average Acute Physiology and Chronic Health Evaluation score on enrollment was 29.3 (SD 4.60). The mean score for family members’ confidence in their ability to act as a surrogate was 8.21 (SD 2.3) on a 1–10 scale; 27% rated their ability as seven or lower.

Table 4 summarizes the univariate analyses of factors associated with lower confidence as a surrogate. Univariate analysis revealed several factors associated with lower confidence among surrogates including: no prior experience as a surrogate, male sex, relationship other than spouse, no prior conversation, and poor communication with ICU physicians. The multivariate analysis revealed three factors significantly associated with lower confidence among surrogate decision makers: lower scores on the QOC scale (OR 1.21, 95% confidence interval [1.09–1.35], $p < .001$), no prior experience as a surrogate (OR 2.15, 95% confidence interval [1.04–4.46], $p = .04$), and the absence of prior conversation with the patient about treatment preferences (OR 3.68, 95% confidence interval [1.79–7.76], $p < .001$) (Table 5).

Using Cox proportional hazard model, we assessed the relationship between QOC and duration of use of life support among patients who died. In the univariate analysis, significant predictors of shorter time on life-sustaining treatments were higher Acute Physiology and Chronic Health Evaluation score, higher QOC, and prior conversation between the patient and surrogate about treatment preferences (Table 6). In the multivariate analysis, every 5-point increase in QOC was associated with a 12.0% shorter time on life-sustaining treatment prior to death (Table 7). Patients who had not discussed their treatment preferences with the surrogate spent on average 40% longer time on life-sustaining treatments prior to their death, but this association did not reach the level of statistical significant ($p = .11$).

DISCUSSION

This study suggests that family members of critically ill patients who have no prior experience as a surrogate and who have not had prior conversations with the patient about treatment preferences are more likely to struggle in the role of surrogate. Better clinician–family communication was associated with higher role confidence among surrogates. Higher QOC was also associated with less time on life support for dying patients.

Our findings of factors that predict lower confidence among family members acting as surrogates provide quantitative confirmation of themes identified in several small qualitative studies of surrogate decision making (4, 12). Vig interviewed families of incapacitated patients and found that surrogates considered several factors helpful in easing the burden of surrogate decision making, including prior conversations with the patient, written advance directives, and shared experiences with loved ones (30). Kirchhoff et al found that a key element of family members' comfort with acting as a surrogate was their understanding of the patient's preferences for future medical care (31). Our findings extend those of prior studies by employing quantitative strategies in a diverse cohort and by using multivariate methods to control for potential confounding. A clinical implication of our findings is that it may be possible to "risk stratify" family members regarding the likelihood that the role of surrogate will be difficult for them. Our data suggest two questions that may help in this process: Does the family member have prior experience as a surrogate, and has the surrogate had prior conversations with the patient about treatment preferences?

We also found an association between the quality of clinician–family communication and surrogates' confidence in their role. This finding is important because it suggests that family members' confidence to act as a surrogate may be modifiable by clinicians, rather than being simply a result of unmodifiable personality traits and life experiences. This has implications for the design of interventions to improve the quality of surrogate decision making in ICUs. It may also shed light on the mechanism of benefit of prior communication interventions, which decreased long-term posttraumatic stress disorder symptoms among surrogates in ICUs (14,32).

We found that higher-quality clinician–family communication was associated with a significantly shorter duration of life support among patients who died. We are not aware of other studies that directly address this question, though it is likely that interventions testing early palliative care consultation (33), ethics consultation (34), or proactive family meetings (32, 35) may achieve their effect through improved QOC. This is in contrast to prior studies reporting that increasing the frequency of communication has no impact on the timing of decisions about life support (15). We speculate that our focus on the QOC rather than the quantity of communication may explain the difference. High-quality communication may address both cognitive and emotional barriers to decisions to forego life support. For example, high-quality communication may provide surrogates not only the information they need to make patient-centered decisions, but also the support needed to face the emotional impact of EOL decisions. Failure to address these emotional and psychological barriers may make it difficult for surrogates to authorize a transition to comfort-focused EOL care, even when doing so is clearly consistent with the patient's values.

A strength of the study is that, rather than eliciting surrogates' global impression of communication quality, we used a validated measure that focuses on surrogates' assessments of how well specific communication competencies were performed. This allows clinicians interested in improving their communication skills to focus on the specific competencies measured, such as discussing prognosis, active listening, eliciting the patient's values, providing emotional support, and deliberating with surrogates about treatment decisions.

There are several limitations to our study. Although there were no differences in demographics between enrolled and nonenrolled patients, we cannot exclude the possibility that unmeasured differences existed between these groups, posing a threat to generalizability. The study sample was relatively well educated, and to the extent that less-educated individuals tend to struggle more with medical decisions, our findings may underestimate the true prevalence of problems with surrogate decision making. The study was conducted in one region of the United States and therefore may not be generalizable to areas in which there are different cultural perspectives on surrogate decision making. Another limitation is that we did not ascertain whether surrogates were appointed by the patient or were acting by default "closeness of relationship." As with all observational studies, this study does not establish a causal relationship between the QOC and timing of decisions to forego life support. We did not measure long-term psychiatric outcomes among surrogates, and therefore could not assess whether higher-quality clinician–family communication was associated with better psychiatric outcomes. Finally, we measured surrogates' perceptions of how well clinicians performed discrete communication competencies rather than direct observation of the actual communication. Although several studies have documented the construct validity of the QOC instrument, further work is needed to better define the domains of high-quality communication.

In conclusion, we identified two characteristics of family members of critically ill patients who may struggle with surrogate decision making: having no prior experience as a surrogate, and not having engaged in prior conversations with the patient about healthcare preferences. Higher-quality physician–family communication was associated with both higher role confidence among family members to act as surrogates and a shorter duration of use of life support among patients who ultimately die. In aggregate, these findings suggest that a potential strategy to improve surrogate decision making is to develop communication interventions that are tailored to families' prior experiences as surrogate decision makers and to the level of understanding of the patient's preferences.

Acknowledgments

Drs. Weissfield and White received funding from the National Institutes of Health.

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Table 1

Quality of communication scale

How good have the doctors been at:

1) Using words that you could understand.
2) Giving you information about your loved one’s illness and treatment.
3) Including you in decisions about your loved one’s illness and treatment.
4) Answering all of your questions about your loved one’s illness and treatment.
5) Listening to what you had to say.
6) Caring about you as a person.
7) Giving you his/her full attention.
8) Asking about the kinds of treatments your loved one would want if he/she could speak for him/herself.
9) Talking with you about your feelings that your loved one might get sicker or die.
10) Talking with you about when and how your loved one might get sicker or die.
11) Talking to you about how long your loved one might have to live.
12) Asking about the things in life that are important to your loved one.
13) Asking about your spiritual or religious beliefs.
14) Helping your family decide about the kinds of treatments your loved one would want.
15) Overall, how would you rate this doctor’s communication with you?

Table 2

Demographic data of surrogates

Surrogate Data	**All (*N* = 223)[a]**	**Low Confidence (*N* = 61)**	**High Confidence (*N* = 162)**	***p***
Age	Mean 46.8, SD 14.5	Mean 45.3, SD 14.6	Mean 47.3, SD 14.5	.369
Sex (male)	73 (32.7)	27 (44.3)	46 (28.4)	.024
Hispanic	32 (14.5)	12 (20.0)	20 (12.4)	.155
Race				.988
White	133 (62.7)	38 (64.4)	95 (62.1)	
Asian/Pacific Islander	37 (17.5)	10 (17.0)	27 (17.7)	
Black	22 (10.4)	6 (10.2)	16 (10.5)	
Others	20 (9.4)	5 (8.5)	15 (9.80	
Relationship to patient				.036
Spouse	53 (25.0)	8 (13.6)	45 (29.4)	
Child	82 (38.7)	22 (37.3)	60 (39.2)	
Parent	22 (10.34)	7 (11.9)	15 (9.8)	
Other	55 (25.9)	22 (37.3)	33 (21.6)	
Level of education				.312
Some high school or less than high school	13 (5.8)	5 (8.3)	8 (4.9)	
High school graduate	44 (19.8)	14 (23.3)	30 (18.5)	
4-yr college degree	119 (53.6)	33 (55.0)	86 (53.1)	
Postgraduate, graduate, or professional training	46 (20.7)	8 (13.3)	38 (23.5)	
Had discussion in the past	137 (61.4)	23 (37.3)	114 (70.4)	<.0001
Has past surrogate experience	115 (51.8)	23 (37.7)	92 (57.1)	.010
Quality of communication (0–20 scale)	Mean 16.23, SD 3.32	Mean 14.92, SD 3.57	Mean 16.72, SD 3.09	.010

[a] Complete data available for 223 subjects.

Table 3

Baseline characteristics of patients

Patient Data	All (*N* = 173)	Low Confidence (*N* = 40)	High Confidence (*N* = 133)	*p*
Age	Mean 59.2, SD 18.2	Mean 56.0, SD 17.4	Mean 60.1, SD 18.3	.203
Sex (male)	96 (55.5%)	25 (62.5%)	71 (53.4%)	.309
Hispanic	20 (11.6%)	6 (15.0%)	14 (10.6%)	.448
Race				.554
White	101 (63.1%)	24 (68.6%)	77 (61.6%)	
Asian/Pacific Islander	34 (21.3%)	7 (20.0%)	27 (21.6%)	
Black	17 (10.6%)	4 (11.4%)	13 (10.4%)	
Others	8 (5.0%)	0 (0.0%)	8 (6.4%)	
Admission diagnoses (% of patients)				.182
Neurological failure	46 (26.6%)	7 (17.5%)	39 (29.3%)	
Gastrointestinal/pancreatic failure	13 (7.5%)	2 (5.0%)	11 (8.3%)	
Cardiac failure/shock (includes sepsis)	44 (25.4%)	10 (25.0%)	34 (25.6%)	
Hepatic failure	13 (7.5%)	6 (15.0%)	7 (5.3)%	
Respiratory failure	47 (27.2%)	14 (35.0%)	33 (24.8%)	
Others	10 (5.8%)	1 (2.5%)	9 (6.8%)	
Acute Physiology and Chronic Health Evaluation score	Mean 29.3, SD 4.6	Mean 29.4, SD 5.3	Mean 29.3, SD 4.4	.867
Length of intensive care unit stay	Mean 15.5, SD 20.6	Mean 12.9, SD 11.4	Mean 16.3, SD 22.6	.367
Mortality	75 (43.4%)	17 (42.5%)	58 (43.6%)	.901
Do not resuscitate on enrollment	27 (15.6%)	8 (20.0%)	19 (14.3%)	.3823

Table 4

Unadjusted odds ratios for surrogate variables associated with lower levels of confidence

Independent Variable	**Odds Ratio (95% Confidence Interval)**	***p***
No discussion in past with patient about treatment preferences	3.70 (1.90–7.19)	.0002
Older age (per 5 yrs intervals of increasing age)	0.97 (0.86–1.09)	.6221
Male sex	2.23 (1.15–4.32)	.0175
Hispanic	1.42 (0.56–3.58)	.4571
Race		
Caucasian vs.non-Caucasian	1.17 (0.56–2.46)	.6750
African American vs. non-African American	1.04 (0.33–3.28)	.9481
Increasing level of education (5 categories)	0.74 (0.50–1.10)	.1362
Primary language is english	0.77 (0.34–1.78)	.5427
Catholic religion	1.14 (0.55–2.35)	.7274
Increasing level of religious influence on life	0.85 (0.60–1.19)	.3343
Relationship to patient		
Spouse vs. nonspouse	0.40 (0.17–0.97)	.0420
Child vs. nonchild	0.96 (0.49–1.87)	.8982
Parent vs. nonparent	1.11 (0.38–3.21)	.8515
Decreasing Short Test of Functional Health Literacy in Adults score (by 5-point intervals)	1.14 (0.85–1.53)	.3857
Decreasing God Locus of Health Control Scale summary score by 5-point intervals (indicating stronger belief in God’s role in health)	1.00 (0.84–1.19)	.9696
Decreasing Life Orientation Test score (more optimistic) by 5-point intervals	1.36 (0.89–2.08)	.1528
Decreasing Patient Provider Orientation Scale score, by 1 point (more patient-centered)	0.97 (0.69–1.37)	.8701
Patient Health Questionnaire-2 score indicates depression(reverse)	1.12 (0.57–2.19)	.7469
No past surrogate experience	2.37 (1.21–4.65)	.0123
MD can predict if patient will live or die (decreasing agreement on 1–6 scale)	1.02 (0.82–1.26)	.8904
Decreasing agreement on 1–6 scale that sometimes physicians don’t tell family members the truth about prognosis	0.83 (0.67–1.04)	.0988
Decreasing agreement on 1–6 scale that it is important physician is honest about prognosis	0.88 (0.52–1.48)	.6260
Decreasing agreement on 1–6 scale that prefer doctor does not discuss chance of survival	0.94 (0.74–1.19)	.5900
Decreasing conflict with doctor on 0–10 scale	1.01 (0.88–1.16)	.9232
Decreasing doctor trust score by 5-point intervals	1.82 (1.22–2.74)	.0040
Decreasing quality of communication score by 5-point intervals	1.15 (1.05–1.27)	.0040
Acute Physiology and Chronic Health Evaluation II score on day of family interview/enrollment	1.03 (0.96–1.11)	.3703

Table 5

Clustered multivariable analysis of surrogate variables associated with lower levels of confidence

Predictor	**Odds Ratio (95% Confidence Interval)**	***p***
Had discussion in past with patient about treatment preferences (reverse)	3.683 (1.794–7.559)	.0005
Has past surrogate experience (reverse)	2.150 (1.037–4.458)	.0399
Decreasing quality of communication score by 5-point intervals	1.209 (1.086–1.346)	.0006

Table 6

Univariate analysis for the time to withdraw treatment including whole sample (*N* = 173)

Parameter	**Variable Estimate**	**Standard Error**	**χ^2-Square**	***P***	**Hazard Ratio**
Sex	0.16540	0.26207	0.3983	.5279	1.180
Spouse	−0.11379	0.26805	0.1802	.6712	0.892
Acute Physiology and Chronic Health Evaluation II score	0.08047	0.02699	8.8879	.0029	1.084
Good quality of communication Score (by 5-point intervals)	0.13193	0.03699	12.7227	.0004	1.141
Surrogate confidence	0.02072	0.05764	0.1292	.7193	1.021
No prior discussion	−0.57754	0.29424	3.8527	.0497	0.561
No prior surrogate experience	0.26468	0.24585	1.1591	.2817	1.303
Reversed doctor trust (0–4 scale)	−0.21148	0.15442	1.8757	.1708	0.809

Table 7

Multivariable analysis for the time to withdraw treatment including whole sample (*N* = 173)

Parameter	**Variable Estimate**	**Standard Error**	**χ^2-Square**	***p***	**Hazard Ratio**
Higher quality of communication score (by 5-point intervals)	0.11291	0.03665	9.4904	.0021	1.120
Acute Physiology and Chronic Health Evaluation II score	0.07168	0.02730	6.8941	.0086	1.074