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Dimensions and Role-Specific Mediators of Surrogate Trust in the ICU

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Abstract

Objective—In the ICU, discussions between clinicians and surrogate decision makers are often accompanied by conflict about a patient's prognosis or care plan. Trust plays a role in limiting conflict, but little is known about the determinants of trust in the ICU. We sought to identify the dimensions of trust and clinician behaviors conducive to trust formation in the ICU.

Design—Prospective qualitative study.

Setting—Medical ICU of a major urban university hospital.

Subjects—Surrogate decision makers of intubated, mechanically ventilated patients in the medical ICU.

Measurements and Main Results—Semistructured interviews focused on surrogates' general experiences in the ICU and on their trust in the clinicians caring for the patient. Interviews were audio-recorded, transcribed verbatim, and coded by two reviewers. Constant comparison was used to identify themes pertaining to trust. Thirty surrogate interviews revealed five dimensions of trust

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in ICU clinicians: technical competence, communication, honesty, benevolence, and interpersonal skills. Most surrogates emphasized the role of nurses in trust formation, frequently citing their technical competence. Trust in physicians was most commonly related to honesty and the quality of their communication with surrogates.

Conclusions—Interventions to improve trust in the ICU should be role-specific, since surrogate expectations are different for physicians and nurses with regard to behaviors relevant to trust. Further research is needed to confirm our findings and explore the impact of trust modification on clinician-family conflict.

Keywords

communication; decision making; intensive care units; nurses; trust

Patients admitted to the ICU commonly lack decisional capacity and require a surrogate to make decisions on their behalf (1). Surrogates often face difficult decisions about goals of care and treatment preferences, and these decisions may be accompanied by conflict with the ICU physicians and nurses (2). ICU conflict may be associated with surrogate demands for inappropriate treatments, surrogate psychologic burden, and job strain among ICU providers (3–5). The etiology of ICU conflict has been the focus of recent research, with multiple studies identifying surrogate distrust as a potential predictor of conflict (5–7). Low levels of trust are also associated with greater surrogate desire to be in control of decision-making (8).

Experts define trust as “the optimistic acceptance of a vulnerable situation in which the truster believes the trustee will care for the truster’s interests” (9). A number of studies have identified factors that affect patient trust in the outpatient setting (10–13). However, these results may not be applicable to trust between surrogates and the care team in the ICU where relationships are impacted by frequent ICU clinician handoffs, multiple consulting services, and high nurse-to-patient ratios. We set out to better understand trust through a qualitative approach exploring salient aspects of surrogate trust in ICU clinicians. The goal of this study was three-fold: 1) to explore trust in the ICU from the perspective of surrogate decision makers of critically ill patients; 2) to add greater detail to existing models of ICU trust by identifying dimensions of trust in the ICU; and 3) to explore role-specific and institutional contributions to ICU trust.

MATERIALS AND METHODS

Setting and Subjects

We performed interviews with surrogate decision makers of intubated patients in the medical ICU of a tertiary care university medical center in Chicago, IL. This 33-bed closed-model ICU is spatially separated from the neurosurgic, cardiac, and surgical ICUs. This ICU model is representative of most medical ICUs in academic medical centers in the United States. The nurse-to-patient ratio on this unit is 1:1 or 1:2. There are no strict visiting hours; one family member per patient is permitted to stay overnight in the patient’s room, and additional family members are permitted to stay in the waiting room.

Using convenience sampling, we enrolled surrogates between November 26, 2012, and September 30, 2013. Eligible subjects were at least 18 years old, fluent in English (speaking and reading), and identified by the primary ICU team as someone actively involved in decision-making for the patient. Surrogates of patients who had been previously cared for by the protocol investigators (P.J.H., T.C.) were excluded to minimize response bias. If multiple surrogates were identified as decision makers, one subject was chosen based on availability for interview and willingness to participate. Enrollment occurred on weekdays during daytime hours. Approval for human subjects research was obtained from the Northwestern University Institutional Review Board.

Script and Interviews

We developed a preliminary set of interview probes based on review of existing literature and input from experts in ICU communication. Interviews began with questions exploring surrogates' general experiences in the ICU, allowing respondents to offer trust-related comments before being explicitly asked about trust by the interviewer. The probes were iteratively revised during the first six interviews to arrive at a final interview script that guided subsequent semistructured interviews (Supplemental Table 1, Supplemental Digital Content 1, <http://links.lww.com/CCM/B949>). After early interviews revealed a significant role for nurses in the formation of ICU trust, the script was modified to reflect this finding.

Eligible subjects were approached at the bedside in the ICU after permission was obtained from the primary attending or fellow responsible for the patient's care. One investigator (P.J.H.) enrolled and interviewed all subjects. After a surrogate agreed to participate, they were taken to a conference room for the consent process and interview. At the completion of the interview, each subject was asked a series of demographic questions. Patient demographic data were collected through chart review, and Acute Physiology and Chronic Health Evaluation IV scores were calculated by the Enterprise Data Warehouse (14).

Analysis

Each interview was audio-recorded and transcribed verbatim. Three investigators (M.C.M., P.J.H., K.M.) read the first six transcripts to develop a preliminary codebook through an open coding approach. Two investigators (P.J.H., K.M.) then independently coded all 30 transcripts. Each transcript was discussed, line by line, in 10 sets of three transcripts. Instances of discordant coding were resolved by reaching consensus through discussion. After each set of transcripts was coded, the codebook was revised in order to improve reliability of future coding. Thematic saturation, the point at which no additional codes were identified with additional interviews, was established when the codebook no longer required revision. Coding was performed using ATLAS.ti qualitative data analysis software (ATLAS.ti Scientific Software Development GmbH, Berlin, Germany).

Our thematic analysis utilized techniques commonly employed in grounded theory, a method of social science research involving hypothesis formation from qualitative data (15–17). A

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semistructured approach to interviews provided a dataset with ample exploration of latent trust-related themes. We used constant comparison in order to explore relationships between coded data excerpts within the same interview and between excerpts of the same code identified in different interviews. Two specific themes, role-specific mediators of trust and the impact of systems' trust, were targeted with direct questions. A third theme, dimensions of trust, was developed through analysis of all aspects of surrogates' experience and comments on trust. As coding progressed, we utilized diagramming to build and iteratively revise a rudimentary conceptual framework describing the relationship between codes. The final list of trust dimensions resulted from grouping-related codes and splitting codes with significant variability in order to represent these dimensions in the most parsimonious manner possible. Once preliminary analysis was completed, the resulting conceptual framework was refined through integration with published empirical data and social science theory (9, 11, 18, 19).

RESULTS

Enrollment and Interview Characteristics

We requested participation from 38 surrogates, 30 of whom agreed to participate and were interviewed. Among those who declined to participate, reasons cited included a high level of stress and bad timing. Surrogate and patient characteristics of enrolled participants are displayed in Table 1. The final codebook revision occurred after the 24th interview. Review of six additional transcripts resulted in no revisions, indicating that thematic saturation had occurred. Average and median interview length was 36 minutes (range, 15–52 min). The only adverse event observed during the interviews was visible emotional distress concerning the illness of the patient. No interview required termination because of emotional distress or subject request.

Codes and Interview Themes

A list of codes and the frequency of each code are provided in Supplemental Table 2 (Supplemental Digital Content 2, <http://links.lww.com/CCM/B950>). The following themes capture the most pertinent surrogate sentiments related to trust and their ICU experiences.

Dimensions of Surrogate Trust in the ICU—Through our analysis, the following five dimensions of ICU trust were identified: “technical competence, communication, honesty, benevolence, and interpersonal skills.” We elaborate on these dimensions below. Representative quotes pertaining to each dimension are provided in Table 2.

Technical competence: Surrogates commonly described nurse behaviors when discussing the effect of clinician competence on their trust. Nurses' diligence, teamwork, and confidence in performing daily tasks were relevant behaviors affecting trust. Nurses' diligence while completing bedside tasks was an indication of competence for many surrogates because it implied that nurses understood their role and responsibilities. Surrogates also commented on nurses' swift response to monitors, alarms, and calls from the patient's room when describing their trust in ICU clinicians. Comments regarding physician

competence were infrequent; some surrogates assessed a physician's competence with regard to outcome or improvement in a patient's condition.

Communication: Surrogates reported that communication with physicians occurred largely during morning rounds when updates were provided on a daily basis. Communication-related qualities, such as the use of lay language, were commonly identified as important to trust. Many surrogates placed a high premium on the frequency of updates provided outside morning rounds. Just as technical competence of physicians received little attention from surrogates, nurses' communication approaches were commented on less frequently than those of physicians.

Honesty: Although closely related to clinicians' communication techniques, receiving accurate, truthful information from physicians was clearly distinguished from other communication-related themes. This dimension concerns the content of discussions rather than the skills used to deliver information to surrogates. In particular, surrogates commonly used the phrase "don't sugar-coat it" when describing their desire for an honest and blunt assessment of a patient's prognosis. Some surrogates expressed that although they understood the physician's obligation to provide hope, they preferred that optimism be appropriately tempered with realistic predictions.

Benevolence: Surrogates frequently reported reassurance, relief, and comfort when the physicians and nurses demonstrated sincere investment in the care of the patient. Surrogates wanted to know that clinicians truly cared about their loved one. This judgment was often based on interactions in which the clinician expressed genuine concern for the patient or surrogate or when they would "go that extra mile" to help. One surrogate described this investment in terms of how the patient was treated, stating, "It is really valuable that kind of comfort knowing that there is staff taking care of your loved one who doesn't even know them but treats them like it is their loved one."

Interpersonal skills: In contrast to benevolence, interpersonal skills concern clinician qualities that are less specific to the clinician-patient interaction. These attributes foster trust by enhancing the surrogate's ability to relate to the clinician through shared qualities and experiences. For many surrogates, the ability of physicians to make a personal connection, such as remembering the surrogate's name or finding qualities they had in common, was a way in which physicians became more "human" and indicated that they were "more than a white coat." Twelve surrogate interviews included specific comments about clinicians introducing themselves when entering the room. Surrogates indicated that they were more comfortable with clinicians who they perceived as caring, personable, and warm.

Role-Specific Mediators of Trust Formation—Nurse- and physician-specific behaviors contributing to surrogate trust are listed in Table 3. As mentioned above, the original interview script did not specifically address nursing care. However, because of the frequency with which surrogates emphasized the importance of nurses, the script was revised after the first six interviews to query the role of nurses in developing trust. Specifically, the flurry of nursing activity upon arrival of a patient to the ICU was an important event in the formation of trust. The convergence of multiple nurses to quickly

connect the patient to monitors made a very strong first impression for some, establishing trust at a time of high stress and anxiety for the surrogates. Some surrogates remarked that the ICU nurses were highly skilled. When asked about the basis for this judgment, one surrogate explained, “Because that look on their face is total confidence...it doesn’t take much once you have been here a while to recognize who is not sure of themselves and who is.” Although nurse-specific factors largely concerned behaviors related to motivation and technical competence with patient care, physician-specific attributes focused on behaviors related to their communication with surrogates.

Institutional and Healthcare System Trust—When asked about the formation of trust with clinicians in the ICU, many surrogates described trust that existed even before their loved one received any care. Surrogates described two foci of trust that existed before ICU admission: 1) the hospital and 2) the healthcare system. Surrogates placed trust in the hospital because of endorsements by family members or friends, reputation, or prior personal experiences at the medical center. Some felt that having a relationship with an outpatient physician at the medical center, such as an oncologist, provided a sense of comfort and augmented trust in the ICU clinicians. Trust in the healthcare system was described by one surrogate as “blind trust,” because in an emergency, there is no prior personal relationship to justify trust. Rather, trust in physicians is established by virtue of their inclusion in the profession.

DISCUSSION

To our knowledge, this is the first study to explore specific dimensions of trust in the ICU from the surrogate perspective. Through interviews with surrogate decision makers, we identified five dimensions of trust: 1) technical competence, 2) communication, 3) honesty, 4) benevolence, and 5) interpersonal skills. Prior surrogate trust in the institution and in healthcare system is modified through interaction with ICU clinicians, resulting in a composite judgment of overall trust during the ICU hospitalization.

These dimensions of surrogate trust in the ICU are similar to those identified in studies of trust in other clinical settings. Examination of trust in outpatient physicians has identified the following dimensions: technical competency, honesty, fidelity/agency (placing a patient’s needs above competing interests), confidentiality, global trust, interpersonal competency, control, disclosure, and caring (9–11,13, 18–20). Our results provide a novel contribution to this knowledge base by identifying dimensions of trust pertinent to the ICU and identifying trust-modifying behaviors of clinicians in this setting. The emphasis that our surrogates placed on nurses demonstrates the importance of the treatment team, rather than an individual physician, in establishing trust in the ICU.

In most circumstances, surrogates of patients in the ICU lack any prior relationship with the ICU physicians and nurses, so trust at the systems’ level influences how surrogates trust caregivers previously unknown to them (21). Surrogates’ trust before ICU admission is essential to our understanding of ICU trust, because the level of surrogate trust in our institution or in the medical profession represents the starting point, or baseline, for trust in the ICU care team. This is an important finding in the context of high levels of distrust

among the general population and variable levels of distrust among surrogates in the ICU (12, 22). Future research might explore whether distrust in the medical profession can be offset by strong institutional reputation.

An important finding in this study was the emphasis surrogates placed on the role of the nursing staff in the formation of trust. This result may be explained by the frequency of interaction between surrogates and nurses. The nurse-to-patient ratio in our medical ICU is 1:1 or 1:2, enabling nurses to spend a large amount of time in each patient's room and thereby interact frequently with family members. Observation of nurses performing daily tasks such as bedding changes, patient turning, blood draws, and medication administration allowed surrogates to comment more about the technical skills of nurses than those of physicians, who infrequently perform procedures in the presence of family members.

Previous research has demonstrated surrogates' preference for nurses as the point of contact for day-to-day communication (23). Nurses have expressed willingness to advocate for patients near the end of life (24), and they have reported greater empowerment when all members of the care team play an important role in the ICU care team (25). Unfortunately, nurses reported that they often are not involved in decision-making processes in the ICU, and their involvement may be less frequent in the United States than in other countries (26, 27). Our results provide support for a more substantial nursing role, especially in the context of research suggesting that nursing communication strategies build rapport and help develop trusting relationships with family members (28).

Identifying dimensions of ICU trust allowed us to construct a conceptual framework (Fig. 1) that builds on previously published models of trust in the ICU (22) and distrust in the healthcare system (12). Our conceptual framework places systems' trust among a number of factors affecting a surrogates' baseline level of trust at the time of their loved one's ICU admission. Once a surrogate is engaged by physicians and nurses, this baseline trust is modified based on interactions affecting the five dimensions of ICU trust. The model proposed by Schenker et al (22) depicts the effect of this "ICU experience" on surrogate trust and lists the ICU outcomes affected by trust. Our adaptation of this model adds clarity to the "ICU experience," emphasizing interaction with physicians and nurses, as well as the specific dimensions affecting ICU trust. Future work might explore how other care team members, such as chaplains and social workers, affect trust for ICU surrogates.

There are a number of limitations to this study. First, the high participation rate may signal selection bias, because the care team may have unknowingly identified surrogates with greater trust who would be more willing to participate. Second, subject sampling was not random and therefore was subject to preferential enrollment of surrogates present during weekdays and daytime hours. Third, this study was performed in a single ICU at one medical center; our results apply to the physician and nursing culture of one care environment that may not be applicable to other ICUs even at the same institution. Finally, our study could not determine the effect of time, or length of ICU admission, on the formation of trust. Although time was an initial code during transcript analysis, insufficient emphasis was placed on time to warrant inclusion in our conceptual framework. Furthermore, we did not perform a quantitative assessment of trust in order to determine

whether higher levels of trust have a positive or negative association with ICU admission duration.

CONCLUSIONS

Our results provide clinicians with practical guidance regarding trust formation. With limited time to spend at the bedside of every patient, attending physicians might focus their efforts on behaviors that have the greatest potential to earn the trust of surrogates, such as regularly introducing themselves and providing frequent updates regarding a patient's condition. Nurses can be educated about the importance of confidence and teamwork, and they can be regularly included in meetings with surrogates that address patient care plans. Communication strategies during family meetings might be modified to convey poor prognoses in an honest yet respectful manner. Although further research is needed to confirm our findings and explore the impact of trust modification on clinician-family conflict, we believe that our results will help improve the surrogate-clinician relationship and enhance family-centered care.

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Figure 1.

Conceptual framework of surrogate trust in the ICU. This framework illustrates evolution of trust during an ICU hospitalization. Surrogates begin with a baseline level of trust before admission, which is then modified through interactions with physicians and nurses. Changes in trust affect patient and surrogate outcomes during and after the hospitalization. Adapted from Schenker et al (22). Adaptations are themselves works protected by copyright. So in order to publish this adaptation, authorization must be obtained both from the owner of the copyright in the original work and from the owner of copyright in the translation or adaptation.

Table 1**Subject (Surrogate) and Patient Characteristics**

Surrogate Characteristics	No. of Surrogates (%)
Sex	
Male	9 (30)
Female	21 (70)
Age	
18–35	4 (13)
36–55	12 (40)
56–75	13 (43)
> 75	1 (4)
Race ^a	
White	17 (57)
Black	9 (30)
Latino	3 (10)
Multiethnic	1 (3)
Relationship to patient	
Spouse	9 (30)
Son or daughter	7 (23)
Partner/fiancé	5 (17)
Parent	3 (10)
Sibling	3 (10)
Nephew/niece	2 (7)
Daughter-in-law	1 (3)
Highest level of education	
High school	3 (10)
College, 1–3 yr	9 (30)
College graduate	11 (37)
Graduate school	7 (23)
Patient Characteristics	No. of Patients (%)
Sex	
Male	19 (63)
Female	11 (37)
Age	
18–35	4 (13)
36–55	6 (20)
56–75	14 (47)

> 75	6 (20)
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Acute Physiology and Chronic Health Evaluation IV predicted mortality ^b , %	
0–25	10 (36)
26–50	8 (28)
51–75	3 (11)
76–100	7 (25)
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No. of days intubated at the time of interview	
3–5	17 (57)
6–8	3 (10)
9–11	8 (26)
12–14	2 (7)
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Hospital survival	
Survived	13 (43)
Expired	17 (57)

^aResponse options were provided by the investigators and selected by the subject.

^bData not available for two patients ($n = 28$).

Table 2

Representative Quotations for Dimensions of Trust

Dimension	Representative Quotation
Technical competence	<p>“And then the nurse X who would stay on all day just was extraordinary. She never stopped doing things. I mean, she was on her feet all day adjusting, titrating, you know, getting things the way they should. It was really very, very impressive....And I think another good experience was how quickly from when the bell went off, if a number was askew, they were right there.”</p> <p>“As a nurse I want to look for things that I would do as a nurse and to look over...and I was like ‘whoa, twelve IV’s.’ And then I look and I am like ‘oh my gosh they are all marked.’ It was just like this flood of just relief even though I was still scared for my aunt I was like, ‘wow, she is really in good hands.’”</p>
Communication	<p>“They explain things to me, you know... so that is why I feel that they are on top of things. They are able to answer really whatever question and they are willing to give information without me asking.”</p> <p>“They explain it to me in a way that I can understand. They gain my trust because they’re not leaving pieces behind. I’m understanding what they’re telling me. I think that will help you gain trust in a person.”</p>
Honesty	<p>“So to me that’s what trust meant, that this is valid information, it’s not being shaded, it’s not being manipulated, this is the real story. So that’s what it means to me.”</p> <p>“Tell us what is going on...We are family and yes there is potential that we can get emotional, but we have the right to know really what is going on with our family members and I trust in someone that is going to be honest with me more than someone that kind of tries to sugarcoat it.”</p>
Benevolence	<p>“Every day there is somebody who walks in with sepsis, but for the person who has it and for the people who are around them it is not real. So that is what I would say: sincerity and compassion go a long way in building trust because once you have us, once we believe in you then we will listen to you.”</p> <p>“It seems like everybody is compassionate, or you know, have a façade of trying to be compassionate with what they’re doing...They know they’re dealing with people...and not, you know, just like an assembly line, you know what I’m saying?”</p>
Interpersonal skills	<p>“And he gave me that glimpse of his personal life, which, I thought, ‘Ahh! You do understand. You’re not just in a white coat and not a human being. But you get it’... They gave you that little insight of their personal life...I appreciate that.”</p> <p>“You know, it was just getting to know the doctor. Learning that he’s from Argentina, and I have a friend from Buenos Aires, and it was just that kind of, just getting to know a little bit more about him that he’s not just a white coat and a stethoscope.”</p>

Table 3

Role-Specific Approaches to Trust Development Categorized by Dimension of Trust

Dimension of Trust	Nurse-Specific Approaches	Physician-Specific Approaches
Technical competence	Responds quickly to monitors, alarms, and patient calls Works diligently with an air of confidence Appears knowledgeable Works as part of a team	Reassures surrogate that team is pursuing all available treatments Improvement in a patient's condition reflects physician competence
Communication	Clarifies physician comments after rounds	Uses lay language Available when requested by surrogate Provides frequent updates Receptive to surrogate's questions and concerns
Honesty	Seeks out physician when unable to answer a surrogate's question	Does not "sugar-coat" prognosis Tempers hope with realistic assessment
Benevolence ^a	Treats patient like they would treat a family member Checks on patient and surrogate after hours or on days when not assigned to patient Demonstrates that they genuinely care about patient and surrogate	
Interpersonal skills ^a	Speaks directly to unconscious patient Remembers surrogate's name Introduces himself/herself when entering the room Warm demeanor Connects with surrogate on a personal level	

^a Approaches for these domains were not specific to nurses or physicians.