Intensive Care Med (2013) 39:1143–1145
DOI 10.1007/s00134-013-2939-3

EDITORIAL

Anneliese M. Schleyer
J. Randall Curtis

Family satisfaction in the ICU: why should ICU clinicians care?

Received: 14 April 2013
Accepted: 17 April 2013
Published online: 24 April 2013

This editorial refers to the article available at:
doi: 10.1007/s00134-013-2862-7.

A. M. Schleyer
Division of General Internal Medicine, Department of Medicine, Harborview Medical Center, University of Washington, Seattle, WA, USA

J. R. Curtis (✉)
Division of Pulmonary and Critical Care Medicine, Harborview Medical Center, University of Washington, 325 Ninth Avenue, Box 359762, Seattle, WA 98104, USA
e-mail: jrc@u.washington.edu
Tel.: +1-206-7443356
Fax: +1-206-7448584

Quality and safety of patient care are increasing areas of focus for healthcare systems around the world. Patient satisfaction has been identified as one measure of quality of care and, in the ICU, family satisfaction often serves as an important alternative to patient satisfaction [1, 2]. There is an ever-growing body of literature that describes that families, in general, are highly satisfied with the ICU care that their loved ones receive [1–3]. These results may cause some clinicians to assume that there is no need to focus on improving family satisfaction with ICU care.

So why should clinicians care about patient and family satisfaction? Some studies suggest that patient satisfaction is not associated with other markers of quality, potentially raising additional questions about its importance [4]. In other studies, however, higher patient satisfaction has been associated with better clinical performance on quality measures for certain diagnoses such as acute myocardial infarction and pneumonia [5], as well as lower in-hospital mortality and lower 30-days readmission rates [6]. A recent study found that higher family satisfaction in the ICU was associated with several domains of better organizational/safety culture [7]. These studies suggest that patient or family ratings do, in some settings, track with other quality domains. However, the important points are that "quality" is a multi-dimensional concept with dimensions that may not always correlate and that patient and family satisfaction are key components of quality which are increasingly a high priority for many national healthcare systems [8, 9].

In this issue of *Intensive Care Medicine*, Schwarzkopf and colleagues integrate quantitative and qualitative analyses (see Table 1 for a description of qualitative and quantitative research) to examine family satisfaction in the ICU and thereby highlight areas for improvement [10]. In this prospective cohort study conducted in four ICUs in a single university hospital in Germany, the authors report results from a translated and validated Family Satisfaction in the ICU (FS-ICU) questionnaire including 24 items summarized on a rating scale of 0 (poor) to 100 (excellent), eight supplemental questions about nursing and physician communication, and three open-ended questions about strengths and recommendations for improvement. Two-hundred and fifteen visiting family members of 215 patients who were hospitalized in the ICU for at least 48 h completed a survey (of a possible 775, giving a 28 % response rate); 111 family members provided qualitative comments. Comments were categorized into five themes: care, communication, respect and compassion shown to family, participation of family, and ICU environment. Overall satisfaction with care and overall satisfaction with information and decision-making based on summary scores were high. While there was no correlation between satisfaction ratings and inclusion of comments, respondents who were highly satisfied were more likely to provide positive comments, and positive

Table 1 Differentiating quantitative and qualitative research

Term	Definition	Examples of study goal in intensive care
Quantitative	Develop an understanding of the strength of the relationship between variables using statistical or computational techniques. Quantitative research often investigates the what, where, and when through hypothesis-testing study designs. Often uses larger and population-based representative samples.	Estimate the incidence or prevalence of disease, identify predictors of disease or outcomes, and compare numeric outcomes across different groups such as groups randomized to different treatment approaches.
Qualitative	Develop an in-depth understanding of human behavior or the behaviors of clinical systems and the influences that govern such behavior. Qualitative methods are often hypothesis-generating and investigate the *why* and *how* of phenomena through rich description to highlight nuances of experience. Data are captured with thematic, conceptual and theoretical descriptions and relationships, rather than numerically. Often use smaller, but focused and targeted (purposive) samples.	Understand the "why" of phenomena, develop coherent frameworks to explain phenomena, generate new hypotheses, identify the reasons why and how interventions succeed or fail, allow participants to explain their experience in their own words.
Mixed-methods	Study using both qualitative and quantitative methods. Typically, one method (either qualitative or quantitative) is the primary approach and the other supports that approach.	Combines goals of qualitative and quantitative methods. For example, a qualitative analysis of open-ended questions done along with quantitative analyses of ratings to increase understanding of family experiences in the ICU [10].

comments outnumbered negative comments. These results suggest that, while families may overall be highly satisfied, they still have suggestions for improvement. Importantly, satisfaction with care is mediated by expectations of that care [11]. High ratings may therefore reflect low expectations, and rising expectations might lower satisfaction. As the public begins to expect patient- and family-centered care, we may find satisfaction ratings dropping.

Quantitative summaries of family satisfaction rating scales, even if relatively high, can be used to identify ways to improve processes of care, develop benchmark comparisons, and determine whether changes are effective [12]. Several studies from multiple countries have identified the value of using family satisfaction ratings to identify potential targets for improving ICU care [2, 12]. These studies have demonstrated that patient- and family-centered decision-making, communication, and respect and compassion were strongly associated with overall satisfaction. Items that had a high impact on satisfaction, but with which families were not as satisfied, included emotional support; provision of understandable, complete, consistent information; and coordination of care [2]. This study by Schwarzkopf and colleagues contributes to this literature, identifying areas for improvement including consistency, clarity and completeness of information; emotional support; and respect and compassion towards families [10].

Fewer studies have reported qualitative analyses of responses to open-ended questions, in which respondents describe specific aspects of care that impact their satisfaction and make recommendations for improvements. One study reported qualitative analyses of family comments finding that staff quality; compassion and respect shown to patient and family; communication with doctors; and hospital environment were key to family satisfaction [14]. In Schwarzkopf's study, similar themes emerged from both quantitative and qualitative analyses [10]. Integration of comments, positive and negative, with overall numeric patient satisfaction ratings provides context and an opportunity to target improvement efforts. Qualitative comments may have more face validity for clinicians and may provide them with more actionable recommendations for improvement than quantitative ratings. In a recent randomized trial that fed family satisfaction data back to ICU clinicians, [15] many clinicians found qualitative satisfaction data more compelling then quantitative ratings. This intervention was, however, not directly associated with outcome improvement, in part perhaps because we did not provide feedback data (qualitative or quantitative) in clearly actionable steps for clinicians.

In this study, *non*-responders were more likely to be family members of patients with greater severity of illness and higher ICU mortality. Prior studies have shown that higher family satisfaction with care is associated with higher severity of illness [2]. Sicker patients may be somewhat underrepresented in this study, thereby slightly lowering the reported overall satisfaction with care. Previous studies also demonstrated that families of non-survivors had higher satisfaction with the care in the ICU than families of survivors [3]. In Schwarzkopf's study, no patient or family factors predicted overall satisfaction, including patient survival. However, with only a 12 % ICU mortality among patients whose families responded, this study may have been underpowered to assess an association with mortality. It is important to acknowledge that the relatively low response rate of 28 % for the survey may produce response bias. Previous studies have

reported higher survey response rates of 45 % for families of non-survivors [13] and >50 % and as high as >75 % overall [2, 3, 7, 14]. The single-center nature of this study limits its generalizability. However, Schwarzkopf and colleagues use a well-validated and formally translated survey, the FS-ICU, that has been shown to be useful in understanding family experiences in the ICU, and numeric ratings are similar to those found in other studies.

This study has important implications for ICU clinicians. Increasingly, family satisfaction with ICU care is becoming an accepted measure of quality of care. Ratings from the FS-ICU have been well validated in multiple countries. However, successful quality improvement initiatives in ICUs must target easily measurable and clearly actionable indicators. As we design and trial improvement initiatives to improve satisfaction along with other measures of quality, studies such as this one by Schwarzkopf and colleagues help us better understand the ways to measure and improve this important outcome. Complementing quantitative family satisfaction ratings with qualitative information may help better target improvement initiatives in the ICU.

Conflicts of interest The authors report that they have no financial conflicts of interest.

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