

# Conflicts and communication gaps in the intensive care unit

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**Current Opinion in Critical Care** 2010,  
16:654–665

## Purpose of review

Conflicts occur frequently in the ICU. Research on ICU conflicts is an emerging field, with only few recent studies being available on intrateam and team–family conflicts. Research on communication in the ICU is developing at a faster pace.

## Recent findings

Recent findings come from one multinational epidemiological survey on intrateam conflicts and one qualitative study on the causes and consequences of conflicts. Advances in research on communication with families in the ICU have improved our understanding of team–family and intrateam conflicts, thus suggesting targets for improvement.

## Summary

Data about ICU conflicts depend on conflict definition, study designs (qualitative versus quantitative), patient case-mix, and detection bias. Conflicts perceived by caregivers are frequent and consist mainly in intrateam conflicts. The two main sources of conflicts in the ICU are end-of-life decisions and communication issues. Conflicts negatively impact patient safety, patient/family-centered care, and team welfare and cohesion. They generate staff burnout and increase healthcare costs. Further qualitative studies rooted in social-science theories about workplace conflicts are needed to better understand the typology of ICU conflicts (sources and consequences) and to address complex ICU conflicts that involve systems as opposed to people. Conflict prevention and resolution are complex issues requiring multimodal interventions. Clinical research in this field is insufficiently developed, and no guidelines are available so far. Prevention strategies need to be developed along two axes: improved understanding of family experience, preferences, and values, as well as evidence-based communication may reduce team–family conflicts and organizational measures including restoring leadership, multidisciplinary teamwork, and improved communication within the team may prevent intrateam conflicts in the ICU.

## Keywords

authority, autonomy, communication, decision making, end-of-life, leadership, satisfaction

Curr Opin Crit Care 16:654–665  
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1070-5295

## Introduction

Conflicts in the workplace are highly complex. Important distinctions include unavoidable versus preventable conflicts; harmful versus beneficial conflicts; and conflicts with causes and consequences at the individual, group, and organizational levels [1]. All those who work in an intensive care unit (ICU) may experience conflicts in their daily practice. ICU conflicts emerge at the intersection between the stressful ICU environment and the evolution of ethical principles [2<sup>••</sup>]. Stress affects everyone in the ICU. ICU patients are the sickest patients in healthcare institutions, and ICU workers must cope both with the high death rate among their patients and with considerable time pressure. As a result, stress and burnout are common in ICU workers [3]. Families of ICU patients experience emotional distress, anxiety, and depression [4<sup>•</sup>,5<sup>•</sup>]. The ICU environ-

ment itself is stressful: the sophisticated equipment, large number of staff members, and involvement of consultants in multiple specialties generate specific burdens for the patients, relatives, and ICU workers [4<sup>•</sup>,6]. In this stressful environment, decisions must be made urgently, in strict compliance with evolving ethical principles [7<sup>•</sup>]. ICU patients are usually unable to interact with the team, and communication therefore occurs largely with the family. Identifying the patients' preferences and values while providing family-centered care constitutes a specific challenge in the ICU [8,9<sup>••</sup>]. Finally, patients in whom the appropriate course of action is palliative care are often referred to intensivists, and the decision to withhold life-sustaining treatments therefore rests chiefly on the shoulders of those who also make decisions to implement these treatments. The same is true for the withdrawal of treatments that are ongoing in the ICU [10,11].

In sum, ICU conflicts arise and develop within a stressful work environment, a complex network of interpersonal relationships, and a need for making life-and-death decisions under considerable time pressure. To understand this complex situation, the first step is clearly a comprehensive typology of ICU conflicts.

Conflict can be defined as ‘a process that begins when one party perceives its interests, norms and values or opinions and viewpoints being opposed, hurt or countered by another’ [1]. There is no consensual definition of ICU conflicts. In 2007, the ethics section of the ESICM, based on a study by Studdert *et al.* [12] and expert panel consensus, suggested the following definition: ‘a dispute, disagreement, or difference of opinion related to the management of a patient in the ICU involving more than one individual and requiring some decision or action’. Although the question of conflict in the ICU was initially raised in the end-of-life (EOL) literature [10,11], better descriptions of ICU conflicts have been obtained from qualitative studies [12–14,15\*\*]. Recently, the Conflicus study explored the prevalence, risk factors, and resolution modalities of intrateam conflicts [16\*\*]. Furthermore, research on communication with ICU patients’ relatives provided additional information [17,18\*\*].

This review attempts to provide the reader with a comprehensive typology of ICU conflicts (Fig. 1). We will first review the epidemiological data about ICU conflicts, focusing on the different parties involved. Then, we will describe the sources and consequences of ICU conflicts

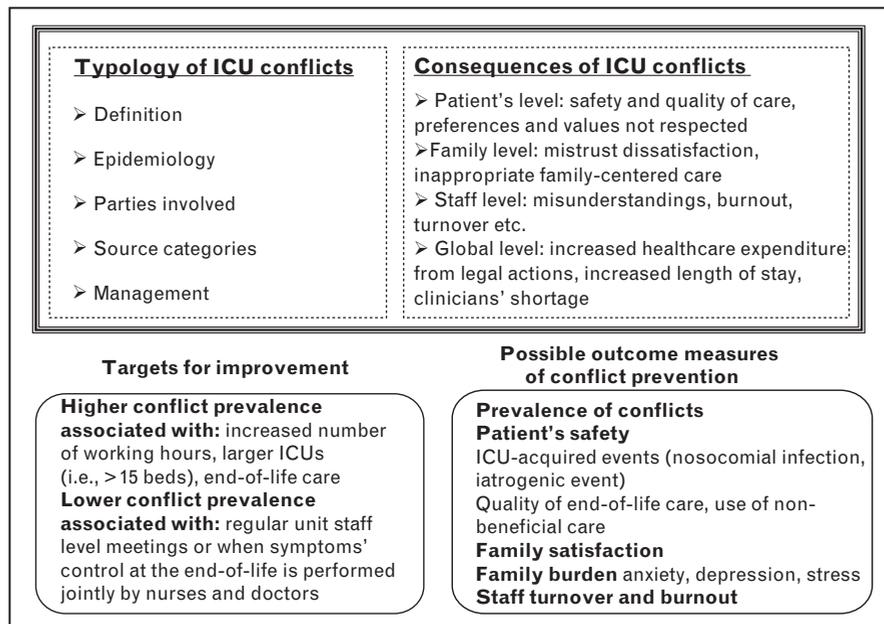
based on results of recent clinical research and on complementary social-science interpretations. Last, evidence that improvements require increased communication skills will be highlighted, and suggestions for conflict prevention and management will be proposed.

### Epidemiology of conflict in the ICU

Epidemiological data about ICU conflicts are scarce and heterogeneous (Table 1). ICU conflicts are currently thought to be frequent, since a large multicenter multinational survey found 72% of ICU clinicians reporting at least one professional conflict perceived over the last working week [16\*\*]. Previous studies, in specific patient cohorts, also found high conflict rates. In a study involving interviews of ICU staff, Studdert *et al.* [12] found a 32% conflict rate for 656 patients with prolonged stays (>85th length-of-stay percentile). Abbott *et al.* [13] interviewed 48 family members of patients who died in the ICU and found conflicts for 46%. By interviewing 406 ICU caregivers, Breen *et al.* [14] found a 78% conflict rate for 102 patients with decisions to forego life-sustaining treatment (DFLST).

However, conflicts were less frequent in multicenter clinical trials evaluating communication and ethical interventions for ICU patients who were screened and found at risk for conflicts. Burns *et al.* [19] identified 113 patients at risk for conflicts in seven ICUs (four hospitals) over 11 months (2% of consecutive admissions). Schneiderman *et al.* [20] enrolled 551 patients with conflicts in seven

**Figure 1 Typology and risk factors for ICU conflicts**



These data are derived from qualitative and quantitative studies.

**Table 1 Studies about conflicts in the ICU**

Study design and goal	Study population	Main results	Main strength and limits
Azoulay <i>et al.</i> [16**]; design: cross-sectional international multicenter survey; goal: to measure prevalence and assess characteristics and factors of conflicts perceived by ICU caregivers in the past week	International (24 countries); 323 ICUs (teaching hospitals: 54%); <i>N</i> = 7498 (91% received questionnaires; 60% nurses + nurses assistants; 15% ICU physicians (senior + junior); study day: 7 December 2006	72% of the interviewed caregivers perceived at least one conflict; intrateam conflicts predominated (84.8%): physicians-nurses (32.6%), internurses (27.3%), and interphysicians (24.9%); then came team-family conflicts (26.6%). Two main reported sources of conflict: general behaviors and EOL care; association between ICU conflicts and job strain	First large study about ICU conflict prevalence and associated factors; data about perceived intensity of conflicts: 83% harmful, 53% severe; perceived and self-reported conflicts (memory bias? overestimation?); no insight about intrafamily conflicts
Danjoux <i>et al.</i> [15**]; design: qualitative study using semi-structured interviews; goal: to understand ICU conflicts experienced by clinicians and administrators and to explore their resolution methods	Canada (Ontario); ICUs (>8 beds, intensivist-led) in 16 hospitals with medical-surgical ICUs; <i>N</i> = 46 participants (16 nurses, 14 intensivists, 6 social workers, 6 hospital administrators, 4 bioethicists); study period: not specified	Detailed description of sources and consequences of interteam, intrateam, and team-family conflicts; examples of factors contributing to conflicts: lack of communication, resource allocation issues, levels of staff experience, failure to develop goals of care	Qualitative study allowing in-depth understanding of factors associated with conflicts; relationship between intrateam and team-family conflicts; detailed qualitative methodology; coding was not independently performed by the different researchers; no insight about intrafamily conflicts
Studdert <i>et al.</i> [12]; design: quantitative and qualitative study using semi-structured interviews and multivariate analysis for predictors; goal: to determine types, sources, and predictors of conflicts among patients with prolonged ICU stays ( $\geq 85$ th percentile)	USA (Massachusetts); 7 ICUs (4 teaching hospitals); <i>N</i> = 656 patients with prolonged stay (mean stay length, $18.0 \pm 15.0$ days); study period: 11 months in 1998–1999	248 reported conflicts involving 209 patients (32.1%), including team-family (57%), intrateam (30.6%), and intrafamily (12.1%) conflicts; examples of main sources of conflicts: DFLSTs in 44%, 7%, and 57% of team-family, intrateam and intrafamily conflicts, respectively; communication problems in 44%, 16%, and 13%, respectively	Definition of ICU conflicts; description of sources of conflicts depending on people involved, demonstrating meaningful discrepancies; discrepancies in conflict detection between nurses and physicians; perceived and self-reported conflicts
Breen <i>et al.</i> [14]; design: qualitative study using semi-structured interviews; goal: to determine the incidence and nature of perceived interpersonal conflicts by ICU caregivers of patients with DFLSTs	USA (North Carolina), 6 ICUs (1 university hospital); <i>N</i> = 406 ICU caregivers (50% nurses, 18% residents, 17% attendings, 15% fellows) of 102 patients with DFLST; study period: 10 weeks in 1996	78% of the caregivers reported at least one conflict among their patients with DFLSTs; intrateam conflicts predominated (48%), followed by team-family (48%) and intrafamily (24%) conflicts; two main sources of conflicts: DFLSTs (63%) and communication problems (45%)	Patient-based case identification with 4 caregivers interviewed (2 nurses and 2 physicians) for every DFLST patient; conflict detection only among patients with DFLST: selection bias?; no data about conflict severity; poor insight into intrafamily conflicts
Abbott <i>et al.</i> [13]; design: qualitative study using semi-structured interviews; goal: to identify areas of conflict and critical psychosocial supports perceived by relatives of patients with DFLSTs in ICUs	USA (North Carolina); 6 ICUs (1 university hospital); <i>N</i> = 48 proxies interviewed 18–22 months after discharge of patients; with DFLSTs ( <i>N</i> = 102); study period: 10 weeks in 1996	Perceived conflicts: 22 (46%); team-family: 19 (40%), intrafamily: 4 (8%), intrateam: 2 (4%); Areas of conflicts: communication: 16 (33%), unprofessional behavior: 15 (31%), perception of care: 9 (19%); treatment decision: 7 (15%)	Original insights into relatives' perceptions of ICU conflicts; data about perceived support; timing of the study: memory bias?; retrospective interviews (memory bias?); small sample size and underrepresentation of ethnic minorities; low response rate (underestimation of conflict rate?)
Burns <i>et al.</i> [19]; design: two-phase study; phase I: prospective observational study (with screening of patients with conflicts or considered at risk for decision-making conflicts); phase II: nonrandomized controlled trial, testing a 4-part intervention process developed in phase I; goal: to develop and evaluate an intervention designed to identify and mitigate ICU conflicts related to decision making	USA; 7 ICUs (4 teaching hospitals); phase I (5 months in 1998–1999): <i>N</i> = 2082 patients screened, 434 (21%) enrolled; phase II (6 months in 1999): <i>N</i> = 2503 patients screened, 439 (18%) enrolled; study period: 11 months in 1998–1999	Phase I: development of a four-step process, including a conflict screening tool (used daily in the ICU staff); a family-social worker interview for selected patients; feedback to the clinicians; a recommendation (e.g., family conference, social, pastoral or ethics consult); phase II (comparing intervened patients vs. nonintervened ones): receiving the intervention was not associated with a significant change in satisfaction with care; deliberative decision facilitated	So far, the only trial that specifically addressed ICU conflicts; regular screening for conflict by the ICU team using simple questions; clinicians infrequently reported decision-making conflicts; only 172 (39%) actually received the intervention; no randomization; intervention by a social worker may not be the most efficient method; choice of the primary outcome open to discussion

DFLST, decisions to forego life-sustaining treatment.

hospitals (total number of ICUs not provided) over 27 months (number of admissions not provided). These data suggest that ICU conflicts may be fairly uncommon when expressed relative to the number of screened patients. A review of conflicts that led to litigation and involved patients near the EOL also suggests a low conflict rate [2\*\*].

These apparent discrepancies across studies of ICU conflict rates may be related to limitations in the available epidemiological data. First, the recent multicenter survey may have overestimated the prevalence of conflicts (which varied widely, from 26% to 100%, across ICUs and countries), because it studied perceived conflicts as opposed to objectively documented conflicts. Along this line, not all conflicts had equal perceived harmfulness or dangerousness. However, the study was large, with data on perceived conflicts collected in the past week from 7498 staff members working in 323 ICUs in 24 different countries [16\*\*]. Second, several studies suffer from detection bias because the conflicts were counted by ICU workers and were not validated independently [12,16\*\*]. Importantly, conflict detection varies widely according to the type of conflict and people interviewed [12,15\*\*,16\*\*]. Physicians were less likely to detect and report conflicts than nurses, especially intrateam conflicts and conflicts stemming from poor communication [12,16\*\*]. Third, there is no consensual definition of conflict, and neither is a severity index available. Finally, although conflict is a recognized problem in emergency

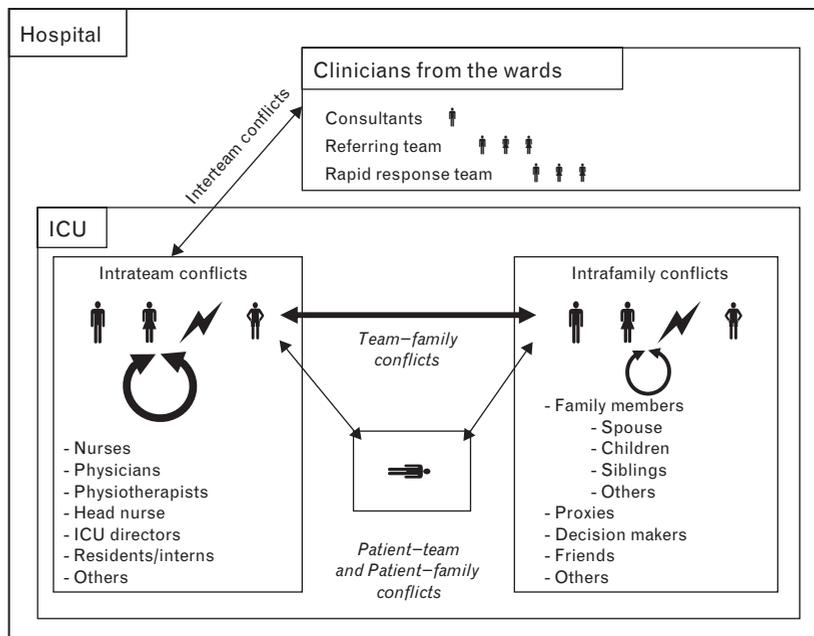
departments, anesthesiology, and surgery, there are no accurate epidemiological data for comparison with ICU data [21–23].

**Parties involved in ICU conflicts**

In clinical research, conflicts in the ICU are classically described by the people involved (Fig. 2). Team–family and team–surrogate decision-maker (SDM) conflicts predominated in the studies by Abbott *et al.* (86%) and Studdert *et al.* (57%); they were as common as intrateam conflicts in the study by Breen *et al.* (48%) and less common in the multicenter survey by Azoulay *et al.* (26.6%) [12–14,16\*\*]. Intrateam conflicts may arise between physicians and nurses (32.6%), among nurses (27.3%), among physicians (25%), or between ICU staff and physiotherapists (16.7%) [16\*\*]. Interteam conflicts with referring departments have been well described in one qualitative study, but quantitative data are lacking [15\*\*]. ICU staff–consultant conflicts have accounted for 15–20% of conflicts [12,16\*\*]. Intrafamily conflicts (10–25%) and ICU team–patient conflicts (17%) appear less frequent and less well investigated [12,13].

However, the heterogeneity and limitations of study designs are obstacles to obtaining a precise description of the people involved in ICU conflicts. First, the point of view used to identify conflicts was that of the clinicians in most studies. A single study used the point of view of the

**Figure 2** People involved in ICU conflicts



The thickness of the arrows reflects the estimated prevalence of conflicts. Intrateam and team–family conflicts are more frequent than intrafamily conflicts or conflicts with patients.

families/SDMs [13]. Second, the composition of the ICU worker sample varies, most notably regarding the proportion of nurses. Third, recent studies provide a broad picture of conflicts perceived by caregivers without taking the patient case-mix into account [15<sup>••</sup>,16<sup>••</sup>], and older studies focused on conflicts concerning selected patients with DFLSTs [13,14] or prolonged ICU stays [12]. Fourth, no studies have reported on patient-centered research about ICU conflicts, and neither are there any comparisons of ICU conflicts perceived by healthcare workers and families/SDMs.

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### Sources of conflict in the ICU

Recently, conflicts perceived by ICU workers have been identified as related to two main sources: interpersonal or general behavior and EOL care [16<sup>••</sup>]. Behavior-related sources of conflict included personal animosity, mistrust, communication gaps, and absence of regular staff meetings. EOL care-related sources of conflicts included absence of psychological support, suboptimal decision-making process or symptom control, and disregard of family preference [16<sup>••</sup>].

These two main sources of ICU conflicts were described in detail for different types of conflict in a recent qualitative study [15<sup>••</sup>]. Team–family and team–SDM conflicts are linked with disagreements about goals of care, lack of information about patients’ wishes, and timing of discharge. Religious beliefs and cultural and linguistic barriers complicate the conflict process. These findings are consistent with previous studies showing that families more often wanted aggressive care compared to intensivists during conflicts near the EOL [14]. Intrateam conflicts are mainly related to failure of physicians and nurses to develop consistent treatment goals, nurses’ frustration toward intensivists’ authority and communication gaps, and nursing staff shortage [15<sup>••</sup>]. Changes in treatment plans with staff rotation carry a particularly high risk of conflict. InterTEAM conflicts are explained by ICU workers as related to inappropriate communication between the referring units and the patients or their families, especially regarding treatments and expected outcomes. Lack of communication about respective practices also contributes to conflicts related to inappropriate ICU transfer [15<sup>••</sup>].

These results are consistent with earlier qualitative studies reporting DFLSTs and communication problems as major causes of ICU conflicts, with both factors often occurring in combination [12–14]. In the single study that used the families’ point of view, conflicts perceived by proxies were mainly related to communication (unsatisfied request for information) and unprofessional staff behaviors (disrespectful or dismissive). Perceptions of patient care (time pressure about decisions and dis-

charge), DFLSTs, and pain control were less often related to conflicts [13]. Intrafamily conflicts were mainly related to DFLSTs, although preexisting conflicts had an important impact [12]. Other determinants of conflicts have been identified. Minority race or culture and lack of knowledge of the language spoken in the country of care may increase the risk of conflict [24,25<sup>•</sup>], whereas female sex of the proxy and married status of the patient may diminish the risk [12,14]. Inappropriate intrusion of religious beliefs in the decision-making process may exacerbate ICU conflicts [26<sup>••</sup>,27].

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### Dynamic process and severity of ICU conflicts

Conflicts in the workplace are known to be a dynamic process [1]. The time from conflict initiation to conflict acknowledgment may range from several minutes to several weeks or months. Six conflict phases can be described, although each conflict has its own dynamics [28]. From ‘latent’, the conflict becomes ‘emergent’ then ‘escalates’ to the ‘hurting’ or ‘stalemate’ phase. After a ‘de-escalation phase’ brought about through negotiation, a ‘postconflict peace-building phase’ ideally occurs, allowing the prevention of further conflicts [28]. Questionnaire surveys suggest that conflicts may be persistent and recurrent: among ICU caregivers, 25% believed that the conflict they reported was related to a previous conflict and 87% that the same type of conflict would recur [16<sup>••</sup>]. Qualitative studies illustrated the interconnections among conflicts, which occur as a dynamic process involving multiple individuals. InterTEAM conflicts can lead to intrateam then to team–family conflicts after inadequate transfer or inappropriate communication [15<sup>••</sup>]. Team–family and intrateam conflicts are often combined, reflecting the complexity of conflicts and the interdependence of each person involved in conflict generation [12].

There is no severity score for conflicts. Interviewed ICU caregivers often perceived conflicts as ‘severe’ (53%), ‘dangerous’ (52%), or ‘harmful’ (83%) [16<sup>••</sup>]. Studying ICU conflicts that lead to litigation is another way to approach conflict severity. Severe conflicts are currently considered rare in the ICU [2<sup>••</sup>]. ICU conflict severity depends on the sources of the conflict and on the consequences for those involved.

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### Consequences of conflicts in the ICU

Recent research established that caregivers perceive negative consequences of conflicts [15<sup>••</sup>,16<sup>••</sup>]. First, adverse consequences for patients may include delayed treatment decisions, hindrance in transitioning from life-supportive to comfort care, and nonoptimal care with potentially nonbeneficial aggressive treatments. Second, adverse consequences for families consist of suboptimal

family-centered care, mistrust, misunderstandings, and dissatisfaction. Conflicts may also increase the burden on families, with higher rates of anxiety, depression symptoms, and complicated grief. Third, conflicts have adverse consequences on ICU-team cohesion and contribute to staff burnout and turnover. Finally, conflicts have adverse consequences on care facilities and health-care systems. The costs of conflict include litigation costs, and employee turnover costs, and increased healthcare costs related to adverse patient outcomes [29\*\*].

The impact of conflicts on quality of care and patient mortality deserves special comment. Harmful effects of conflicts on quality of care and patient survival were reported by 70 and 44% of ICU staff, respectively [16\*\*]. Recent research on team communication, team performance, and patient safety will help to understand how conflicts negatively impact patient outcomes [30\*,31,32]. Other mechanisms may involve medical errors, pain and symptom assessments, and diagnostic performance, which are potentially affected by conflicts [29\*\*,33].

The links between conflict and ICU staff burnout also deserve discussion. Burnout syndrome is frequent among ICU staff members [34,35]. In recent multicenter studies, conflict with a patient was the main determinant of severe burnout syndrome in ICU nurses and conflict with a colleague intensivist in the last 7 days was the main factor associated with ICU physician burnout [34,35]. Recent staff surveys also found that job strain was significantly associated with conflict severity [16\*\*]. In qualitative studies, ICU workers reported feeling that conflicts were 'stressful, distressing, frustrating, time-consuming, and exhausting' [15\*\*].

The potentially positive consequences of conflict must also be mentioned, since communication tensions and conflict are a normal part of healthcare work [1]. A conflict in the ICU may provide the opportunity for identifying gaps in intrateam or team-family perceptions. Conflicts may be part of the necessary psychological process that families of dying ICU patients must go through [14]. When viewed as a symptom of inappropriate communication, conflicts can raise opportunities for improving communication [28]. ICU staff have reported that conflicts can lead to debriefing, intensified communication, or initiation of a working group [16\*\*].

At this point of the paper, we have reviewed all recent findings about ICU conflicts. We have provided epidemiological data on conflict prevalence and the people involved, and we have suggested a typology of ICU conflicts based on dynamics, severity, sources, and consequences. However, this typology is still perfectible. Now, we will argue that input from social-science

theories is necessary for a better understanding of the sources, consequences, and types of conflicts in the ICU.

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### Contribution of social science to understanding conflicts

De Dreu and Gelfand [1] reported an interesting multi-level analysis of conflict dynamics in the workplace. According to them, conflict is a multilevel phenomenon: individual, group, and organizational factors must be considered, as well as the local and national culture in which they are embedded (Fig. 3). Then, considering three theoretical perspectives (whose description is beyond the scope of this paper), they suggest three root causes of conflict that exist across levels and lead to three types of conflicts. First, scarce resources lead to resource conflicts (also called conflicts of interest or conflicts over outcomes). Second, the need to achieve and maintain a positive view of oneself and one's group leads to ideological and value conflicts (also called relationship or affective conflicts). Third, the desire to hold consensually shared and socially validated opinions and beliefs about the world and the to-do tasks lead to socio-cognitive conflicts of understanding (also called cognitive or task-related conflicts). De Dreu and Gelfand [1] emphasize that workplace conflicts are usually rooted in two or three sources, composing 'a mixture of opposing interests, clashing values, and incompatible beliefs'. They explain that according to sociopsychological theories, conflicts have not only immediate and deferred consequences, but also a number of social functions. Thus, the role of conflicts in change and social identity has been studied across individual, group, and organizational levels in different cultural contexts [1].

The development of research on ICU conflicts requires input from the social sciences. So far, a single study has evaluated ICU conflicts using theoretical frameworks for management [28]. The authors suggested four areas of ICU conflicts, but their classification was mostly intuitive, given the lack of intensive care medicine literature and their absence of a background in social science [28]. Two qualitative studies explored intrateam communication and tensions, looking beyond the cliché to the social concept of 'team collaboration' in the ICU [36,37]. Qualitative studies, whose methodology is rooted in social sciences, have considerable potential for increasing the amount of evidence-based knowledge about complex issues in the ICU [38,39\*]. However, as intensivists conducting research on ICU conflicts, we acknowledge that qualitative studies deserve a larger role and should be combined with our quantitative analyses. Especially, we need to use them to explore and assess the irrational sources of conflicts (i.e., conflicts related to emotions, nonverbal communication, etc.) in the ICU, not appraised by quantitative studies. As an illustration,

Figure 3 Level analysis of the sources and consequences of workplace conflicts

National/cultural context			
Local community/institutional context Ex: Hospital			
Level analysis		Conflict sources	Conflict consequences
	Individual Examples: 1 Nurse 1 Physician 1 Spouse	Dogmatism Power motivation Job characteristics Cognitive and affective state	Well being and health Stress and burnout Absenteeism and turnover Learning potential Creativity
	Group Examples: Nurses/Physicians / physiotherapists ICU/wards families	Power differentials Leadership style Group heterogeneity Group communication Interaction patterns	Aggression Escalation Team motivation Team performance Team membership
	Organizational Examples: ICU/ hospital management	Mergers and acquisition Systems of conflict management	Organizational change Innovation

The sources and consequences of conflicts can be analyzed across levels (individual, group, and organizational levels), embedded in the local and national context.

recent qualitative studies exploring intergroup communication and power issues between clinicians (outside the ICU) were mainly grounded in sociological theories (social identity theory, communication accommodation theory, and competitive vs. collaborative power theories) [32,40\*].

**Qualitative research perspectives: toward a comprehensive understanding of ICU conflicts**

We will now outline avenues for research aimed at extending and improving the current definition and typology of ICU conflicts. The goal is to merge recent research findings with input from the social sciences. In the future, the definition of ICU conflicts could be renegotiated by ICU workers (nurses, doctors, physiotherapists, psychologists, etc.) with the help of sociologist consultants specializing in conflict research. The future definition could integrate the notion that conflict is a dynamic process extending across multiple levels (individual, group, and organization). The typology of ICU conflicts could draw from the typology of workplace conflicts proposed by De Dreu and Gelfand (resources, values, and task-related conflicts). This typology will also need to classify ICU conflict severity into new categories that take into account both the usefulness and the harmfulness of ICU conflicts. Such a classification is crucial because, although some conflicts are unavoidable, others must be taken outside the ICU, as they threaten patient

safety and quality of care through inappropriate decision making and impaired communication.

To illustrate the potential of this research approach, we will use our recent findings about the two main sources of intrateam and team–family conflicts [16\*\*]. First, conflict sources reported by caregivers as ‘behavior-related and communication-related’ are better understood when viewed as a multilevel process [1]. ICU conflicts involve nurses, physicians, and family members as individuals (‘personal animosity’) but also as groups (‘misunderstanding among staff or between staff and families’), within the ICU organization (‘no regular staff meetings, lack of leadership, inadequate visitation policy’). Thus, additional root sources of ICU conflicts, discrepancies across observers, as well as cognitive beliefs not captured by questionnaire surveys can be identified. Second, DFLSTs, identified as sources of ‘EOL-related conflicts’, can be traced back to resources (e.g., ICU bed shortage, length of stay, and cost), values (e.g., ethical disputes about futility and goals of care), and task conflicts (e.g., modalities and timing of ventilation withdrawal, pain management).

Hence, our current typology of ICU conflicts appears incomplete, as it is based on scarce epidemiological data and limited studies. However, it offers a starting point for future research in the field. Future qualitative studies will need to merge the clinical-research and social science cultures to develop a comprehensive typology of ICU

conflicts, with the goal of improving their prevention and management.

### ICU conflict prevention and management

Conflict prevention and management are complex issues requiring multimodal interventions. Clinical research on this topic is underdeveloped, and no evidence-based guidelines exist so far. However, available data suggest special attention to communication, EOL care, and organizational issues to prevent intrateam and team–family conflicts. Legal issues will be addressed briefly.

#### Clinical research about ICU conflict prevention

So far, a single study evaluated an intervention specifically designed to diminish conflicts in the ICU. Burns *et al.* [19] designed a nonrandomized controlled trial of a four-step intervention process to decrease team–family conflicts (Table 1). They found no effect on patient/SDM satisfaction with care, information, and involvement in the decision-making process. However, they noted that the intervention helped to clarify the treatment preferences of patients and families [19]. The limitations of the study do not support a role for the results in developing evidence-based recommendations to reduce conflicts in the ICU, and no interventional studies were done subsequently. Another study assessed the effect of communication efficacy on conflict reduction, although this effect was not the primary outcome. Lilly *et al.* [41,42] tested the influence of an intensive communication intervention on the use of life-sustaining technologies in ICU patients near the EOL. In their prospective before-and-after single-center study, the intervention diminished the median ICU-stay length in the most severe patients who died. The intensive communication strategy also decreased the rate of days without intrateam and team–family consensus about goals of care [41]. Because reducing conflict requires complex interventions, great care will be needed in designing the evaluations of these interventions [43,44].

#### Communication with families to prevent ICU conflicts

Compared to ICU conflicts, communication with families in the ICU has received a fair amount of research attention. Evidence-based recommendations about structured communication and family conferences are available [17,18<sup>••</sup>]. Among recent studies in this field, we focused on families' perceptions of the prognosis and on physicians' attitudes during the decision-making process, two areas we believe are crucial to prevent and manage conflicts in the ICU.

Lee Char *et al.* [45<sup>••</sup>] randomized 169 SDMs in a study comparing two methods for disclosing a bad prognosis. They found that neither numeric nor qualitative statements accurately conveyed the poor prognosis to SDMs,

who continued to overestimate the patients' chances of survival. Boyd *et al.* [46<sup>••</sup>] conducted 179 semi-structured interviews with SDMs of 142 incapacitated ICU patients, with the aim of understanding their sources of knowledge about prognosis. They found that the majority of SDMs balanced the prognosis given by the physicians with many other sources of prediction. SDMs used their own perception of the patient's strength of character and will to live, history of illness and survival, and appearance and status, as well as their own belief in a favorable effect of their presence at the bedside and of their optimism, intuition, and faith. Thus, we are confident that a deeper understanding of what families experience and believe improves our communication skills. Sharing information and uncertainty about the prognosis with families is a promising means of detecting, preventing, and managing team–family disagreement and conflicts [47<sup>•</sup>].

White *et al.* [48<sup>••</sup>] aimed to determine how responsibility was balanced between physicians and SDMs for life-support decisions during family conferences. They audio-taped 162 clinician–family ICU conferences in six US hospitals. They developed a framework and described four models of physician involvement, namely, informative, facilitating, collaborative, and directive. It is worth noting that none of the clinicians asked the SDMs about their preference for decision making whereas lack of attention to family preferences is known to be associated with team–family conflicts [15<sup>••</sup>,16<sup>••</sup>]. Interestingly, disregarding family preferences about the decision-making model was also recently found to be associated with higher scores for posttraumatic stress disorder [5<sup>•</sup>]. Chow *et al.* [49<sup>•</sup>] specifically addressed the problem of decision making in emergencies. They developed the mnemonic 'CURVES' to help assess the decision-making capacity of patients and to make emergent decisions in the absence of an SDM. The components of CURVES are Choose and Communicate, Understand, Reason, Value, Emergency and Surrogate. Among them, communication and elicitation of differences in values between patients or SDMs and physicians are especially important to prevent disagreements and conflicts [50]. Thus, these studies shed light on the physician/family communication process during decision making. However, we need qualitative research exploring how communication and decision-making models influence the genesis and history of conflicts during family conferences or in the emergency setting.

#### Preventing and managing EOL care-related conflicts

EOL care has been identified as a major source of conflict [14,15<sup>••</sup>,16<sup>••</sup>]. Recent recommendations for EOL care in the ICU devoted a special section to conflicts [51]. Communication to reach a consensual decision was highlighted as crucial for conflict prevention. Clarification of

the goals of care and identification of a potential gap between the hopes held by SDMs and the prognosis based on medical evidence were suggested as useful for conflict resolution, and mediation by hospital ethics committees was proposed [51]. Ethics consultations are considered effective in decreasing conflicts in the ICU based on a multicenter randomized trial in ICU patients with value-laden treatment conflicts [9<sup>••</sup>,52]. Schneiderman *et al.* [20] found that ethics consultations were associated with shorter ICU and hospital stays (with no change in mortality). An overwhelming majority of interviewed staff members, patients, and surrogates found ethics consultations helpful for addressing treatment conflicts and expressed a high level of satisfaction. Nevertheless, recent studies raised questions about the infrequent use of hospital ethics consultations [53,54<sup>•</sup>]. However, we consider that ethics consultations remain useful for selected severe conflicts. We believe that ethics consultants should not only be trained in communication and conflict management, but also have ICU experience so that they can interact effectively with ICU workers [55,56<sup>•</sup>].

The management of EOL-related conflicts in the ICU may also be improved by better integration of palliative care in the ICU [57<sup>••</sup>]. Recently, consensual criteria, including team–family disagreement, have been proposed to trigger palliative care consultations in the ICU [58<sup>•</sup>]. Nevertheless, in our experience, collaboration with ethical and palliative-care consultants in the ICU remains challenging.

#### **Prevention and management of organizational issues and ICU conflicts**

Among organizational measures for conflict prevention and resolution, management, leadership, and team communication are promising [28,30<sup>•</sup>,59–61]. Leadership for conflict management was recently promoted by the US Joint Commission as especially needed for the quality and safety of care [62]. Minvielle *et al.* [60] assessed the organizational performance of 26 French ICUs, developing a score with five dimensions, namely, coordination and adaptation to uncertainty, communication, conflict management, organizational change, and organizational learning. They ascribed discrepancies across ICUs to differences in ‘cultural values’. According to their theoretical model, a ‘team-oriented ICU culture’ (promoting self-expression, achievement, and staff development) is the most efficient model for achieving high organizational performance. Thus, conflict management, similar to other team performance indicators, is highly dependent on ICU management. Carlet *et al.* [63<sup>•</sup>] recently published an example of ICU management based on ‘LOVE’, that is, Leadership, Ownership, Values, and Evaluation. They illustrate the feasibility of a management style designed to enhance teamwork,

improve communication (notably near the EOL), and avoid conflicts [63<sup>•</sup>]. In our experience, team humor is also important for team cohesion, identification and recognition of complex problems, and management in the ICU [64,65<sup>•</sup>,66]. Whether these management skills prevent or decrease ICU conflicts remains to be proven, but we believe they are worthy of attention.

Questionnaire surveys and qualitative interviews also provide clues to organizational measures for further conflict prevention. Correlations exist between conflicts, workload, and teamwork [16<sup>••</sup>]. A higher prevalence of conflicts was associated with working more than 40 h a week, having more than 15 beds in the ICU, and caring for one or more EOL patient in past week. On the contrary, lower conflict rates were associated with routine unit-level meetings and joint symptom-control management by physicians and nurses [16<sup>••</sup>]. Lately, daily rounds by a multidisciplinary team were also demonstrated to be associated with lower mortality among medical ICU patients [67<sup>••</sup>]. Conflict prevention, in addition to communication and collaboration, may be among the mechanisms explaining this finding [68].

#### **Legal issues raised by ICU conflicts**

Litigation can be seen as a way to resolve conflicts, especially between healthcare workers and SDMs in EOL-related conflicts. The prevalence of conflicts brought to court is not known [2<sup>••</sup>]. Although these conflicts undoubtedly account for only a small proportion of all ICU conflicts, they can be amplified by the media, thereby contributing to create a climate of fear and distrust [69]. However, ICU workers usually perceive legal recourse as an inefficient means of obtaining informed and timely conflict resolution [15<sup>••</sup>]. In addition, litigation about EOL conflicts may impair the grief process in the family members and amplify frustration among the ICU staff. Thus, we agree with others that EOL conversations are preferable over litigation for conflict resolution [69].

The history of advance-care planning (ACP) is intimately linked with widely publicized lawsuits about ICU conflicts. Advance directives and involvement of SDMs have gained legitimacy on both sides of the Atlantic [7<sup>•</sup>]. However, surrogate decision-making has a number of well established limitations. More specifically, SDMs often lack specific knowledge about the patients’ quality of life before ICU admission, care and resuscitation status, and wishes regarding DFLSTs [70<sup>•</sup>,71]. Until now, no evidence exists that ACP reduces conflicts in the ICU for patients near the EOL who have DFLSTs or for patients with long ICU stays [12–14,15<sup>••</sup>]. Some team–family conflicts can even be amplified by the fact that legislation confers SDM status to a relative [26<sup>••</sup>]. Thus, although the surrogate decision-making model

remains valuable for some DFLSTs, its limitations should be borne in mind, as well as the need to use it under strictly defined conditions. SDMs are required to base their opinions mostly on the patient's values. In case of conflict with an SDM, every decision must remain patient-centered [27].

## Conclusion

Conflict in the ICU is a complex phenomenon. Because conflicts are inherent in all human activities, ICU conflicts are unavoidable. Moreover, they may induce positive changes, innovation, and progress. However, ICU conflicts have also substantial negative effects on patient safety, team cohesion, staff burnout, and family well being. Thus, there is an urgent need for research into ICU conflicts.

Until lately, research in this field was underdeveloped and heterogeneous. However, a recent questionnaire survey and a qualitative study have provided information on the typology of ICU conflicts. ICU conflicts are frequent and, among them, the most common occur within the team and between the team and the family. The main sources of ICU conflicts are communication problems and EOL care. ICU conflicts can adversely affect all those involved: the patients and their relatives, the ICU staff, and the healthcare institution. Conflict prevention and management must focus primarily on communication, EOL care, and organizational measures.

We suggest the following avenues of research. First, complementary qualitative studies are needed to achieve three main objectives: to deepen our knowledge of the typology of ICU conflicts, to explore the relevance of social science theories about conflicts to the ICU, and to objectively assess the severity of ICU conflicts. Second, epidemiological studies using consensual case definitions, defined patient case-mixes, and a severity index would provide valuable information. Special attention to detection biases identified in previous work will be mandatory. Based on the results of these studies, the feasibility of interventional studies will have to be assessed. Designing studies of ICU conflict prevention will be challenging. The interventions (including communication, team leadership, and organizational measures) will be multimodal and standardized. The study endpoints (including family satisfaction, ICU staff burnout, medical errors, and inappropriate decisions) will be selected based on the baseline prevalence of ICU conflicts and the depth of the intervention under study.

Until then, we believe that attention to our own perceptions of conflicts in our ICUs is an effective and inexpensive means of gaining new insights. Conflicts should be viewed in a balanced way that acknowledges both the

negative consequences and the potential for benefits, although these have not yet been proven. The roots of conflicts at the individual, group, organizational (and cultural) levels must be determined. Finally, skills in communication and conflict management are clearly crucial for ICU workers. Such skills may be improved through training but may also depend largely on an acute sense of human relationships, whose development is a tremendous challenge for medical education.

## References and recommended reading

Papers of particular interest, published within the annual period of review, have been highlighted as:

- of special interest
- of outstanding interest

Additional references related to this topic can also be found in the Current World Literature section in this issue (pp. 674–675).

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