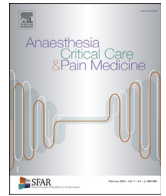




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Original Article

The experience of anaesthesiology care providers in temporary intensive care units during the COVID-19 pandemic in France: a qualitative study



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ABSTRACT

Background: During the COVID-19 pandemic, care providers (CPs) worldwide grappled with the extraordinary number of severely ill patients with high fatality rates. The objective of this study is to explore the experience of anaesthesiology CPs in temporary intensive care units during the COVID-19 pandemic's first wave.

Methods: CPs were interviewed at a university hospital in Paris, France. We conducted a qualitative study using interpretative phenomenological analysis.

Results: Fifteen participants were included (five nurses, three nurse managers, and seven physicians). The analysis uncovered four themes: 1. Overworked care providers in an intensive care unit under pressure; 2. The disrupted relationship among patients, their families, and end-of-life care; 3. Short-term coping strategies; 4. A long-term transformative experience for care providers.

Discussion: The COVID-19 pandemic has drained CPs physically and emotionally. Infection control protocols, lack of knowledge about this new disease, the establishment of open-space care settings, and the disruption of relationships have posed ethical dilemmas, leading CPs to question the meaning of their profession, and their future professional involvement. CPs at both an individual and institutional level employed numerous coping strategies, relying on a strong team spirit and a reinforced sense of duty. Nevertheless, after the end of the first wave, participants described the long-lasting psychological impact of this experience and frustration at the lack of recognition from their institutions and from policymakers. This study can inform institutional interventions and public health policy to support CPs during and after such a crisis to ensure their well-being and high standards of care.

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Abbreviations:

COVID-19, Coronavirus 2019 disease
ICU, Intensive Care Unit

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1. Introduction

Care providers throughout the world have grappled with the extraordinary number of patients with severe illness and high fatality rates due to Coronavirus 2019 disease (COVID-19) [1]. In response to this public health crisis, hospitals began forming temporary COVID-19 intensive care units (ICU), staffed by care

providers from other units, including some anaesthesiologists who worked in operating theatres exclusively. In France, anaesthesiology residents are trained to work in intensive care units as well as in operating theatres. After residency, 50% of them choose to work in operating theatres exclusively, 24% work in ICUs only, and 23% continue to work in both settings [2]. In these temporary COVID-19 ICUs, physicians and nurses faced unprecedented workloads, growing numbers of critically ill patients, countless patient deaths, and the constant risk of infection [1,3,4].

During the COVID-19 pandemic, care providers have demonstrated symptoms of anxiety, depression, post-traumatic stress disorder (PTSD), acute stress disorder, and sleep disorders at high rates, which can negatively impact the quality of patient care [3]. However, few qualitative studies have addressed the long-term impact of care providers' experiences during the pandemic on their practices and professional involvement. Furthermore, most of these studies focused on care providers in Asia and on nurses' experiences during or soon after working in COVID-19 units [5,6]. Studying the experiences of care providers after the peak of the pandemic allows us to explore the ramifications of their time in COVID-19 ICUs after returning to routine care in non-COVID-19 units. This qualitative study explores the experience of non-ICU care providers who worked in temporary COVID-19 ICUs in Paris, France, at the peak of the pandemic's first wave and then returned to their usual position.

2. Methods

This qualitative monocentric study follows the consolidated criteria for reporting qualitative research (COREQ) and has been approved by the Ethics Committee of the National Institute of Health and Medical Research (CEEI/IRB n° 20-703). We provided clear oral and written information about the study and obtained verbal consent from participants. The Ethics Committee waived the requirement for written consent.

2.1. Population

We recruited volunteer participants among physicians, nurses, and nurse managers who had worked in the three temporary COVID-19 ICUs during the first wave of the pandemic in a university hospital in Paris, France. These temporary ICUs were set up in the Department of Anaesthesia and Surgical Intensive Care between March and June 2020, increasing the number of ICU beds with individual rooms from 20 to 63 (25 in original ICUs and 38 in open-space recovery rooms) in 14 days. Individual semi-structured interviews were performed at least 4 months after the closing of the temporary ICUs from the first wave of the pandemic to study the participants' experience of the crisis and how they made meaning of the experience in the long term. Participants were recruited through mailing lists. Recruitment concluded when data saturation was reached, meaning that the analysis of new interviews no longer provided new findings.

2.2. Data collection

Two male researchers (MM and SBG) conducted semi-structured interviews, either face to face or via video conferencing. The interview guide was adapted iteratively during the study and included sensitising questions about the following topics: changes to clinical duties while working in the temporary ICUs; possible changes in the relationships among providers, patients, and patients' families; experiences surrounding patient deaths; the impact of COVID-19 on loved ones and colleagues; the return to pre-pandemic routines; and their long-lasting feelings about these

experiences. The interviews were audio-recorded, anonymised, and transcribed word for word.

2.3. Data analysis

The interviews were analysed using interpretative phenomenological analysis [7], a method used to understand how people subjectively perceive an experience and how they make sense of it. In this method, researchers read the interviews several times and then annotate and code them to identify emerging themes. The researchers analyse each interview independently and search for connections between these emerging themes. The results are then compared between interviews to both identify recurring themes and integrate new emerging elements. The results are then evaluated to construct a complete thematic description of the experiences of the participants, organised into themes linked to underlying subthemes, and illustrated with specific data from the interviews. In this study, three authors independently coded the interviews (MM, LB and SBG), aided by NVivo 12 software, and the "triangulation" process was assured by experienced researchers (JL, EC, MRM) [7]. Participants provided feedback on the results and discussion. The results are then discussed through the lenses of mental health and social science.

3. Results

Fifteen interviews (seven physicians, five nurses, and three nurse managers) were conducted from the 24th of September to the 19th of November 2020, which was 4 to 8 months after participants' mobilisation during the first wave of the pandemic. Interview lengths ranged from 20 minutes to more than one hour. Participants' characteristics are presented in Table 1. The analysis identified four themes: 1. Overworked care providers in an ICU under pressure (Table 2); 2. The disrupted relationship among patients, their families, and end-of-life care (Table 3); 3. Short-term coping strategies (Table 4); 4. A long-term transformative experience for care providers (Table 5).

Table 1
Characteristics of participants.

Participant number	Age (years)	Gender	Years in practice	Original department (activity)	Duration of work in COVID-19 ICU
Nurses or nurse managers					
P1	38	F	16	Anaesthesia*	6 weeks
P2	41	F	20	Anaesthesia	7 weeks
P5	31	F	8	Other (no training in critical care)	3 months
P6	32	F	10	Anaesthesia	6 weeks
P7	38	F	13	Anaesthesia	6 weeks
P9	52	F	30	Other (experience in critical care)	2 months
P12	34	M	10	Anaesthesia	1 month
P14	27	F	4	Other (experience in critical care)	2 months
Physicians					
P3	30	M	2	Anaesthesia	6 weeks
P4	50	M	20	Anaesthesia & ICU	1 month
P8	37	F	5	Anaesthesia	2 months
P10	32	M	3	Anaesthesia	1 month
P11	34	F	4	Anaesthesia	6 weeks
P13	37	F	6	Anaesthesia & ICU	2 weeks
P15	34	M	2	Anaesthesia	6 weeks

Interviews 10 to 15 were conducted after the beginning of the second lockdown in France.

Interviews 13 to 15 were conducted online at the request of these participants.

* Anaesthesia = operating theatres & recovery rooms.

3.1. Overworked care providers in an intensive care unit under pressure

Participants described the hospital as overwhelmed by the number of patients with severe COVID-19 infections. The care tasks became more time-consuming due to infection control measures. Donning and doffing personal protective equipment was “a terrible waste of time during the day” (P13). The nature of the COVID-19 infection required “repetitive round trips to the scanner” for diagnosis and progress assessments as well as continuous nursing tasks, such as prone positioning, leading nurses to “spend all day on your feet doing care” (P13).

Several care providers quickly felt overwhelmed by this “coronavirus tornado” or “tsunami”. Facing an unknown infectious disease, whose evolution was unforeseeable, was particularly anxiety-inducing for providers caring for “patients for whom we don’t understand what is going on, who fall and relapse, who don’t recover and die” (P5). This led some of them to question their own safety and that of their loved ones.

Within 14 days, the ICU had increased its capacity, which resulted in increased demand for staff, equipment, and personal protective equipment. At times, the increased demand for resources led to inevitable deviations from the protocols, described by the participants as “doing some tinkering” and “being resourceful.” Nurse managers described their work as burdened by staffing challenges. Nurse managers made every effort to meet staff quotas and had to recruit volunteer nurses who lived far from the city and had no training in critical care: “Most of us had no resuscitation skills” (P5). Care providers coming from other specialties worried about their lack of competence in intensive care, which engendered a sense of illegitimacy and a fear of harming patients (Table 2).

Table 2
Overworked care providers in an ICU under pressure: Themes and sample quotes.

Themes	Sample quotes
An overwhelmed hospital	“Usually, there is a balance in intensive care between severe and mild patients. At the peak, they were all critically ill” (P8).
Overwhelmed care providers	“We work all the time, always lean-and-mean, and we never see the end of it” (P2).
Safety concerns	“You’re on the front line, you don’t know the risks you have of being contaminated, therefore contaminating your loved ones” (P3).
Deviations from protocol	“We had to mix two to three drugs in one syringe to use only one syringe pump [whereas the protocol called for one drug per syringe] which would never have happened if we had enough syringe pumps” (P3).
Staffing challenges	“Managing, finding, and praying that we would get enough nurses” (P9).
A sense of illegitimacy	“Clearly, between an ICU nurse who is used to doing it and does it all the time, and me coming in there, doing it a little bit by feel, I was thinking: what a waste of survival chances for the patients”.

3.2. The disrupted relationship among patients, their families, and end-of-life care

3.2.1. Patient-provider relationships are “depersonalised” and “dehumanised”

Participants described the care they provided as “depersonalised” (i.e., individual features were blurred together). Personal protective equipment limited their emotional interactions with

patients, obscuring their facial expressions, impairing their ability to recognise each other, and impeding comforting physical contact. Due to their heavy workloads, they had the feeling of “working in a factory” (P12) and compared themselves to “technicians” (P12) or “robots” whose mission was “mass treatment” (P4).

Care providers lamented the possibly traumatic impact of open-space settings on patients and compared it to “torture”: “The ICU setting was great for us as care providers, but for the patients, it was a disaster. They were all facing each other, they had lights in their eyes non-stop, there was constant noise because there were no rooms” (P11). Providers recalled distressing exchanges with patients witnessing the critical condition of those around them: “We would say, ‘We’re going to have to intubate you soon’; they would show us the naked patient in front of them, saying, ‘Like this?’ They saw when there were cardiac arrests. Everything was visible” (P11).

Care providers described patients as “dehumanised” (P1) (i.e., deprived of human qualities, such as thoughts or feelings) because they felt unable to get to know their patients as people; patients were sedated, intubated, or delirious, and patients’ families were not present to speak on their behalf. Additionally, due to infection control protocols, “there had to be nothing in the rooms,” not a single picture, leading one participant to compare the patients to “bodies tied to machines” (P8). Moreover, as soon as they improved, patients were “directly transferred to other wards to free up space.” As a result, some care providers recalled barely seeing any conscious patients during this period.

Despite this distressing situation, care providers took extra steps to maintain a level of care that was as reassuring and humanising as possible toward their patients. They would “write their names at least on a bandage” (P1) to help remember their names and express empathy and warmth. Several providers felt a responsibility to talk to their unconscious patients and tried “repeating, repeating, repeating” (P3) to help them understand the situation.

Some providers expressed feeling more involved in patient care because rounding took place at the patients’ bedside rather than in a conference room, thanks to the open-space layout of the temporary ICUs: “We all know every patient. They are no longer a room number.” Anaesthesiologists experienced a shift in their patient interactions, which are usually restricted to preoperative consultations and brief encounters in the recovery unit. Their increased involvement with their patients, combined with physical exhaustion, led them to struggle, especially when patients died.

3.2.2. Disruptions in end-of-life care and funerary rites raise ethical issues

Despite efforts to personalise their care and humanise their patients, infection prevention protocols disrupted how the participants provided care, even at the end of life. When a death occurred suddenly, families were not able to see their deceased loved ones before they were quickly prepared for burial. The psychosocial and spiritual aspects of end-of-life care were disrupted because, if families could visit, it was often during patients’ final moments, without a chance to visit earlier or prepare psychologically. Thus, some family members were reluctant to accept palliative care measures because the restrictions on visits prevented them from witnessing the critical condition of their loved ones.

The limited contact between patients and their families complicated how care providers offered support to families when reporting the death of their loved one. Furthermore, their limited understanding of COVID-19 left care providers feeling helpless when they had to prepare families for the death of otherwise healthy patients. Indeed, most people in France had not experi-

enced an infectious disease so rapidly fatal, especially among young people, in their lifetimes.

Finally, some participants lamented the disruption of funerary rites. The cleaning and preparation of the bodies were limited because they were quickly bagged. Care providers also felt frustrated by the lack of information about their deceased patients' lives, religions practices, and values.

3.2.3. The relationships between care providers and patients' families are disrupted

The strict ban on visitors at the beginning of the pandemic, in addition to alarming reports from the media, resulted in repeated phone calls from families, many of which went unanswered due to time constraints.

To address family members' need for updates and reassurance, care providers planned calls to families ahead of time. At times, particularly in end-of-life situations, they "overruled" (P5) the hospital guidelines and allowed family visits "just for a few moments to say goodbye" (P5). Some care providers described a relationship of mutual understanding with the families and reported minimal conflicts, thanks to news reports about the seriousness of COVID-19 (Table 3).

Table 3
Disrupted relationships: Themes and sample quotes.

Themes	Sample quotes
<i>Patient-provider relationships</i>	
Depersonalised treatment	"We had all the same patients, they all had the same antibiotics, they all had the same management. It was an assembly line job" (P9).
Limited emotional interactions	"We couldn't even see our [colleagues'] faces. It was a kind of . . . very, very cold thing" (P2).
Talking to unconscious patients	"Because she is still a person, even if she doesn't answer" (P3).
Increased involvement with patients	"Fortunately, we didn't have many deaths, but there was a significant emotional component, more than usual."
<i>End-of-life care and funerary rites</i>	
Rapid decline of patients	"It was clearly difficult because people arrived at the last minute." (P15).
Relatively unknown patients	"We didn't know the person. Hopefully we had a chance to get to know the patient, but we didn't even know the family members" (P1).
Young patients dying of infection	"When you have a patient, who is going to die, who is young, who has no medical history, what can you say to a family?" (P5)
Hurried disposal of bodies	"We couldn't do last offices for COVID patients. Putting people in bags, with a COVID sticker, that's not our job! We hated doing that. I feel like I haven't really done my job" (P5).
Disruption of funerary rites	"The other thing I found hard—I'm not religious, yet I have a deep respect for rituals—is that [families] couldn't be present when stopping [life support] and they couldn't have the rituals they wanted performed" (P9).
<i>Care providers and patients' families</i>	
Many unanswered phone calls from families	"I've never been called like that in the ICU. There were calls all the time because they couldn't come and see, and they couldn't imagine what's going on" (P11).
Mutual understanding thanks to news reports	"They heard every day on the news that people were dying on life support. So, they were prepared. I don't mean that they accepted the idea, but they could understand it" (P4).

3.3. Short-term coping strategies

Emotion-focused coping strategies were "rather reassuring" for care providers (P6). Social aspects of the team's routine, such as meals and breaks, were partly preserved. New rituals were created

to celebrate achievements, such as applause when patients were extubated. Care providers set up informal debriefing sessions after their shifts and during their days off, thus building a sense of team spirit and a supportive atmosphere. To cope with the emotional weight of critical care, some care providers organised rotations for their teams on non-COVID-19 services.

Problem-focused coping strategies included searching for the most up-to-date clinical knowledge outside of working hours and implementing it to treat COVID-19 patients. The precariousness of the situation required changes in protocols from one day to the next and increased communication within teams: "Everyone added a little of what they had read. We would communicate new stuff every morning and update everything" (P10). To close the gap in resuscitation skills, some care providers benefited from ICU-specific training. One physician was appointed as the point person for ethical issues.

Support-seeking strategies included seeking advice from experienced colleagues. Providing quality care under these conditions also meant acknowledging one's limits and asking for help: "During briefings I would say 'I'd prefer to work in pairs with three patients rather than having one patient alone because I will put myself in danger and I will put the patient in danger'" (P5). Another effective support-seeking strategy was welcoming the leadership of skilled junior colleagues, regardless of the hierarchical culture in the hospital.

Finally, a *meaning-making strategy* helped care providers to navigate the crisis by identifying with the professional value of dedication to service (Table 4).

Table 4
Short-term coping strategies: Themes and sample quotes.

Themes	Sample quotes
New rituals to celebrate achievements	"All the providers were happy. We gathered at the patient's bed and applauded. It added something to what we usually do" (P10).
Informal collective training outside of work hours	"Afterwards, we would get together with the anaesthesia nurses and the recovery unit nurses and practice doing relay changes with the equipment, with the pumps" (P6).
Seeking advice from other teams	"I got in touch with many colleagues in other ICUs who had already started before us to understand the difficulties and what to expect" (P10).
Welcoming colleagues' leadership	"The nursing student was there all the time, and he was much more experienced than me. He was the one taking the lead" (P6).
Identifying with professional values	"Whatever you give me, my mission is to treat him—I will do it properly" (P13); "They need us, we have to do it, we do it" (P1).

3.4. A long-term transformative experience for care providers

3.4.1. A transformative professional experience

All participants mentioned being exhausted and some of them had psychiatric symptoms like stress, anxiety, anger, sleep disturbances, derealisation, and social withdrawal. Some connected their anxiety to the fear of infection and to feelings of illegitimacy at the beginning of the crisis. Care providers reported that they eventually adapted to this new disease and felt "legitimate" and "more competent."

Even after their time in the COVID-19 ICU, some participants discussed their worries about returning there, as if they were "on the edge of a precipice". They described their experience as a turning point in their lives: "There was a 'before COVID-19' and there will be an 'after.'"

Some care providers described the work in the COVID-19 ICU as repetitive, leaving little room for thinking. Under these circumstances, the usually enjoyable aspects of patient care became a chore. Nevertheless, most participants felt that they developed

skills and self-assurance because of the experience: "I realised that I was more versatile than I thought. Strangely enough, it gave me confidence" (P11).

All participants reported that, despite the fear of this unknown virus and the difficult working conditions, their colleagues engaged fully in patient care, and most of them highlighted how the crisis had resulted in a renewed team spirit among their colleagues in an unprecedented way (Table 5).

After adapting to this enormous workload, some participants described the closure of the temporary COVID-19 ICUs and the sudden return to their previous duties as brutal. Some providers felt disappointed and even frustrated; others reported a feeling of emptiness and unease. Some considered the return to their usual work routine as too abrupt after the "hell" (P5) that they had just experienced and that remained on their minds: "Boom, it ended just like that. We were almost like, oh well, that's it. It's over" (P2).

3.4.2. Changes in relationships with loved ones and with society

Most care providers welcomed the efforts by the hospital and the government to rapidly provide additional staff and material resources. In the context of care providers being labelled "heroes" by politicians, mass media, and the public, many participants said they appreciated the applause that occurred in France every evening from balconies, the public's respect for the lockdown and social distancing, and the donations they received. Most of the participants felt supported and valued: "People outside of medicine thought I was a superhero because I was in COVID-19 unit!" (P11) Nonetheless, some care providers felt alienated and misunderstood by their friends and family members, sometimes leading to conflicts. One participant described a "disconnect" in her relationships with the people who did not experience the COVID-19 ICU as care providers.

After the temporary ICUs closed, some care providers witnessed a growing laxity about social distancing among the public, a lack of institutional recognition, and a failure by the state to fulfil promises made to care providers. Participants also felt hurt by the attacks from the "anti-vaccine and anti-mask movements" (P2). Finally, given the physical and psychological toll that their professional commitments have taken on their personal lives, some care providers questioned their desire to continue a career in healthcare (Table 5).

Table 5

A long-term** transformative experience: Themes and sample quotes.

Themes	Sample quotes
<i>Professional experience</i>	
An exhausting experience	"That was hard, really physically demanding, we worked all the time, non-stop and we would never see the end of it" (P2)
From terror during the first wave to fears of a new wave	"Colleagues were all dropping like flies and we were thinking: when is it my turn? We had the impression that we were being sent out like that, as cannon fodder" (P5). "This stuff wakes me up at night, keeps me from sleeping. As long as we're talking about COVID, I'll never have peace of mind."
The importance of the patient-provider relationship	"It becomes rather burdensome to talk to the patient. Basically, it's something that we enjoy, but it becomes burdensome because it becomes a waste of time and we shouldn't be getting to that point" (P14).
A renewed team spirit	"I didn't recognise the staff. I loved seeing them like that. There was an energy, a motivation, a commitment, something very strong and beautiful in the way they acted" (P9).

Table 5 (Continued)

Themes	Sample quotes
<i>Relationships with society</i>	
Welcomed political support during the crisis	"During COVID-19, the President of France said, 'Whatever it takes.' And it was true. We asked for equipment, and we got it" (P2).
A lack of recognition and support after the crisis	"Nothing has changed, there is no more equipment, there are no more providers. There was no recognition, and I think that everyone felt angry" (P14).
A challenge to professional commitment	"I'm losing my physical and mental health, and it's not worth it. It's not worth it. For what we earn financially, for the recognition we get, it's not worth it" (P5).

** For some participants, the "long-term" effects referred to their ongoing experience on the day of the interview, while for others, "long-term" referred to their anticipation of the future.

4. Discussion

4.1. "Heroes" prevented from providing dignified and human care

During the early phases of the COVID-19 crisis, messaging emerged, both within healthcare institutions and in the media, that hailed healthcare workers as "heroes" [8]. The label of "hero" implies a preternatural strength, a level of invulnerability, and the fulfilment of a duty, even at great personal cost [9]. Yet heavy workloads, staff and resource shortages, and a lack of knowledge about COVID-19 management led care providers in ICUs to experience feelings of powerlessness and illegitimacy in their roles, as reported in our study and other studies [5,6,10]. Many participants decidedly did not feel like "heroes."

One aspect of this sense of powerlessness was the inability to provide dignified end-of-life care to patients in the temporary ICUs. Funeral rites have a symbolic weight because they affirm to society the value of the decedent's life [11]. We believe that the inability to perform these rites during the first wave of COVID-19 made the losses even more tragic for both families and care providers. It is vital that healthcare facilities allow family visits for terminally ill patients, to respect the right of both families and patients to communicate before their death and to avoid a traumatic separation that could contribute to pathological grief [4].

So far, outside of the context of COVID-19 pandemic, few studies pointed out the challenges related to open-space settings and ethical issues related to the dehumanisation of care [12]. Our results suggest that the open-space settings of ICUs could induce post-traumatic symptoms for patients due to increased stimulation and witnessing other patients being intubated or dying, which should be assessed in further studies.

4.2. Increased chronic mental health problems despite acute coping strategies

Coping strategies in epidemics can alleviate stress and promote the well-being of care providers [13,14]. Therefore, several authors argued that individual coping skills should be supported during the COVID-19 pandemic, such as guaranteeing breaks in comfortable areas [15], valuing care providers' professional commitment [10], implementing training sessions [5,6,16], stimulating positive emotions, and providing targeted preventative psychological support [17] and multidimensional support for care providers (political, social, and managerial) [6].

However, despite ICU leaders' commitment to support their staff's coping strategies, most participants described their deployment in the temporary ICUs as a painful experience, followed by long-lasting psychiatric symptoms.

Indeed, the efficacy of coping strategies to safeguard care providers' mental health depends on many factors such as culture, gender, and level of control over stressors. Moreover, some coping styles can be associated with greater distress and depression [13]. When facing potentially traumatic events, coping strategies could increase the risk of PTSD [18,19]; internalising problems, such as depressive symptoms; and externalising problems, such as aggressive behaviours [20]. Therefore, coping skills training should be adjusted to each provider's coping style and personal situation, including measures to prevent exhaustion and facilitate mental health screening and psychotherapeutic support.

4.3. Healthcare systems and the individualisation of responsibility

The personal experience and choices of caregivers are influenced by social factors, and participants expressed how the absence of change after their tremendous involvement at work influences their representation on career choices. According to the sociologists Juven et al., public hospitals management has converted resource problems into organisational problems (e.g., insufficient commitment from care providers, ineffective management), thus displaced the burden of "quality of care" on team managers and staff alone [21]. In this logic, the "optimal" workload—defined as increasing care activities while reducing the number of care providers—is calculated by only considering standardised, technical, quantifiable activities. This increased workload does not value either the relational component of care (the time dedicated to developing relationships with patients and their families) or providers' need for rest. As a consequence of multitasking in different departments, nurses feel as though they are acting as incompetent "fillers" [21].

Deteriorating conditions impact the professional trajectory of care providers [22], and the quality of care provided is tied to their mental health [23,24]. Care providers are caught between the fear of harming their patients, their need for self-care, and their solicitude for others [25]. This injunction to be both efficient and fastidious causes care providers to become unmotivated or defensively indifferent [26,27]. This management approach leads to quantifiable signs of distress, such as growing numbers of reported altercations with patients and increasing rates of absenteeism and suicide among care providers [21]. In this way, relying on coping strategies to face the pandemic places the responsibility of navigating the crisis on individuals, threatening both provider well-being and patient care.

4.4. Professional identity crises in the aftermath

Some care providers believed that the COVID-19 pandemic would shed light on the flaws of the healthcare system and bring positive changes to their working conditions; when it did not happen, they began to question their future professional plans.

Beyond their heavy workload, the participants' distress resulted from their perceived inability to satisfactorily carry out their duties. Some anaesthesiologists felt uncomfortable when facing some aspects of resuscitation care. Such unease could be explained by the fact that residents specialising in anaesthesiology are attracted by the prospect of brief interactions with patients, immediate results, manageable schedules, and a balanced lifestyle [28,29].

Reflecting the results of previous studies [5,30], many care providers felt powerless to perform their interpersonal duties. However, identifying with patients, interacting with them, and receiving feedback are necessary to perform the four stages of care defined by sociologist Joan Tronto: *caring about*, *taking care*, *caregiving*, and *care receiving* [25]. Overall, our findings are consistent with the observations of Tronto, who identified time,

material resources, and competence as three prerequisites for meaningful care work.

4.5. Implications for practice in a crisis context

The COVID-19 pandemic has exacerbated the existing challenges facing French hospitals. It is necessary to re-examine the management of healthcare institutions from the perspective of a possible paradigm shift. Offering care providers coping strategies without valuing the relational components of care nor meeting the demand for material resources is not sufficient to ensure their well-being, their continued professional involvement, or the quality of their care.

Coping strategies can function as a means of avoiding the question of whether healthcare should be a profitable sector. Along with the hero narrative, the injunction to develop coping skills and engage in self-care is a way to make care providers responsible for the well-being of patients and themselves, even as workplace infrastructures and conditions deteriorate.

The limits of coping strategies are reached when care providers express the meaninglessness of being a care provider. Therefore, the relational component of care [26,27] should be preserved as much as possible, even in times of crisis. Enabling care providers to meet families, perform end-of-life rites, and receive updates on their patients' clinical progress after they leave the ICU could be a way to value their commitment to an emotionally demanding job.

4.6. Strengths and limits

One strength of this study is its exploration of the retrospective experiences of care providers who worked in temporary COVID-19 ICUs after returning to their daily activities. To our knowledge, this study is the first to describe the challenges posed by open-space settings in ICUs and the only one addressing the experience of anaesthesiologists in COVID-19 ICUs. This monocentric study enabled us to conduct in-person interviews with participants. One limitation is that the study participants were self-selected volunteers, whereas providers who chose not to participate may have provided new information. This paper seeks to provide a particular in-depth view of these care providers' experiences and does not aim to be generalisable. Further research would be needed to compare our findings to the experience of care providers who routinely work in ICU settings.

5. Conclusion

Infection control protocols, lack of knowledge about this new disease, the establishment of open-space care settings, and the disruption of relationships with patients have posed ethical dilemmas during the COVID-19 pandemic, leading care providers to question the meaning of their profession and their future professional involvement. Participants described the long-lasting psychological impact of this experience and frustration at the lack of recognition from their institutions and from policymakers. This study informs institutional and political interventions to support care providers, during and after such a crisis, and help them maintain their well-being while safeguarding high standards of care.

Human and animal rights

The authors declare that the work described has been carried out in accordance with the Declaration of Helsinki of the World Medical Association revised in 2013 for experiments involving humans as well as in accordance with the EU Directive 2010/63/EU for animal experiments.

Informed consent and patient details

The authors declare that this report does not contain any personal information that could lead to the identification of the patient(s).

Competing interests

The authors have no conflict of interest to declare.

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None.

Contribution

SBG, MRM, JL conceived and planned the study. MM and SBG carried out the interviews, MM, SBG, LB coded the interviews and analysed the data, all authors contributed to the interpretation of the results, SBG, MM, LB, IT took the lead in writing the manuscript. All authors provided critical feedback and helped shape the research, analysis, and manuscript.

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Appendix A. Supplementary data

Supplementary material related to this article can be found, in the online version, at doi:<https://doi.org/10.1016/j.accpm.2022.101061>.

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