BMC Medical Ethics

RESEARCH

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Decision-making and ethical dilemmas experienced by hospital physicians during the COVID-19 pandemic in the Czech Republic

Ilona Tietzova[1,3], Radka Buzgova[2*] and Ondrej Kopecky[3]

Abstract

Background During the COVID-19 pandemic, global healthcare systems faced unprecedented challenges, with a lack of resources and suboptimal patient care emerging as primary concerns.

Methods Our research, using a comprehensive 24-item electronic questionnaire, "Reflections on the Provision of Healthcare during the COVID-19 Pandemic," delved into the experiences of 938 physicians across the Czech Republic.

Results Over fifty per cent observed a "lower standard of care" compared to pre-pandemic levels. A division arose among physicians regarding a decision's medical, ethical, or legal basis, with a notable gender disparity: male doctors leaned towards medical perspectives, whereas females accented the ethical perspective. Decision-making concerning health care limitations required agreement among the physicians on duty, interdisciplinary teams, or shift supervisors. Physicians reported varying degrees of patient or family participation in health care decisions. Variables such as age, pre-existing health conditions, and life expectancy influenced care decisions. Surprisingly, half of the physicians faced refusals of patients' transportation to better-equipped facilities due to resource constraints. One-third of physicians never discuss the decision about care limitation and other options with patients or their families. As a result, almost fifty per cent of the physicians rarely or never imparted information about care limitations to patients.

Conclusion The survey shed light on the profound ethical dilemmas hospital physicians face across different types of healthcare facilities during the pandemic. It uncovered the need for open dialogue and scholarly debate on resource allocation and strengthening the role of patients and their families in care decisions in future healthcare crises.

Background

The COVID-19 pandemic has exerted immense pressure on healthcare systems worldwide, leading to strained resources, lower standards of care, and an overwhelmed workforce faced with a surge of patients, inadequate supplies, and a shortage of personnel [1]. This unprecedented strain has ushered in numerous ethical dilemmas and challenges in treatment decisions and resource allocation, magnified by factors such as overcrowding, limited access to care, procedural delays, and the decreased availability of healthcare professionals. These factors, contributing to the diminished standard of care during

*Correspondence:
Radka Buzgova
radka.buzgova@osu.cz
[1]First Department of Tuberculosis and Respiratory Diseases, First Faculty of Medicine, General University Hospital in Prague, Charles University, Prague, Czech Republic
[2]Department of Nursing and Midwifery, Faculty of Medicine, University of Ostrava, Ostrava, Czech Republic
[3]Department of Palliative Medicine, First Faculty of Medicine, General University Hospital in Prague, Charles University, Prague, Czech Republic

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the pandemic, have significant implications for patient outcomes and quality of life [2–5].

The pandemic has posed substantial challenges to healthcare delivery around the globe but also forced healthcare professionals into challenging decision-making scenarios, revealing existing weaknesses in the health, medical, and public health sectors [6–9]. The scarcity of crucial resources and concerns regarding insufficient patient care were prominent during the initial response in 2020 and have persisted through subsequent waves of the pandemic [8].

Different care levels have been implemented to address these resource limitations, from conventional care based on EBM (Evidence-Based Medicine), which utilises the standard level of care using available resources, to contingency care that adapts care practices to functionally equivalent alternatives [6, 10]. A lower standard of medical care or crisis care is triggered when resources are insufficient, leading to care provision at a level that matches the available resources. In such a phase, there's an increased risk of adverse health outcomes, mitigable by implementing proactive strategies for resource allocation [6, 10].

Moreover, the pandemic has added a new layer of complexity to healthcare delivery, including the lack of communication with severely ill patients during hospitalisation [11]. Stringent infection control measures and the need to minimise exposure and conserve personal protective equipment have often led to isolated patients, with limited in-person interactions with healthcare providers and virtually no visits from family members or loved ones [12, 13].

In addition, the pandemic underscored the significant role of ethical and personal consultation for ethical decision-making, addressing moral distress, and supporting the well-being of healthcare providers. The consultation services have been instrumental in helping healthcare professionals navigate the challenging choices and dilemmas they encounter, ensuring that patient care is delivered with the utmost ethical integrity [14]. However, access to ethical consultation has varied across different regions and healthcare systems, influenced by various factors [14, 15].

Our research aimed to investigate inpatient physicians' perspectives and experiences regarding providing healthcare during the COVID-19 pandemic when resources were limited. To achieve this, we developed a questionnaire titled "Reflections on the provision of health care during the COVID-19 pandemic." This questionnaire was designed to gather valuable insights into physicians' challenges, ethical considerations, and decision-making processes in resource scarcity. By exploring the views and experiences of inpatient physicians, we sought to gain a deeper understanding of the complexities and dilemmas associated with providing healthcare during such unprecedented times. Through this research, we aim to contribute to the ongoing discourse on optimising healthcare delivery and ethical decision-making in times of crisis.

Methods

The study leveraged a survey titled "Reflection on the Provision of Health Care in Times of Pandemic" developed by our Working Group on Limitation of the Care from the Section for Ethics in Palliative Care under the Czech Society of Palliative Medicine. The survey included eight questions about Care Decisions Awareness and Perceptions of Ethical Dilemmas and seven on Ethical Dilemmas and the Upholding of Care Standards.

The targeted participants of this research were unselected physicians working in different in-patient departments across all types of hospitals in the Czech Republic. Via the Czech Medical Chamber's online platform, the survey was disseminated to 39,548 physicians in June 2021. Since membership in the Czech Medical Chamber is mandatory, we ensured all hospital physicians were contacted. From these, 1,045 doctors submitted completed responses. However, 107 filled out by physicians working in out-patient environments were disregarded in the analysis, resulting in 938 questionnaires from inpatient physicians being considered in the final evaluation. In the Czech Republic's healthcare system, hospitals fall into three categories. Teaching or Faculty Hospitals are linked to medical schools, providing practical training for students. Regional Hospitals cater to broader geographic areas, offering diverse health services to diverse patient needs. Lastly, Rural Hospitals focus on the healthcare needs of individual rural communities, which is crucial in making healthcare accessible in those areas.

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Among the 938 completed responses, we specifically sought information from anaesthesiologists and intensive care physicians according to their hierarchical position, expertise, and the significant years they have dedicated to clinical practice. Their expertise is pertinent to making key decisions about utilising equipment, methodologies, and alternatives in intensive care medicine during critical situations such as the COVID-19 pandemic.

The analysis of the collected data was executed in SPSS (Statistical Package for Social Sciences) Statistics version 24. The tools of descriptive statistics, including arithmetic mean, standard deviation, and both absolute and relative frequencies, were employed to summarise the data. Furthermore, to investigate differences among groups, the Mann-Whitney test was applied.

Table 1 Demographic and occupational data of the study population ($n = 938$)

	Number (%)		Number (%)
Age		**Department**	
Mean (SD)	45.0 (12.6)	Intensive and resuscitation care units	283 (30.2)
≤ 30 years	136 (14.5)	Standard departments (non-intensive departments)	562 (59.9)
31–40 years	252 (26.9)	Post-acute care units (Aftercare unit/departments)	93 (9.9)
41–50 years	235 (25.0)		
51–60 years	183 (19.5)	**Type of Facility**	
> 60 years	132 (14.1)	Teaching/faculty hospitals	283 (30.2)
Gender		Regional hospitals	562 (59.9)
Men	441 (47,0)	Rural hospitals	93 (9.9)
Female	497 (53,0)		
Education			
Graduates	106 (11,3)	**Board certification in anaesthesiology and intensive medicine**	
Residents	127 (13,5)	Yes	156 (16.6)
Board-certified physicians	705 (75,2)	No	782 (83.4)

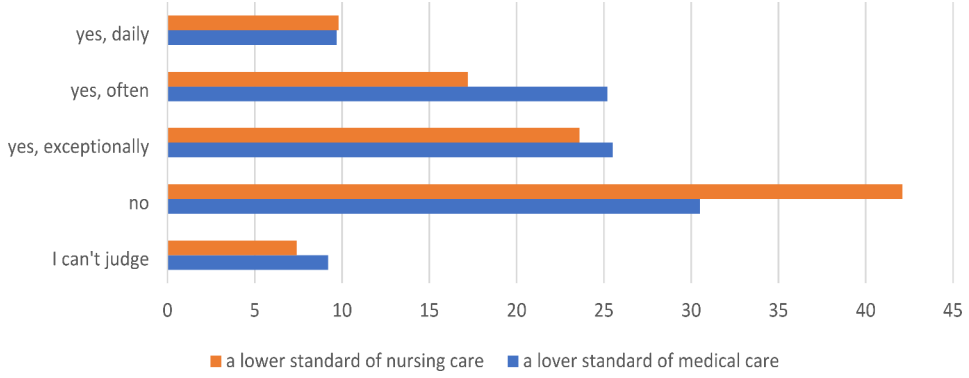

Fig. 1 Reporting of a "lower standard of care"

Results

Demographic and occupational data

On average, the physicians were 45 years old, with a SD of 12.6 years. The age distribution showed that 14.5% were under 30 years old, 26.9% were between 31 and 40 years old, 25.0% were between 41 and 50 years old, 19.5% were between 51 and 60 years old, and 14.1% were over 60 years old. In terms of gender, 47.0% were men and 53.0% were women. Regarding education, 11.3% were graduates, 13.5% were residents, and 75.2% were board-certified physicians. Additionally, 16.6% of the physicians were board certified in anaesthesiology and intensive medicine, while 83.4% were not. The participants work in various departments, with 30.2% in the Intensive and Resuscitation Care Unit, 59.9% in standard (non-intensive) departments, and 9.9% in Post-Acute Care Units (Aftercare units or departments). The type of facility they work in included 30.2% in teaching or faculty hospitals, 59.9% in regional hospitals, and 9.9% in rural hospitals.

A detailed presentation of the data on the study can be found in Table 1.

Providing a lower standard of care

The survey aimed to assess whether hospital physicians encountered situations where patients received a "lower standard of medical care" during the pandemic (Supplementary data, question 5). In this context, "lower standard of medical care" is defined as a scenario where a patient received fewer therapeutic procedures than would typically be administered under standard care in the pre-pandemic period. The definition of this term was established in a statement issued by the Czech Society of Anaesthesiology and Intensive Care Medicine (available only in the Czech language) and posted on the Czech Ministry of Health website [16]. The results reveal that over half of physicians reported that at least occasionally, they found themselves in a situation where they had to provide a "lower standard of medical care" to a patient (Fig. 1). Notably, a smaller percentage (less than 5%) encountered these situations daily. This data underscores the challenges faced by healthcare providers during the pandemic, with a substantial proportion experiencing instances where the care delivered was below the usual standard due to the strain on healthcare resources.

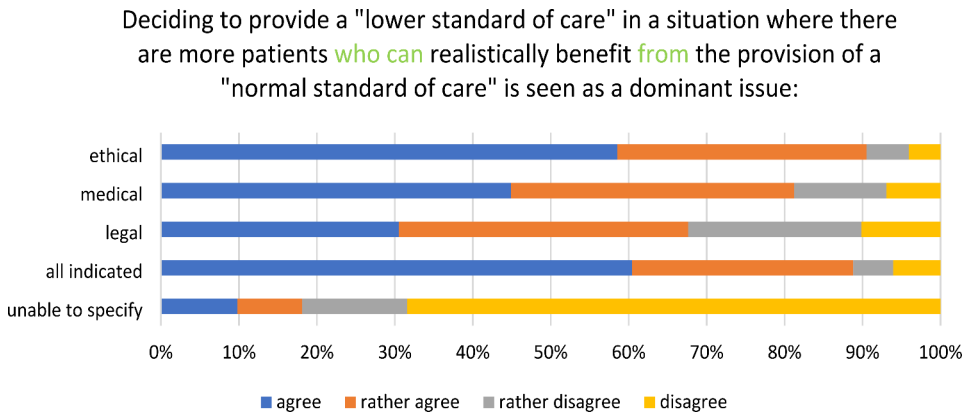

Fig. 2 Physicians' perception of the decision to provide a "lower standard of care"

Table 2 Differences in physicians' perception of the decision to provide a "lower standard of care" according to gender

	Medical		Ethical	
	Male	**Female**	**Male**	**Female**
Agree	222 (50.3)	199 (40.0)	246 (55.8)	303 (61.0)
Rather agree	37 (8.4)	28 (5.6)	141 (32.0)	159 (32.0)
Rather disagree	135 (30.6)	206 (41.4)	30 (6.8)	21 (4.2)
Disagree	47 (10.7)	64 (12.9)	24 (5.4)	14 (2.8)
p-value	0.0001		0.037	

Around 46% of physicians in the Anaesthesiology departments/ICU made decisions on limiting care in consensus with a multidisciplinary team, more than in standard departments, where only 11.4% reported using this approach.

A decision about healthcare

Physicians frequently perceive the decision to administer a "lower standard of care", particularly in a scenario where more patients could realistically benefit from the "usual standard of care" based on EBM (Evidence-Based Medicine), as a dilemma of a medical and ethical nature rather than a legal concern (Supplementary data, question 9). About 20% of the responders could not define the nature of the question, whereas, in stark contrast, a significant 90% agreed or somewhat agreed with all the concerns mentioned, indicating the complexity and gravity of these decisions. (Fig. 2). Physicians answered each question separately with a degree of compliance.

The data also revealed a gender difference in how these situations are viewed: male physicians are more likely to see it as a medical issue ($p<0.001$), while female physicians are more inclined to consider it an ethical issue ($p=0.037$), see Table 2. This suggests that perceptions of these challenging scenarios can vary significantly based on the physician's perspective and possibly their experiences in clinical practice [17, 18]. Other results were not statistically significant.

The analysis of physician perspectives on ventilator allocation during shortages reveals a complex and multifaceted approach to decision-making in crisis scenarios (Supplementary data, question 10). Figure 3 illustrates the perspectives of physicians on the ethical and practical challenges of withholding artificial pulmonary ventilation during periods of ventilator shortage. The majority of respondents consider the situation as an ethical dilemma, with about 70% agreeing or rather agreeing that it is necessary to establish a predefined framework for decision-making. This indicates a strong consensus on the need for clear guidelines to navigate these difficult choices. Additionally, a significant proportion of physicians agree or rather agree with the full utilisation of available ventilators, reflecting a general inclination to maximise the use of scarce resources. However, there is considerable variation in views when it comes to patient categorisation and narrowing medical criteria. Approximately half of the respondents believe that categorisation should be relevant only when the last ventilator is available, suggesting a preference for delaying such decisions until absolutely necessary. Similarly, the idea of narrowing medical criteria to prioritise specific patient groups received mixed responses, with notable disagreement, indicating the contentious nature of this approach.

Notably, female physicians are more inclined to support narrowing the criteria for ventilation ($p=0.001$). Comparing hospital types, physicians from regional hospitals more frequently agree that only patients with the highest chance of survival should receive ventilators compared to those from teaching/university hospitals ($p=0.035$) and other regional hospitals (hospitals at regional and district

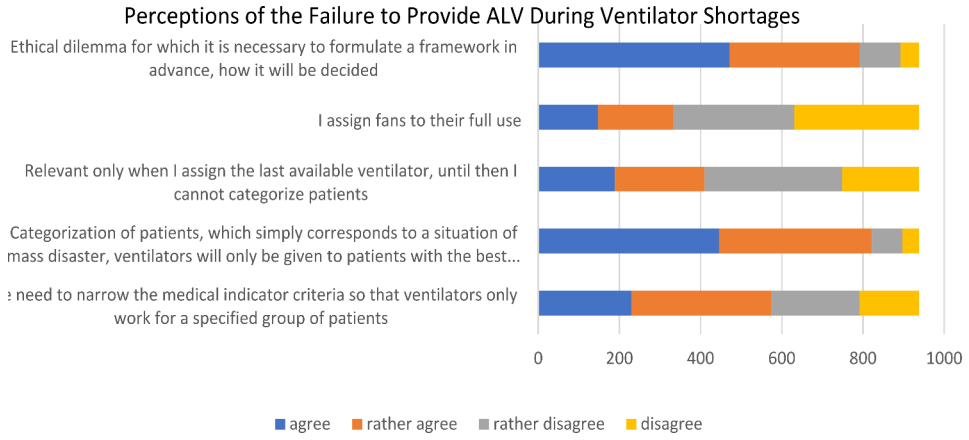

Fig. 3 Physicians' perception of the failure to provide ALV during ventilator shortages

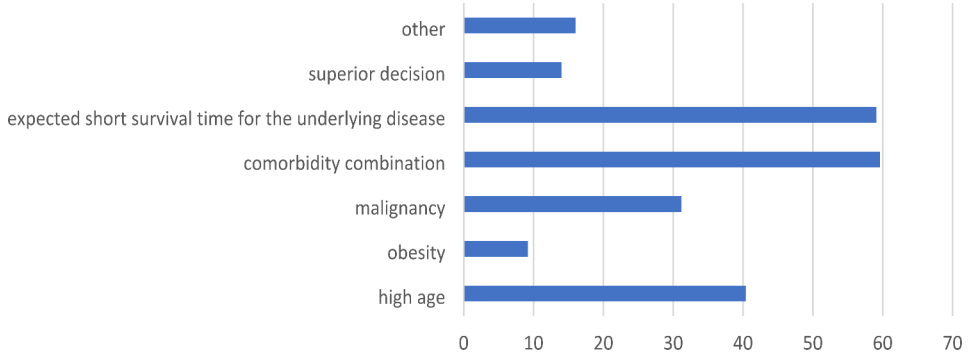

Fig. 4 Reasons for advising against intensive care, artificial lung ventilation, or extracorporeal membrane oxygenation

levels) ($p=0.014$). This viewpoint is also observed when comparing residents to board-certified physicians. Conversely, all physicians working in and those from standard departments (non-intensive departments) are more inclined to support using ventilators to their total capacity ($p=0.004$). Regarding decision-making on healthcare limitations, the consensus of attending physicians (54.4%) or a multidisciplinary team (24.3%) predominantly drive decisions. Other processes include the determination of shift supervisors (the chief physician of the department or the chief medical officer of the service) (15.6%) and the personal judgments of physicians (5.7%). The decision not to administer artificial lung ventilation or transfer patients to the ICU is jointly made by treating physicians and ICU physicians without any participation of patients or their families in the decision-making process regarding care, according to 70.9% of respondents. This collaborative decision-making process occurs occasionally or rarely, as 21% of physicians reported. It is more commonly seen among female physicians than male counterparts ($p=0.027$). The most frequently reported reasons for not recommending ICU, artificial lung ventilation, or ECMO include a combination of comorbidities or anticipated short survival time (60%) (in the scope of the questionnaire, the meaning of "short" survival was not explicitly defined), high age (40%), malignancy (31%), and obesity (9%) (Fig. 4).

Anaesthesiology and intensive medicine residents and fellows and physicians (residents, fellows, board-certified) from standard (non-intensive) departments more often agreed with allocating ventilators to their full use ($p=0.004$). Half of the surveyed physicians (50.2%) experienced patient transportation refusal to higher facilities.

During the pandemic, communication between physicians and patients regarding care restrictions due to resource limitations varied significantly (Table 2). Nearly half of the physicians who treated patients with restricted care due to resource limitations communicated this situation to them (Table 2). In contrast, 25.4% of physicians indicated that they never informed the patient despite the patient being capable of receiving such information. Additionally, only 26.6% of physicians informed patients exceptionally.

Physicians in the anaesthesiology department, known for their higher standard of care, communicate with patients less frequently about a lower standard of care compared to those in standard departments. This distinction is significant, as most physicians in standard departments, including residents, fellows, and board-certified professionals, communicate a lower standard of care

more often. In fact, only 42% of anaesthesiology department/ICU physicians engage in such communication.

Recent graduates, across all specialities, show a higher frequency of communication with patients about a lower standard of care compared to board-certified physicians ($p=0.0001$) and board-certified physicians ($p=0.014$). This finding suggests a potential for improvement and growth in these young professionals, offering hope for the future of healthcare. The findings also show a need for improving communication skills across all specialities regardless of years of practice.

Anaesthesiology residents, who were less experienced in their field, more often communicated a lower standard of care with patients compared to anaesthesiology fellows (p-value 0.0001) or board-certified anaesthesiologists (p-value 0.014), indicating that less experienced physicians may be more likely to engage with patients under a lower standard of care.

Furthermore, two-thirds of physicians shared this information with the patient's family or a close associate. However, 18.7% of physicians did so only exceptionally, and 14.7% did not inform the family, believing it was inappropriate (Table 3). We lack data on the frequency at which patients were kept informed or how regularly they took part in the decision-making process.

Discussion

During the COVID-19 pandemic, we created a comprehensive questionnaire for hospital-based physicians to understand their decision-making processes and the availability of care. The survey delved into how the pandemic affected their workloads, situations where they may have had to provide below-standard care, their decision-making processes, patient and family engagement, and the role of ethical consultations.

A key component of our research was collecting demographic data to analyse variations in experiences based on the type of medical facility, the physician's specific fields of practice, and years in clinical practice. Moreover, we aimed to understand board-certified and intensive care physicians' attitudes and decision-making process regarding patients with limited resources during the COVID-19 pandemic. The findings could serve as a roadmap to help develop targeted strategies for improving care delivery and communication during crises, potentially impacting healthcare.

Based on the survey results, this discussion will delve into three critical topics: sensitivity to decision-making in care as an ethical issue, communication and shared decision-making, support for professionals, and societal debate.

Sensitivity to decision-making in care as an ethical issue

The COVID-19 pandemic created significant ethical challenges in healthcare, particularly concerning communication and decision-making about care limitations due to resource constraints. The variation in how physicians communicated these restrictions is notable. Nearly half of the physicians informed patients about the limitations of their care. However, 25.4% chose not to communicate this information, even when the patients could understand it. Additionally, only 26.6% of physicians informed patients exceptionally, while two-thirds shared the information with the patient's family or a close associate. However, a notable portion of physicians—18.7%—only informed the family exceptionally, and 14.7% did not inform them at all, believing it was inappropriate. This inconsistency raises concerns about the transparency and inclusiveness of the decision-making process during the pandemic.

In a traditionally paternalistic healthcare culture like that in the Czech Republic, decision-making is often viewed as a professional prerogative, with significant emphasis on maintaining control over these decisions. However, ethical, legal, and professional guidelines, such as those from the Council of Europe's guide on end-of-life decision-making and the European Resuscitation Council (ERC) recommendations, call for reevaluating care delivery practices within this framework. The pandemic has not just highlighted but underscored the urgent need for more inclusive and transparent decision-making processes, significantly when resources are constrained and the stakes are high.

The study by Zielina et al. (2024) underscores the challenges in developing moral competence within the Czech medical education system [19]. Their findings indicate a significant decline in moral competence from the first to the fifth year of medical education, with no significant improvement even after educational interventions like

Table 3 The extent of communication of physicians with patients (between physicians and patients) during the pandemic

Patient awareness	No.	%	Family awareness	No.	%
The patient was never informed of the restriction, although the patient could receive information.	166	25.4	The patient's family was not informed of the situation; I do not consider it adequate.	97	14.7
The patient was informed exceptionally about the care restriction if they could receive the information.	174	26.6	The patient's family or close person was informed exceptionally.	124	18.7
The patient was usually informed of the restriction if they could receive information.	313	47.9	The patient's family or close person was usually informed in advance.	441	66.6

problem-based learning and the Konstanz Method of Dilemma Discussion. This decline suggests that current educational practices may not be adequately preparing medical students to handle the ethical complexities they will face professionally, especially in crises like a pandemic. This has significant implications for the healthcare system, as it highlights the need for a re-evaluation of the current medical education system and the incorporation of more effective strategies to enhance moral competence among future healthcare professionals.

The ethical dilemmas around resource allocation, such as the distribution of ventilators and advanced life-saving treatments like artificial lung ventilation (ALV) and extracorporeal membrane oxygenation (ECMO), further complicate the decision-making process. Roughly half of the respondents believed that patient categorisation should only be considered when the last ventilator is available, reflecting a preference to defer such decisions until necessary. Mixed reactions to refining medical criteria for prioritising certain patient groups underscore the contentiousness of these decisions. This discord highlights the critical need for ethical and communication training in professional development, as these skills are essential for reducing moral distress and the ethical burden on healthcare professionals.

Access to bioethics consultations became crucial during the pandemic, offering guidance on how to navigate these complex ethical challenges. However, the availability of such consultations could have been more consistent, influenced by regional and systemic factors [14, 15]. In the Czech healthcare system, institutionalised ethical counselling is generally not offered, though palliative care teams may occasionally provide it. Addressing this deficiency could involve several strategies:

1. **Establishing Clinical Ethics Committees (CECs)**: These committees within hospitals can provide consultation and generate ethical guidelines to support healthcare providers [14, 15].
2. **Implementing Ethics Training Programmes**: Integrating ethics training into pregraduate and postgraduate education can enhance the ethical competence of healthcare providers, better preparing them for the challenges they will face [20, 21].
3. **Developing a Centralised Ethical Guideline Document**: Such a document would facilitate consistent decision-making across the healthcare spectrum, ensuring that ethical standards are upheld in all institutions [22].
4. **Creating an Online Ethics Consultation Platform**: This platform could offer immediate guidance for complex decisions, particularly in resource-limited areas, enhancing the accessibility of ethical support.
5. **Expanding the Role of Palliative Care Teams**: Palliative care teams provide some ethical counselling in the Czech Republic. Expanding and formally acknowledging their role could strengthen ethical decision-making during crises.

Furthermore, personal consultations played a significant role in supporting healthcare providers, helping them navigate the moral complexities and emotional distress of the pandemic. These consultations were not just crucial, but invaluable, not only for the well-being and resilience of healthcare professionals but also for ensuring that ethical considerations remained central to patient care [23].

The gender-based differences observed in the survey, with male physicians more focused on biomedical aspects and female physicians more on ethical considerations, further complicate the decision-making process. These differences suggest that personal perspectives and experiences significantly influence how healthcare professionals approach ethical dilemmas. Moreover, the absence of a centralised ethical framework in the Czech Republic exacerbates these challenges, underscoring the urgent need for structured guidelines to support healthcare providers in navigating these dilemmas and reducing emotional distress [24, 25].

Communication and shared decision-making

The findings of the survey provide critical insights into the challenges faced by hospital physicians during the COVID-19 pandemic, particularly in relation to the provision of care under constrained resources. The data indicates that over half of physicians encountered situations where they had to deliver a "lower standard of medical care" than what was typically accepted in pre-pandemic conditions, with a small percentage facing these scenarios daily. The reasons for such reductions in care quality were manifold, including resource scarcity, inadequate training, and procedural errors. These challenges were particularly grim during the global health crisis, where substandard care often arose due to delays in treatment, lack of adequate follow-up, and insufficient resources [6, 10, 26, 27]. The consequences of compromised healthcare were dire for patients, often leading to worsened health outcomes and potential harm [28].

The study highlights differences in communication and decision-making practices between physicians in anaesthesiology departments and those in standard departments. Physicians in anaesthesiology, known for providing higher standards of care, communicate less frequently about delivering lower standards of care compared to their counterparts in other departments. Notably, only 42% of anaesthesiology/ICU physicians engage in such discussions, whereas a higher percentage of physicians in standard departments do.

Recent graduates, regardless of specialty, tend to communicate more frequently about a lower standard of care with patients than board-certified physicians, suggesting room for improvement in communication skills among young professionals. Among anaesthesiologists, residents were more likely to discuss lower standards of care than fellows or board-certified physicians, indicating that less experienced doctors engage more in this type of communication.

The survey also revealed notable differences in perspectives based on the type of hospital and the experience level of the physicians. Physicians from regional hospitals, for example, were more likely to support the prioritisation of patients with the highest chance of survival, compared to those from teaching or university hospitals. This difference may be attributed to the varying levels of resources availability and patient demographics in different hospital settings. Similarly, board-certified physicians and those working in intensive care units were more inclined to support the full utilisation of available ventilators, reflecting their direct involvement in critical care and their familiarity with the complexities of resource allocation.

The most frequently cited reasons for not recommending ICU care or advanced interventions such as ECMO—comorbidities, anticipated short survival time, high age, malignancy, and obesity—reflect the clinical complexities that physicians had to consider when making these decisions. These factors highlight the ethical challenges of balancing the potential benefits of intensive interventions against the likelihood of a meaningful recovery for the patient.

Additionally, around 46% of anaesthesiology physicians make care-limiting decisions with a multidisciplinary team, a much higher rate than the 11.4% reported in standard departments, highlighting a more collaborative approach in anaesthesiology.

The COVID-19 pandemic significantly impacted communication between healthcare providers, patients, and their families, particularly regarding care restrictions due to resource limitations [29, 30]. The survey results reveal considerable variability in how physicians communicated these limitations. Nearly half of the physicians informed patients about the limited care they would receive, but a significant portion (25.4%) did not communicate this information, even though the patients were capable of understanding. Furthermore, only 26.6% of physicians informed patients in exceptional circumstances, indicating a need for more consistent communication practices.

Communication with patients' families or close associates was slightly more common, with two-thirds of physicians sharing information about care limitations. However, 18.7% of physicians only did so exceptionally, and 14.7% chose not to inform the family, often believing it inappropriate. This inconsistency in communication practices raises concerns about the transparency and inclusiveness of the decision-making process during the pandemic. It's clear that we need to do better, and the time for improved communication practices is now.

The stark lack of patient and family involvement in critical decisions, such as withholding artificial lung ventilation or ICU transfers, underscores a significant communication gap [29, 30]. The absence of input from those most affected by these decisions could lead to perceptions of paternalism in medical decision-making, potentially undermining the trust between healthcare providers and patients. This situation calls for urgent action to bridge this communication gap [29, 30].

The pandemic introduced profound changes in how healthcare professionals communicate with patients and their families, largely due to the constraints of the global crisis, which severely limited in-person interactions. These restrictions complicated the delivery of complex medical information and increased anxiety and fear among both patients and healthcare providers [29, 30]. Addressing these communication challenges is crucial for improving patient care and ensuring healthcare providers can make ethical and informed decisions during crises.

Despite the emphasis on patient autonomy in end-of-life care decisions, the pandemic revealed significant gaps in this practice. Many decisions about the appropriateness of care were made without meaningful input from patients or their families, particularly when resources were scarce. This lack of involvement highlights the pressing need for immediate action to improve communication practices in healthcare, underscoring the urgency and importance of this issue.

The rapid adoption of digital technology during the pandemic has further complicated shared decision-making. The absence of non-digital communication elements has hindered effective dialogue. While technology facilitated remote interactions, it often lacked the nuance and empathy of in-person communication, which is vital in end-of-life care and other sensitive medical situations. This complexity underscores the need for a nuanced approach to digital communication in healthcare.

Support for professionals and societal debate

Recommended procedures and standard care are vital tools in providing the necessary professional support for health professionals. This support acts as a reassurance and confidence booster in their decision-making process. However, the COVID-19 pandemic highlighted significant global health and ethical challenges, bringing the reality of large-scale death back into public consciousness and challenging societies' perceptions of mortality.

Contrastingly, in the Czech Republic, recommendations for managing the pandemic and making resource

allocation decisions were implemented without a broader professional and public debate [31]. This lack of debate led to a situation where the issue of resource scarcity was downplayed, leaving some physicians feeling that the band recommendations needed sufficient and understandable support. The weight of the first ethical decision faced during the crisis was on physicians working in regional hospitals, underscoring the need for a more transparent and inclusive decision-making process nationally to ensure security and information for all.

In contrast, international recommendations highlight that such societal debates can empower all stakeholders and lead to more respected and transparent procedures [32]. For instance, a debate on resource allocation can lead to a consensus on fair distribution, while a discussion on public health measures can result in a more comprehensive and effective strategy. Such debate would empower and involve all stakeholders and engage and commit them to the process, ensuring that healthcare providers' ethical and professional support is robust and well-communicated.

In future scenarios, it would be beneficial to develop framework recommendations for care decisions from relevant stakeholders (healthcare providers, government agencies, public health experts, international organisations, community representatives, private sector, ethical and legal experts, academic and research institutions, media and communication experts, civil society and public representatives, policymakers and politicians, and economic and financial experts) promptly [33]. Moreover, addressing the challenges and issues identified through interdisciplinary reflection and analysis is crucial for better preparation and response to future global health crises, providing reassurance and a sense of preparedness [34–36].

Empowering civil society and local communities, alongside transparent and accountable governance, will be vital in fostering inclusive responses to health crises [34–36]. By implementing these solutions, societies can enhance their resilience and equity in the face of future pandemics [34–36]. These recommendations could be the foundation for more precise guidelines in specific situations, ensuring healthcare providers receive ethical and professional support.

In conclusion, our study outlines hospital physicians' challenges during the COVID-19 pandemic, emphasising the importance of ethical consultations and effective communication in healthcare, particularly during crises. It paves the way for a more in-depth analysis of issues, connections, and potential improvements in decision-making for future crises, offering a hopeful outlook for healthcare. The study underscores the necessity of sustained ethical awareness among all physicians, regardless of their education, length of medical practice, or position within the hierarchy. Furthermore, the study shows the necessity of a broad societal debate that includes the public, stakeholders, and policymakers to ensure that future healthcare responses are well-informed, ethically sound, and aligned with the values and needs of society.

Abbreviations

ALV	Artificial lung ventilation
CECs	Clinical Ethics Committees
EBM	Evidence-based Medicine
ECMO	Extracorporeal membrane oxygenation

Supplementary Information

The online version contains supplementary material available at https://doi.org/10.1186/s12910-024-01133-w.

Supplementary Material 1

Acknowledgements
We thank the Czech Medical Chamber for distributing the electronic version questionnaire and to all physicians who filled out the given questionnaire.

Author contributions
All authors [IT, RB, OK] contributed to the study conception and design. Material preparation, data collection, and analysis were performed by IT and RB. The first draft of the manuscript was written by IT and authors RB and OK commented on previous versions of the manuscript. All authors [IT, RB, OK] read and approved the final manuscript.

Funding
Supported by MH CZ – DRO-VFN64165.

Data availability
The excel file can be provided on demand. OK (corresponding author) should be contacted by anyone requesting the data.

Declarations

Ethics approval and consent to participate
The study conformed to the provisions of the Declaration of Helsinki. The research project was approved by the Ethics Committee of the Czech Medical Chamber. Only physicians were included in the research, not patients or family members. All participants (physicians) gave their informed consent to inclusion before they participated in the study.

Consent for publication
Not applicable.

Competing interests
The authors declare no competing interests.

Received: 9 October 2023 / Accepted: 4 November 2024
Published online: 04 December 2024

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