

Physicians' Perceptions of Palliative Extubation in Intensive Care Units

Percepción de los médicos acerca de extubación paliativa en las unidades de cuidado intensivo

Received: 23 february 2025 | Accepted: 14 march 2025

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ABSTRACT

Introduction: During patients' stay in the Intensive Care Unit (ICU), the attending physicians may be faced with the need to withdraw life support, such as mechanical ventilatory support. **Objective:** To evaluate the physicians' perception regarding palliative extubation and the factors that influence their decision making in the ICU in Colombia. **Methodology:** A self-applied survey was conducted among 36 physicians from different medical disciplines. Sociodemographic aspects, ethical, legal perceptions, and the influence of spirituality in the discontinuation of mechanical ventilation were analyzed. **Results:** The majority of participants were male ICU physicians with less than five years of intensive care experience. In terms of clinical decision-making, 92% of the participants considered that the limitation or withdrawal of therapies was a key component of medical practice in the ICU, and that it should be applied regardless of underlying medical condition. Concerning mechanical ventilation withdrawal technique, the majority (50%) chose terminal weaning, while a smaller percentage (5.6%) viewed terminal extubation as an illegal practice. This study also found that religiosity and spirituality played a relevant role in medical decision making. **Conclusions:** Quantitative results showed substantial variability in physician perception of palliative extubation, in particular according to specialty and religious beliefs.

Keywords

palliative care; airway extubation; ICU; medical futility.

How to cite: Reyes Rueda M, Martínez Orjuela A, Castañeda Alarcón NF. Physicians' Perceptions of Palliative Extubation in Intensive Care Units. *Univ Med.* 2025;66. <https://doi.org/10.11144/Javeriana.umed66.pmae>

RESUMEN

Introducción: Durante la estancia de los pacientes en la unidad de cuidado intensivo (UCI), los médicos encargados de su cuidado se pueden enfrentar a la necesidad de retiro de soportes vitales, como lo es el soporte ventilatorio. **Objetivo:** evaluar la percepción de los médicos que trabajan en UCI en Colombia sobre la extubación paliativa y los factores que influyen en su toma de decisiones. **Metodología:** Aplicación de una encuesta autoaplicada, realizada a 36 médicos de diversas especialidades.

Se analizaron aspectos sociodemográficos, percepciones éticas y legales, y la influencia de la espiritualidad en la suspensión de la ventilación mecánica. **Resultados:** La mayoría de los encuestados son médicos intensivistas, hombres, con menos de cinco años de experiencia en UCI. En términos de decisión clínica, el 92 % de los participantes considera que la limitación o suspensión de tratamientos es una parte fundamental del ejercicio médico en UCI y que debe aplicarse sin importar la patología subyacente. En cuanto a la técnica de retiro de la ventilación mecánica, la mayoría (50 %) opta por el destete terminal; mientras que un menor porcentaje (5,6 %) percibe la extubación terminal como una práctica ilegal. El estudio también reveló que la religiosidad y la espiritualidad desempeñan un papel relevante en la toma de decisiones médicas. **Conclusiones:** Los resultados cuantitativos mostraron una considerable variabilidad en la percepción médica sobre la extubación paliativa, particularmente en función de la especialidad y las creencias religiosas.

Palabras clave

cuidado paliativo; extubación traqueal; UCI; futilidad.

Introduction

In the context of intensive care, patients often have clinical conditions that require orotracheal intubation. Patients with these medical criteria are placed on artificial respiratory support to preserve their lives through invasive mechanical ventilation; however, just as there are medical indications for initiating ventilation, its withdrawal must also be considered in the context of futility.

Palliative extubation is a complex medical decision based on bioethical and clinical principles to ensure a dignified death for patients with irreversible diseases or in states of therapeutic futility. In intensive care units (ICUs), where patients receive advanced life support, the need arises to evaluate when treatments become disproportionate relative to prognosis and quality of life.

From an ethical standpoint, the withdrawal of mechanical ventilation falls within the principle of patient autonomy, the duty of non-maleficence, and therapeutic proportionality. Legally, while limitation of life support is recognized in many jurisdictions, perceptions of its legality and morality vary among healthcare professionals.

It is clear that modern intensive care methods lead to higher survival rates for critically ill patients, and that the withdrawal of mechanical ventilation is an essential part of the discontinuation of treatments at the end of life. The goal of palliative extubation is to alleviate unnecessary suffering and allow for a natural death (1). There are two methods for withdrawing mechanical ventilation: terminal extubation, or immediate extubation, and terminal weaning. The choice between the two remains controversial. Terminal extubation refers to the removal of the orotracheal tube by ICU staff to immediately cease invasive mechanical ventilation. In contrast, terminal weaning, which also seeks to remove mechanical ventilation, involves a gradual reduction of ventilatory parameters (2). A study showed that one-third of patients in a hospital in Germany die in the ICU (3). In these patients, at least one therapy was withdrawn or limited at the end of life in more than 60% of cases, with mechanical ventilation being withdrawn in less than 5% of patients.

One of the most significant challenges in the shared decision-making process in the ICU stems from a lack of agreement between the medical team and the patient, which may result from differences or a lack of clear concepts regarding advance directives, patient autonomy, and futility. Interventions by the palliative care team are necessary in ICUs, where the educational role of palliative care services for patients, families, and physicians is crucial, helping to build informed and shared decisions (4). Similarly, it has been demonstrated that early involvement of palliative care improves clinical outcomes and the use of healthcare resources, allowing for better allocation of these resources.

Given the above, this article aims to investigate how doctors working in ICUs are influenced in the decision to withdraw invasive mechanical ventilation and assess which factors may impact the autonomy of medical personnel in performing or withholding the withdrawal of mechanical ventilation.

Methodology

A quantitative study was conducted using the Google Forms tool, with a total participation of 36 voluntary participants: general practitioners, anesthesiologists, emergency physicians, internists, and intensivists working in ICUs in various cities of Colombia. The original survey applied in the ARREVE study (5) was used as a reference, given the similarity of the questions with the objectives of this work. This survey was translated into Spanish, and then the most relevant questions were selected to meet the objectives of this study. Additionally, questions were modified and new ones added to assess the understanding of palliative care and the concept of the legality of palliative extubation procedures. The survey was administered using a multiple-choice format, followed by data analysis through both frequency evaluation and pivot tables to estimate possible associations between the variables studied.

Results

A total of 36 physicians responded to the survey, with the majority of respondents from Bogotá and Cali, followed by Medellín. The gender distribution was predominantly male, with 72% of the participants. The most represented age group was between 30 and 50 years old, also comprising 72% of the sample. The most common religious affiliation was Catholic Christianity (47%), followed by non-Catholic Christians (14%) and self-identified atheists (14%). The remaining quarter of the sample was affiliated with other religions. All sociodemographic data can be found in Table 1. The majority of physicians had at least one additional medical specialty (86.1%), with 47.2% being intensive care specialists and 30.5% being internists.

Table 1.
Sociodemographic Characteristics

Variable	Category	Absolute Frequency	Relative Frequency (%)
Gender	Male	26	72.2
	Female	10	27.8
City	Cali	14	38.9
	Bogotá	14	38.9
	Medellín	6	16.7
	Other	2	5.6
Age	31 to 50 years	26	72.2
	<30 years	8	22.2
	>50 years	2	5.6
Medical Specialty	Intensive Care Physician	17	47.2
	Internist	11	30.6
	General Practitioner	5	13.9
	Emergency Physician	3	8.3
How long have you worked in intensive care?	<5 years	17	47.2
	De 5 a 10 years	12	33.3
	De 11 a 20 years	6	16.7
	>20 years	1	2.8
What is your religious affiliation?	Catholic Christian	17	47.2
	Other	9	25.0
	Atheist	5	13.9
	Non-Catholic Christian	5	13.9
Living Situation	With partner, no children	13	36.1
	Alone	11	30.6
	With others	7	19.4
	With partner, with children	5	13.9

Regarding decisions involving the limitation or suspension of treatments, 64% of the physicians considered it part of their job and did not find it difficult; the remaining 36% also considered it part of their work but expressed difficulty in managing it. In this same line, 92% of the respondents agreed that if the limitation/suspension of treatments had already been considered, such a decision was indicated regardless of the origin of the clinical condition.

When asked about preferences for the method of withdrawal of mechanical ventilation, there was a clear preference for terminal weaning. Thus, 50% of the respondents selected this method exclusively, followed by the more common option of weaning but occasionally extubation, with 40%, and one respondent chose terminal extubation exclusively.

From a legal standpoint, all of the participants (100%) expressed that terminal weaning is legally appropriate; meanwhile, two participants (5.6%) considered terminal extubation to be illegal. From a moral perspective, the results were diverse. 25% of the respondents fully agreed that there is a moral difference between terminal

weaning and terminal extubation, while another 25% completely disagreed with the existence of such a moral difference.

When evaluating the recognition of palliative care in the ICU, 64% of the physicians fully agreed that the withdrawal of mechanical ventilation is a palliative measure. Additionally, 53% of the participants stated that palliative care team support is always required during the withdrawal of mechanical ventilation.

Finally, it was deemed important to clarify the factors that could lead participants to change their opinion regarding the limitation/suspension of treatments or the withdrawal of mechanical ventilation. Nearly 44% identified a different religious or spiritual belief as the most important reason, followed by 39% who pointed to having a different medical specialty. Approximately 14% expressed that, with more work experience or older age, they might have a different opinion on the matter, and the remaining percentage argued that a different family structure might be a determining factor.

Relationship Between Medical Specialty and Decisions Regarding Limitation or Suspension of Treatments

A cross-analysis was performed between medical specialties and the question about considerations regarding decisions of limitation or suspension of treatments (Table 2). As observed, 12 intensivists (70.6%) and 9 internists (82%) consider that decisions regarding the limitation or suspension of treatments do not pose a difficulty. On the other hand, although only 3 emergency physicians and 5 general practitioners were surveyed, in both cases, the predominant response was that although decisions regarding the limitation or suspension of treatments are part of their work, they are difficult to manage.

Tabla 2.

Relación entre especialidad médica y decisiones de limitación o suspensión de tratamientos

Specialty	Part of my job and no difficulty	Part of my job and Difficult to manage	Total
Emergency Physician	1	2	3
	33,3%	66,7%	8,3%
	4,3%	15,4%	
	2,80%	5,60%	
General Practitioner	1	4	5
	20,0%	80,0%	13,9%
	4,3%	30,8%	
	2,80%	11,10%	
Intensivist	12	5	17
	70,6%	29,4%	
	52,2%	38,5%	
	33,3%	13,9%	
Internist	9	2	11
	81,80%	18,20%	30,60%
	39,10%	15,40%	
	25,0%	5,60%	
Total	23	13	36

The results obtained from emergency physicians and general practitioners, although representing a small portion of the sample, can be explained by factors inherent to their role in clinical practice. For instance, emergency physicians are responsible for initial rapid intervention scenarios; however, in most cases, they do not follow up on the patient's evolution or outcome, so decisions regarding the limitation or suspension of treatments may not be routine in their clinical practice. Similarly, in the case of general practitioners, the difficulty mentioned may be linked to the years of experience or specific exposure to such cases.

Relationship Between Religious or Spiritual Affiliation and Method of Mechanical Ventilation Withdrawal

The religious or spiritual affiliation was also cross-referenced with the method of mechanical ventilation withdrawal, that is, terminal weaning or terminal extubation. The Catholic Christian group, the largest group in the survey, unanimously opted for terminal weaning as the first choice (30%), followed by more frequent weaning and sometimes extubation (70%). In the atheist group, the results were similar: none of the respondents chose terminal extubation as their

preferred method. On the other hand, among the respondents identifying as non-Catholic Christians, it is interesting to note that, unlike Catholic Christians, both terminal weaning and terminal extubation had representation in their responses. Here, three of the respondents selected terminal extubation, either as their first choice or equal to terminal weaning.

The previous results indicate that while spirituality or religiosity can influence medical decision-making, there is no clear trend showing that any particular religious denomination has a majority preference for one method over the other. Notably, the results from the atheist group stand out because a preference for palliative extubation over terminal weaning could be expected. However, in this case, none of the respondents selected the former method (Table 3).

Table 3.
Relationship Between Religious or Spiritual Affiliation and Method of Mechanical Ventilation Withdrawal

	More frequent weaning, but sometimes extubation	Terminal weaning: gradual reduction of ventilatory parameters	More frequent extubation, but sometimes weaning	Terminal extubation: removal of the endotracheal tube	Extubation and weaning equally performed	Total
Religious Denomination						
Atheist	3	2	0	0	0	5
	60,0%	40,0%	0,0%	0,0%	0,0%	13,9%
	21,4%	11,1%	0,0%	0,0%	0,0%	
	8,33%	5,55%	0%	0%	0%	
Catholic Christian	5	12	0	0	0	17
	29,4%	70,6%	0,0%	0,0%	0,0%	47,2%
	35,7%	66,7%	0,0%	0,0%	0,0%	
	13,9%	33,3%	0,0%	0,0%	0,0%	
Non-Catholic Christian	0	2	1	1	1	5
	0,0%	40,0%	20,0%	20,0%	20,0%	13,9%
	0,0%	11,1%	100,0%	100,0%	50,0%	
	0,0%	5,6%	2,8%	2,8%	2,8%	
Other	6	2	0	0	1	9
	66,7%	22,2%	0,0%	0,0%	11,1%	25,0%
	42,9%	11,1%	0,0%	0,0%	50,0%	
	16,7%	5,6%	0,0%	0,0%	2,8%	
Total	14	18	1	1	2	36
	38,9%	50,0%	2,8%	2,8%	5,6%	

Discussion

In this study, the majority of physicians working in ICUs are men, belonging to the age group between 31 and 50 years, with most of them being intensivists with less than five years of experience

in this field. In the Faber-Langendoen (6) study, conducted through surveys, 513 intensive care physicians were questioned about patients who had withdrawn from life support. The physicians in this study were primarily specialists in internal medicine (40%), surgeons (28%), pediatricians (16%), and anesthesiologists (11%). This study contrasts with the Scottish study by McAree and Doherty (7), where over 90% of the respondents were anesthesiologists with one to two decades of experience.

The study by Cottureau et al. (5), conducted via self-administered surveys among ICU staff, evaluated perceptions regarding extubation and terminal weaning in several ICUs in France. This study showed a predominance of male participants, who were mainly in their fourth decade of life.

This study aligns with Faber-Langendoen's (6) findings concerning the frequency of representation from certain specialties, where internal medicine was the most frequent. The Cottureau et al. (5) study, like this study, predominantly represented male physicians. The literature review revealed that, unfortunately, the available studies have limited information about the years of professional experience and lack data on the age group or family structure of the professionals included. Such a scenario provides an opportunity for future studies to evaluate these characteristics to determine whether they influence decision-making in ICUs.

In general, the physicians in the present study consider the limitation or suspension of treatments to be part of clinical practice and believe that the withdrawal of mechanical ventilation should be done regardless of the underlying diagnosis or clinical condition. The results regarding the decision-making on the limitation or suspension of treatments indicate that they are part of their work, although for some, they are difficult to manage.

Previous studies have attempted to address the elements that contribute to the difficulty professionals face when making decisions regarding mechanical ventilation. In a critical review of the literature conducted in Australia by Flannery et al. (8), including both quantitative

and qualitative studies, the decision-making of doctors and nurses was assessed. They stated that this decision, which should be the responsibility of the attending physician, can represent a significant source of moral distress, which in turn can be influenced by burnout and decreased job satisfaction. Similarly, they mentioned that the complexity in decision-making is related to the individuality of each patient.

A significant variety of considerations have emerged regarding the indications for withdrawing mechanical ventilation in the context of treatment limitation/suspension. Azoulay et al. (9) conducted a study to report the incidence and characteristics of decisions to withdraw support therapies, involving 282 ICUs and 14,488 patients. These decisions occurred in 8.6% of the patients, with therapy retention in 54.6% and therapy withdrawal in 45.4%. The most relevant diagnoses supporting these decisions included the diagnosis of solid organ malignancy, hematologic neoplasms, cerebrovascular disease, and postanoxic coma. In the same study, an interesting finding was that a higher number of nurses per number of beds was associated with a greater likelihood of decisions to withdraw support therapies. In the study by Robert et al. (2), which included patients undergoing immediate extubation or terminal weaning, the majority of participating patients suffered from chronic diseases, such as neurological conditions, neoplastic diseases, or conditions causing systemic immunosuppression.

The study by Jox et al. (10) indirectly evaluated the indications by exploring what constitutes futility for professionals. Medical conditions that lead to irreversible dependency, terminal neoplastic diseases, and severe conditions such as intracerebral hemorrhage were highlighted.

Unlike previous studies, an additional study (5) aligns with this one by considering that terminal extubation and terminal weaning are measures that, rather than depending on the underlying pathology, represent a last resort, employed once all other life support therapies have been withdrawn. The marked variability in the indications for withdrawing mechanical

ventilation among the publications reviewed reflects the complexity experienced by the participants, as well as the lack of international consensus.

Although the decision-making regarding the limitation or suspension of treatments should be individualized for each patient, the importance of proceeding with these decisions as part of ICU work must be recognized. Likewise, the withdrawal of mechanical ventilation should not be stigmatized as being linked to specific pathologies, but rather as a mechanism based on the patient's clinical condition and the impossibility of reversibility.

In terms of religious beliefs, for this study, the majority of participants identified as Catholic Christians, with a small portion of the sample being non-Catholic Christians or atheists, and there were no Jewish or Buddhist participants. Sprung et al. (11) sought to evaluate end-of-life practices in 17 European countries, comparing the frequencies and patterns of end-of-life care across different regions. In their publication, involving 4287 patients from various regions of Europe, they documented that the physicians who most frequently performed the withdrawal of medical treatments were from Protestant (44.6%), Catholic (41.2%), and non-affiliated (35.6%) religious backgrounds, in contrast to Muslim (23.7%), Jewish (15.7%), and Greek Orthodox (13%) physicians.

In the study by Wenger and Camel (12), 443 Jewish physicians were surveyed to describe the relationship between religion and end-of-life decisions, given their paternalistic tendencies. To achieve this goal, self-administered surveys were conducted with questions about communication, attitudes, practices, and factors influencing end-of-life decision-making, using a clinical case with questions aimed at medical interventions. Religiosity was also assessed on a scoring scale that categorized physicians into three groups: non-religious, moderately religious, and highly religious. The results from this study showed that the median religiosity score was 9.2, with 32% of doctors being categorized as non-religious, 59% as moderately religious, and 9% as highly religious.

Among the characteristics of the more religious physicians, they tended to be older, have more children, and had greater years of practice. When asked about the withdrawal of life support, those with higher religiosity were less likely to carry out this practice compared to the non-religious and moderately religious physicians (50.7% vs. 36.3% vs. 10.8%). Additionally, more religious physicians were less likely to prescribe pain medication to a terminal patient if it could accelerate death, with a significant difference compared to non-religious and moderately religious physicians (84.7% vs. 80.2% vs. 69.4%). In conclusion, the study by Wenger and Camel (12) suggested that the religiosity of physicians could impact how their patients die and encourages patients to understand the religious preferences of their physicians and their alignment with the patients' preferences. It would be interesting to have a larger sample of participants to explore further the impact of religiosity and spirituality on decision-making, and to delve deeper into other less prevalent beliefs in our setting.

It was identified that 44% of the respondents believe their religious or spiritual beliefs could influence their decision regarding the suspension of treatments or the withdrawal of mechanical ventilation. When analyzing these results by religiosity, it was observed that physicians who identified as highly religious showed greater reluctance to perform terminal extubation compared to those with moderate beliefs or no religious affiliation. This trend was also reflected in the preference for terminal weaning, especially among Catholic and non-Catholic Christian physicians.

Regarding medical specialty, intensivists and emergency physicians showed less influence from religiosity on decision-making, while general practitioners and anesthesiologists exhibited greater variability in their responses. These findings align with previous studies, such as the one by Wenger and Camel (12), which demonstrate how a physician's religiosity can influence how they manage the limitation of treatments at the end of life. Future research should further explore this aspect

through qualitative interviews to understand how spirituality impacts decision-making in clinical practice.

The physicians who participated in this survey recognized terminal weaning and extubation as legal practices. In the study by Jox et al. (10), it was documented that emotions such as pain and guilt, fear of legal consequences, and reactions from patients' families shape the decisions and the difficulty in withdrawing futile therapies in ICUs. A particularly interesting study (13) evaluated the perception of family members regarding terminal extubation compared to terminal weaning, involving a total of 68 patients. In this study, all participants approved of extubation and were able to witness the moment of death. It is important to highlight the scientific evidence supporting the withdrawal of invasive mechanical ventilation in futile contexts. As a result, the recognition of the legality of this maneuver is essential and requires continuous education to eliminate the barriers created by fear of legal consequences due to technical and scientific ignorance.

The literature reviewed demonstrates that perceptions regarding the legality of palliative extubation vary among physicians, suggesting a lack of consensus on its regulation and application. In Colombia, Law 1733 of 2014 establishes the right to palliative care, while Judgment C-239 of 1997 recognizes the possibility of suspending futile treatments in patients with terminal illness. However, there is still no specific guideline on palliative extubation in ICUs, which creates uncertainty among healthcare professionals. In contrast, international organizations such as the World Health Organization, the American Thoracic Society, and the European Society of Intensive Care Medicine have developed detailed guidelines on decision-making regarding life support limitation, emphasizing the need for standardized protocols and the integration of palliative care in these decisions.

Lastly, for the participants in this study, palliative care is considered an integral part of the multidisciplinary ICU team. A retrospective cohort study aimed to evaluate whether the

implementation of a joint palliative care model in the ICU affected clinical outcomes (14). Two groups were formed: one with palliative care intervention and another without it. The results showed that patients in the intervention group had a shorter hospital stay compared to the non-intervention group (3.7 days vs. 3.9 days), as well as a lower rate of cardiopulmonary resuscitation (3.1% vs. 5.3%, respectively). A study by Ma et al. (15) evaluated how routine palliative care consultation in ICUs can have a positive impact on critical patient care. The study also assessed the impact of early palliative care consultation in high-risk ICU patients. A total of 199 participants were involved, with 97 (48.7%) assigned to the intervention group and 102 (51.3%) to the usual care group. In the intervention group, decisions about do-not-resuscitate and do-not-intubate were made more frequently and earlier than in the usual care group (50.5% vs. 23.4%). The intervention group also had more transfers to palliative care (18.6% vs. 4.9%) and fewer days on the ventilator.

A study by Helgeson et al. (16) aimed, like the study by Ma et al. (15), to evaluate the benefit of early palliative care consultation (within the first 24 hours) in medical ICU patients, specifically in terms of clinical outcomes and satisfaction. A total of 91 patients were included, with 50 assigned to the intervention group and 41 to the standard care group. On the satisfaction score, the intervention group scored 23 points higher than the control group (82 vs. 62). Similarly, in the intervention group, advanced care planning was completed in 34% of patients compared to 12% in the control group. This study concluded that early palliative care for critically ill patients is important based on the evidence.

A systematic review by Martins et al. (17) aimed to determine whether the introduction of palliative care teams in ICUs reduced ICU length of stay and mortality in terminally ill patients. The review included eight studies with a total of 7846 patients, and it demonstrated a reduction in mortality in the intervention group (RR = 0.78; CI = 0.70-0.87) and a decrease in ICU length of stay by 2.5 days. The scientific evidence has

shown that the involvement of palliative care in ICUs leads to improved clinical outcomes.

Palliative care has been recognized as a fundamental part of critical care, although its integration in ICUs is still variable and depends on the perceptions of treating physicians. Various studies have shown that early intervention by palliative care teams in the ICU is associated with reduced hospitalization time, lower incidence of resuscitation attempts in patients with irreversible prognosis, and improved quality of death as perceived by family members. Care models in the United States and Europe have implemented palliative care teams within ICUs, allowing for informed decision-making from the moment of the critically ill patient's admission. However, in Colombia, the integration of palliative care in the ICU faces challenges, such as the lack of institutional protocols, a lack of awareness of its scope among medical personnel, and a shortage of palliative care specialists. Therefore, it is essential to strengthen medical training in this area and develop implementation strategies adapted to the country's hospital reality.

The limitations of this study must be recognized. First, although the sample size is considerable, it is necessary to expand the number of respondents in future research to represent more regions and medical specialties, thus allowing for a more representative and generalizable analysis. Additionally, interviews or focus group studies could be considered for future research to explore key aspects such as work experience and religious beliefs in greater depth.

It is also crucial to seek strategies where palliative care is a central part of shared decision-making in ICUs to avoid futile and therapeutic obstinacy scenarios at all costs. Similarly, communication strategies should be promoted with the healthcare staff, palliative care teams, patients, and their families, ensuring that the necessary information about the reorientation or limitation of efforts, including the need to withdraw mechanical ventilation, is delivered with the highest quality and clarity.

Lastly, equally important, emphasis must be placed on the need to train medical personnel in

bioethics. This would highlight the importance of understanding critical aspects in daily medical practice, such as the ethical issues surrounding the withdrawal of life support, where scientific evidence should be the basis for decision-making, not the influence of personal beliefs.

Conclusions

The study reaffirms that palliative extubation is an essential process in critical care medicine, and its perception among ICU physicians varies based on sociodemographic, religious, and ethical factors. A predominant trend was identified toward terminal weaning as the preferred method for withdrawing mechanical ventilation, with a minority of physicians considering terminal extubation to be an illegal or morally questionable practice.

Additionally, the influence of religiosity on medical decision-making was evident, posing a challenge for bioethics education and the need for protocols that ensure decisions are based on scientific principles rather than personal beliefs. The variability in the participation of palliative care teams in extubation suggests that it is crucial to more systematically integrate their intervention into the ICU.

The results obtained align with previous studies in Europe and North America, where medical specialty, bioethics training, and work experience influence the decision to suspend ventilatory support. Moreover, it was found that a physician's spirituality and religious beliefs can affect their judgment, a relevant finding, given that evidence-based medicine should take precedence over personal considerations in decision-making.

Regarding the role of palliative care in the ICU, the literature supports the integration of palliative care teams in the care of critically ill patients to improve the quality of decision-making, reduce family distress, and shorten hospital stays. However, in this study, only half of the physicians consider their involvement essential in palliative extubation, suggesting the need to strengthen their role in clinical practice.

This study contributes relevant information for the development of clinical guidelines to standardize decision-making regarding the withdrawal of ventilatory support in critically ill patients. Furthermore, it highlights the importance of continuous education in bioethics, effective communication with families, and the implementation of strategies to improve safety and clarity in these processes.

The quantitative results showed considerable variability in physicians' perceptions of palliative extubation, particularly depending on their specialty and religious beliefs. However, to better understand the reasons behind these differences, it would be useful to incorporate qualitative analysis through interviews or focus groups. Studies such as that of Wenger and Carmel (12) have demonstrated that perceptions of palliative extubation are strongly influenced by factors such as academic training and work experience. Including these methods would allow for more accurate identification of perception patterns and factors that do not emerge in a quantitative analysis.

It is crucial that future research expands the sample of participants and includes qualitative analysis that explores in greater depth the reasons behind differences in perception among physicians from different specialties and years of experience. In this way, progress can be made toward a more homogeneous palliative care model in the ICU, based on the best available evidence and well-defined ethical principles.

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Notes

Conflict of Interest The authors declare that there is no conflict of interest related to this research.