

Healthcare Professionals' Ethical Dilemma in Out-of-Hospital Cardiopulmonary Arrest: A Scoping Review

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ABSTRACT

Objective: Cardiopulmonary arrest (CPA) is a prevalent scenario outside the hospital. When a nurse, the most qualified professional present during such an event, encounters a CPA situation, they may face an ethical and legal dilemma. Legally, they lack the authority to declare death, thus necessitating the initiation of advanced life support (ALS) maneuvers without the ability to determine whether to cease them. This study aims to identify the factors influencing the ethical dilemma experienced by healthcare professionals in out-of-hospital CPA situations.

Method: Utilizing the scoping review approach following the Joanna Briggs Institute method, we analyzed article relevance, data extraction, and synthesis performed independently by two reviewers. Following the application of predefined inclusion criteria, 11 studies were included in the review.

Results: Studies were categorized based on factors influencing the ethical dilemma encountered by healthcare professionals in CPA situations outside the hospital, ethical principles guiding such situations, the roles of healthcare professionals involved, the contextual aspects of CPA incidents, and strategies facilitating decision-making for healthcare professionals.

Conclusion: This scoping review has contributed to understanding factors affecting ethical dilemmas healthcare professionals face in CPA situations outside the hospital.

Keywords: Healthcare Professional, Out-of-Hospital Cardiopulmonary Arrest, Ethics, Professional, Emergency Medical Services

INTRODUCTION

At present, various forms of assistance are accessible, enabling the application of advanced life support (ALS) maneuvers even at the site of cardiopulmonary arrest (CPA), which proves advantageous due to their promptness, given that the likelihood of survival for the individual in CPA largely hinges on the intervention time. In such instances, immediate life support (IVS) ambulance nurses frequently encounter an ethical dilemma.

In Portugal, Law No. 141/99, enacted on August 28th, governs the principles underlying the verification and confirmation of death, stipulating that this responsibility falls upon a physician. This legal mandate necessitates that nurses operating in IVS ambulances, when confronted with CPA situations, must initiate and sustain resuscitation maneuvers utilizing advanced life support (ALS) procedures and await the arrival of the

medical emergency and resuscitation vehicle (VMER) or even the arrival at the emergency unit with a doctor present, as only a legally authorized physician can decide whether to continue or terminate resuscitation.¹

Ethics is grounded on the principle of the inherent value of human life. Nevertheless, it is imperative to avoid therapeutic obstinacy, and resuscitation should not commence in cases where the procedure proves futile.¹

Given the aforementioned circumstances and recognizing that nationally, this remains a topic necessitating substantial investment and advancement, a systematic literature review was conducted. This endeavor stems from the need to synthesize findings from conducted research, aiming to establish a robust scientific foundation on the subject for potential future initiatives to update protocols or guidelines. For instance, there is a need for updating the CPA protocol in

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IVS ambulances at the national level, as internationally, various protocols exist with criteria for refraining from initiating or ceasing resuscitation, such as Basic Life Support-Termination of Resuscitation (BLS-TOR), Non-shockable initial rhythm, Unwitnessed arrest, Eighty years or older (NUE), and Advanced Life Support-Termination of Resuscitation (ALS-TOR).²

Thus, this article seeks to delineate the scientific evidence regarding the factors impacting the ethical dilemma encountered by healthcare professionals when addressing CPA outside the hospital setting. Furthermore, our objective is to pinpoint the ethical principles manifest in instances of out-of-hospital CPA as articulated by healthcare professionals, identify the specific healthcare professionals involved in these incidents, delineate the locations of CPA occurrences, and elucidate strategies that facilitate the decision-making process in such situations. This objective stems from the imperative to discern the outcomes of conducted investigations, thereby establishing a solid foundation of scientific understanding on the subject matter.

The research inquiry adheres to the Population, Concept, Context framework, with the population (P) being healthcare professionals, the concept (C) being the factors influencing the ethical dilemmas faced by healthcare professionals in cases of out-of-hospital CPA, and the context (C) being the out-of-hospital setting.

Considering this, the formulated research question is as follows: "What factors contribute to the ethical dilemmas experienced by healthcare professionals when confronted with cardiorespiratory arrest in an out-of-hospital context?"

Specifically, this review seeks to address the following secondary questions:

- What ethical principles underlie the occurrence of CPA for healthcare professionals in an out-of-hospital setting?
- Which healthcare professionals are involved in cases of CPA outside the hospital environment?
- Where do incidents of CPA typically occur?
- What strategies facilitate decision-making for healthcare professionals when faced with CPA?

To expound upon the concepts delineated in the *scoping review*, the following definitions from the literature are provided:

An ethical dilemma arises when an individual must select between two or more alternatives that possess equivalent ethical weight.³ Opting for one alternative engenders internal conflict within the individual.⁴

Additionally, dilemmas are regarded as pivotal in professional development, fostering a more introspective and discerning approach among professionals, particularly in matters pertaining to business ethics.⁵

Bioethics pertains to human behavior or conduct in relation to life, denoting ethics applied to life, with a particular emphasis

on the fundamental principles guiding human actions. The teleological principles of beneficence and respect for autonomy delineate the ultimate ends toward which actions should be directed and upheld. Conversely, deontological principles such as nonmaleficence and justice denote the duties that professionals must adhere to in patient care, mandated by the inherent rights of their profession.⁶

Ethical principles necessitate discernment, contingent upon individual character, moral judgment, and a sense of responsibility and reflection. Developing reflective ethical thinking is imperative for individuals to discern their personal and professional values effectively.⁷

CPA represents a sudden occurrence and stands as one of the primary causes of mortality in Europe and the United States.⁸ In the absence of basic life support (BLS) interventions, blood circulation to vital organs is nearly halted, resulting in cellular hypoxia, irreversible damage, and inevitable death.⁹

An out-of-hospital emergency refers to any sudden occurrence of illness, trauma, crisis, or disaster affecting an individual, group, or community, necessitating immediate evaluation and intervention at the location and moment, ensuring high-quality, comprehensive, and timely care.¹⁰

METHODS

This *scoping review* adheres to the methodological recommendations outlined in the *Joanna Briggs Institute Reviewer's Manual*. The selection of studies for inclusion in the review was based on specific criteria, namely studies exploring the identification of ethical dilemmas in cases of CPA among healthcare professionals; studies addressing the out-of-hospital context; studies focusing on CPA; studies available in Portuguese, English, and Spanish; and studies with unrestricted access.

Given the nature of a *scoping review*, various study designs were considered for inclusion, including primary quantitative, qualitative, and mixed-methods studies, as well as literature reviews, opinion pieces, reports, dissertations, and gray literature.

The search strategy aimed to identify all relevant studies meeting the aforementioned inclusion criteria. Initially, a preliminary search was conducted in databases such as MEDLINE (via PubMed) and CINAHL (via EBSCOhost) to identify articles related to the topic. Text words from article titles and abstracts, along with indexed terms used to describe the articles, were employed to develop a comprehensive search strategy across MEDLINE and CINAHL. Additionally, the bibliographies of identified articles were examined to include further relevant sources. The search strategy, encompassing all identified keywords and indexing terms, was tailored for each information source utilized and is detailed in Table 1.

The quest for unpublished articles was conducted within the Portuguese Open Access Scientific Repository (RCAAP) database.

As stipulated in the introduction, only studies written in English, Portuguese, and Spanish were considered, with no temporal constraints regarding the publication years of the studies.

Following the search process, all located studies were collected and transferred to *Mendeley*, a bibliographic *software*, which identified and removed duplicate articles. Subsequently, a pilot test was conducted, wherein the titles and abstracts of the articles were scrutinized by two independent reviewers, adhering to the predefined inclusion criteria for the review. Potentially pertinent documents were retrieved in full, and the complete texts of the selected articles were meticulously assessed by two independent reviewers, ensuring compliance with the inclusion criteria. Any discrepancies arising between the reviewers at each stage of the selection process were resolved through discussion and, if necessary, the involvement of a third reviewer.

Formal evaluation of the methodological quality of the studies incorporated into a *scoping review* is typically omitted, as it does not align with its objective, which, in this instance, entails mapping knowledge on the selected topic (Peters et al., 2020).

Data extraction from the studies included in the *scoping review* was performed by two independent reviewers employing a standardized data extraction tool. The extracted data encompassed specific details pertaining to the factors influencing the ethical dilemmas encountered by healthcare professionals confronting CPA in an out-of-hospital context, the ethical principles evident in the occurrence of CPA among healthcare professionals in an out-of-hospital setting, the healthcare professionals engaged in instances of CPA in an out-of-hospital context, the location of the CPA incidents, and the

strategies facilitating ethical decision-making in such occurrences for healthcare professionals. To achieve this, two distinct data extraction instruments were devised and utilized, as delineated in Tables 2 and 3. The data extracted from the studies included in the review are presented both narratively and through tables, aiming to address the main research question, secondary questions, and overall objectives of the study.

The synthesis of the data involved the participation of two reviewers, and no disagreements emerged, obviating the necessity for involving a third reviewer.

RESULTS

As depicted in Figure 1 using the PRISMA 2020 flowchart, the initial search yielded 470 studies that were potentially relevant. Among these, 70 duplicates were identified and removed. Subsequently, upon title evaluation, 337 studies were excluded, followed by the exclusion of 41 studies based on abstract assessment. After a thorough examination of the full text, 11 studies were excluded as they did not meet the inclusion criteria or address the research question. Consequently, 11 studies were ultimately included in this review. **Figure 1.** Modified PRISMA 2020 flowchart illustrating the process of study selection¹¹

Among the 11 studies incorporated into the review, 2 were conducted in the United States and 9 in Europe, spanning from the oldest study in 1997 to the most recent in 2022.

Details regarding the analyzed articles, including title, authors, year, origin, type, and study objective, are provided in Table 2.

To address the main research question and the secondary questions, Table 3 was compiled.

Table 1. Research Strategy

Data base	Strategy Research carried out on May 10, 2023; no time limit	Number of finds
MEDLINE (via PubMed)	(((((((“Out- of -hospital cardiac arrest “[Title / Abstract]) OR (“ Cardiac arrest “[Title / Abstract])) OR (“ Heart arrest “[Title / Abstract])) OR (“ Resuscitation “[Title / Abstract])) OR (“Out- of -Hospital Cardiac Arrest “[Mesh])) OR (“ Heart Arrest “[Mesh])) AND ((((((Ethic * “[Title / Abstract] OR (“ Ethical dilemmas “[Title / Abstract])) OR (“ Ethics , Professional “[Mesh])) OR (“ Ethics Committees , Clinical “[Mesh])) OR (“ Principle- Based Ethics “[Mesh])) AND ((((((“ Prehospital “[Title / Abstract] OR (“out of hospital “[Title / Abstract])) OR (“ Emergency medical services “[Title / Abstract])) OR (“ Emergency Medical Services “[Mesh]))	315
CINAHL Complete (via EBSCO)	S1- TI “Out- of -hospital cardiac arrest ” OR AB “Out- of -hospital cardiac arrest ” OR TI “ Cardiac arrest ” OR AB “ Cardiac arrest ” OR TI “ Heart arrest ” OR AB “ Heart arrest ” OR TI “ Resuscitation ” OR AB “ Resuscitation ” OR (MH “ Heart Arrest ”) OR (MH “ Rapid Response Team”) S2- TI Ethic * OR AB Ethic * OR TI “ Ethical dilemmas” OR AB “ Ethical dilemmas” OR (MH “ Codes of Ethics ”) OR (MM “ Ethics , Nursing ”) OR (MH “ Medical Futility ”) OR (MH “ Decision Making , Ethical ”) S3- TI “ Prehospital ” OR AB “ Prehospital ” OR TI “out of hospital” OR AB “out of hospital” OR TI “ Emergency medical services ” OR AB “ Emergency medical services ” OR (MM “ Prehospital Care ”) OR (MM “ Emergency service ”) S4- S1 AND S2 AND S3	155
RCAAP	(Health professionals (subject) AND ethical dilemma subject)) OR (Ethical dilemma (subject) AND cardiopulmonary arrest (subject)) OR (Health professionals(subject) AND extra-hospital (subject))	0

Note: MEDLINE: *Medical Literature Analysis and Retrieval System Online* , CINAHL: *Cumulative Index to Nursing and Allied Health Literature* , RCAAP: Portugal’s open access scientific repository.

Table 2. Identification of articles analysed

A1 12	Title	Non-medical factors in prehospital resuscitation decision-making : a mixed-methods systematically review
	Author(s)/Year	Milling L, Kjær J, Binderup LG, de Muckadell CS, Havshøj U, Christensen HC, Christensen EF, Lassen AT, Mikkelsen S, Nielsen D. (2022)
	Country of origin	Denmark
A2 13	Kind of study	Systematic review
	goal	Explore how non-medical factors influence healthcare professionals' decisions to initiate pre-hospital resuscitation maneuvers in adults undergoing cardiac arrest
	Title	Some Ethical Issues in Prehospital Emergency Medicine
A3 14	Author(s)/Year	Erbay H. (2014)
	Country of origin	Türkiye
	Kind of study	Revision
A4 15	goal	Describe ethical conflicts that occur in the pre-hospital environment
	Title	Prehospital Providers ' Perspectives about Online Medical Direction in Emergency End-of-Life Decision-Making
	Author(s)/Year	Waldrop DP, Waldrop MR, McGinley JM, Crowley CR, Clemency B. (2022)
A5 16	Country of origin	USA
	Kind of study	Descriptive and cross-sectional exploratory study
	goal	Explore the decision-making process by the pre-hospital emergency team in an end-of-life context
A6 17	Title	Guidance for ambulance personnel on decisions and situations related to out-of -hospital CPR
	Author(s)/Year	Ågård A, Herlitz J, Castrén M, Jonsson L, Sandman L. (2012)
	Country of origin	Sweden
A7 18	Kind of study	Review article
	goal	Address and clarify the ethical aspects related to out-of-hospital CPR, based on our knowledge and experience of healthcare professionals, and summarize the key points in a guideline
	Title	ethical dilemmas during cardiac arrest incidents in the patient's man
A8 19	Author(s)/Year	Karlsson M, Karlsson N, Hilli Y. (2019)
	Country of origin	Sweden
	Kind of study	Descriptive design with a qualitative approach
A9 20	goal	Investigate the ethical dilemmas experienced by pre-hospital nurses in cases of CA in homes
	Title	Ethics in treatment decisions during out -of -hospital resuscitation
	Author(s)/Year	Naess AC, Steen E, Steen PA. (1997)
A10 21	Country of origin	Norway
	Kind of study	Qualitative (semi-structured interview)
	goal	Investigate ethical issues during out-of-hospital resuscitation
A11 22	Title	Swedish ambulance nurses ' experiences of nursing patients Suffering cardiac arrest
	Author(s)/Year	Larsson R, Engström Å. (2013)
	Country of origin	Sweden
A12 23	Kind of study	Descriptive, qualitative design, anchored in the naturalistic paradigm
	goal	Describe the experiences of nurses with patients who suffered pre-hospital cardiac arrest
	Title	ethical issues of cardiopulmonary resuscitation : current practice among emergency doctors
A13 24	Author(s)/Year	Marco CA, Bessman ES, Schoenfeld CN, Kelen GD. (1997)
	Country of origin	USA
	Kind of study	Revision
A14 25	goal	Determine practice among physicians regarding initiation and termination of CPR
	Title	The ethics of resuscitation : how do paramedics experience ethical dilemmas when faced with cancer patients with cardiac arrest ?
	Author(s)/Year	Nordby H, Nøhr Ø. (2012)
A15 26	Country of origin	Norway

	Kind of study	Qualitative study (semi-structured interviews and interpretative cognitive-emotional approach)
	goal	Understand how paramedics experience ethical dilemmas in relation to CPR of cancer patients
	Title	Documentation of ethically relevant information in out-of-hospital resuscitation is rare: Danish nationwide observational study of 16,495 out-of-hospital cardiac arrests
A10 21	Author(s)/Year	Milling L, Binderup LG, de Muckadell CS, Christensen EF, Lassen A, Christensen HC, Nielsen DS, Mikkelsen S. (2021)
	Country of origin	Denmark
	Kind of study	Qualitative study (retrospective observation)
	goal	Determine the transparency of records regarding decision-making in pre-hospital resuscitation
	Title	Family members, ambulance clinicians and attempting CPR in the community: the ethical and legal imperative to achieve collaborative consensus at speed
A11 22	Author(s)/Year	Cole R, Stone M, Ruck Keene A, Fritz Z. (2021)
	Country of origin	England
	Kind of study	Qualitative study
	goal	Present the personal perspectives of two authors on the ethical dilemmas they face in CPR

Note: A1: article 1, A2: article 2, A3: article 3, A4: article 4, A5: article 5, A6: article 6, A7: article 7, A8: article 8, A9: article 9, A10: article 10, A11: article 11.

DISCUSSION

The findings from the analyzed studies were interpreted in light of the synthesized knowledge generated to address the formulated questions.

As a result, the factors most prominently discussed in the examined articles, which influence the ethical dilemmas faced by healthcare professionals in an out-of-hospital CPA scenarios, include the presence of family members (A1, A2, A4, A5, A7, A9, A10, and A11) and the personal beliefs of healthcare professionals

(A1, A2, A3, A4, A5, A6, A8, and A11). Furthermore, family members' beliefs were found to impact professionals' decision-making (A2, A3, A6, and A9), as well as the attributes of healthcare professionals themselves (A1, A2, A3, A5, A7, A9, A10, and A11).

Regarding professional attributes, two of the articles noted that differences in opinions among team members influence decision-making (A3 and A5).

Apart from these four primary factors previously mentioned, additional factors associated with the patient were identified

Table 3. Results of the articles analysed

Article	Health Professionals / Sample	Factors influencing the Ethical Dilemma/Ethical Principles	PCR location	Facilitating Strategies for Decision Making
A1 12	Doctors, paramedics and nurses (n=not mentioned)	<p><u>Factors related to the patient</u> (patient characteristics; prognosis vs quality of life)</p> <p><u>Family members</u> (desires and emotions; presence of family members)</p> <p><u>Factors related to healthcare professionals</u> (emotions and values; professional characteristics/experience and team interaction)</p> <p><u>External conditions</u> (professional environment; legislation).</p> <p><u>Conflicts of expectations</u> ;</p> <p><u>Fear of litigation and uncertainty</u></p> <p><u>Justice</u> (challenged through PCR site)</p> <p><u>Experience and training of health professionals</u> ;</p> <p><u>Personal values and attitudes</u> ;</p> <p><u>Perception of the duty to sustain life</u> ;</p> <p><u>Absence of physical presence of the doctor</u> ;</p> <p><u>End of CPR</u> (family acceptance due to the fact that CPR takes place outside the hospital);</p> <p><u>Personal belief (futile CPR) vs Internal procedure</u> ;</p> <p><u>Presence of the family during CPR</u> .</p>	Public or private place; Tight and dark places	Knowledge of the existence of an advance directive
A2 13	Health professionals (n=does not refer)	<p><u>Family wants to revoke DNR</u> ;</p> <p><u>Lack of written documents</u> ;</p> <p><u>Agreement between all elements</u> . Autonomy (defending the wishes documented by the person at the end of life and managing the suffering experienced by family members)</p>	Does not mention	If in doubt about the appropriateness of withholding resuscitation attempts, CPR should be initiated.
A3 14	Basic, advanced, critical care emergency medical technicians and paramedics (n=50)	<p><u>Family wants to revoke DNR</u> ;</p> <p><u>Lack of written documents</u> ;</p> <p><u>Agreement between all elements</u> . Autonomy (defending the wishes documented by the person at the end of life and managing the suffering experienced by family members)</p>	PCR in nursing home (questioned OLM D)	Importance and necessary support of Online Medical Direction in the CPR process (recommended and useful practice)

A4 15	Health professionals (n=does not refer)	<p><u>Dignity in death</u> ; Psychologically more difficult to stop CPR rather than start it:</p> <p>4 “psychological “ factors for continuing CPR considered futile: influence of the presence of family members.</p> <p>Autonomy (presence of an advance directive)</p> <ul style="list-style-type: none"> - Doubts about the <u>presence of family members</u> ; - <u>Exposure of the person</u> (protection of the person’s dignity); - <u>Cultural and religious aspects</u> (exposure of intimate parts of the person); <p><u>Inability to provide support to family members</u> (emergency team only on site);</p> <ul style="list-style-type: none"> - <u>Participation of family members in decision- making</u> ; - <u>Personal values and guidelines/policies</u> ; - Importance of Communication; - <u>Conflict of personal values</u> among the emergency team; - <u>Provide support to family members</u> . Beneficence (nurses acted according to the reason for caring, alleviating the person’s suffering). <p>4 Factors: 1 - Patient’s perspective : prognosis and ethical criteria (patient’s right to live or die with dignity);</p> <p>2- <u>Viewer’s perspective</u> (expectations expressed by family members)</p> <p>3- <u>Perspective of the paramedic or doctor</u> (system reputation)</p> <p>4 -Community perspective (making a “good appearance”)</p> <ul style="list-style-type: none"> - <u>Taking care of family members</u> (Dichotomy of the presence of family members) 	PCR at home	<p><u>Know the family’s wishes</u> ; <u>Medical support</u>;</p> <p>If there is any doubt about discontinuing CPR, <u>CPR should be initiated</u> .</p> <p><u>Always start CPR maneuvers in case of PCR</u> (they did not always have the necessary information in the situation or were under time pressure on site); <u>Follow the law/guidelines and the constitution</u> .</p>
A5 16	Nurses (n=9)	<ul style="list-style-type: none"> - <u>Participation of family members in decision- making</u> ; - <u>Personal values and guidelines/policies</u> ; - Importance of Communication; - <u>Conflict of personal values</u> among the emergency team; - <u>Provide support to family members</u> . Beneficence (nurses acted according to the reason for caring, alleviating the person’s suffering). 	Residence	<p>Does not mention</p> <p>Does not mention</p>
A6 17	Paramedics (n=35) and doctors (n=9)	<p>4 Factors: 1 - Patient’s perspective : prognosis and ethical criteria (patient’s right to live or die with dignity);</p> <p>2- <u>Viewer’s perspective</u> (expectations expressed by family members)</p> <p>3- <u>Perspective of the paramedic or doctor</u> (system reputation)</p> <p>4 -Community perspective (making a “good appearance”)</p> <ul style="list-style-type: none"> - <u>Taking care of family members</u> (Dichotomy of the presence of family members) 	Does not mention	Does not mention
A7 18	.Nurses (n=7)	<ul style="list-style-type: none"> - <u>Termination of CPR</u> (Difficulty in making a decision - transmitting confidence to people around) 	Does not mention	Reflection- team support.

Note: A1: article 1, A2: article 2, A3: article 3, A4: article 4, A5: article 5, A6: article 6, A7: article 7, A8: article 8, A9: article 9, A10: article 10, A11: article 11., n: sample, PCR: cardiorespiratory arrest, CPR: cardiopulmonary resuscitation, DNR: decision not to resuscitate.

(A1, A6, A8, and A10), such as honoring “dignity in death” (A6), adhering to the patient’s wishes (A10), and assessing the patient’s clinical status, prognosis, and age (A8 and A10). Moreover, factors pertaining to the environment, particularly legislation (A1, A5, A7, A8, and A9), the preservation of the emergency system’s reputation (A6), the patient’s exposure to public scrutiny (A5), and the absence of physician’s physical presence (A2), were acknowledged.

Concerning the healthcare professionals included in the studies, various professional categories were identified, with doctors being mentioned in several articles (A1, A6, A8, and A10), followed by nurses (A1, A5, and A7), paramedics (A1, A3, A6, A9, and A11), and emergency technicians (A3). Articles A2 and A4, however, do not specify the studied population.

Regarding the ethical principles underlying the ethical dilemma, among the 11 analyzed articles, the principle of autonomy (A3, A4, and A10), non-maleficence/beneficence principle (A5, A9, A10, and A11), and the principle of justice (A1 and A10) were identified. Articles A2, A6, A7, and A8 do not explicitly mention any ethical principle.

Analysis of the studies reveals the significance of the location of the incident in the decision-making process of healthcare professionals during CPA, as the presence of family members or bystanders influences their decisions. Four articles discussed incidents in private locations (A1, A3, A4 and A5), one article focused on a public location (A1), and seven articles did not

specify the location of the CPA (A2, A6, A7, A8, A9, A10, and A11).

In all studies encompassed within the review, except for one (A6), various strategies were identified to facilitate decision-making for healthcare professionals during CPA incidents. These strategies include familiarity with advanced directives (A1), initiation of CPR in case of uncertainty regarding the appropriateness of resuscitation cessation (A2, A4, A5, and A11), medical guidance via telephone for decision-making (A3 and A4), availability of protocols or guidelines aiding in determining circumstances justifying CPR cessation (A4 and A8), adherence to local legislation (A5), opportunities for team reflection (A7, A9, and A10), and emphasizing effective communication among team members (A11).

It is noteworthy that only articles published in English, Portuguese, and Spanish were considered for inclusion in this review. Consequently, articles published in other languages may have held significance for this review. However, since the primary objective of the scoping review does not involve assessing the methodological quality of the included studies, no practice recommendations are provided.

CONCLUSION

The objective of this *scoping review* was to delineate the scientific evidence regarding factors influencing the ethical dilemmas encountered by healthcare professionals when confronting CPA in out-of-hospital settings. Additionally, an examination was conducted on the ethical principles inherent

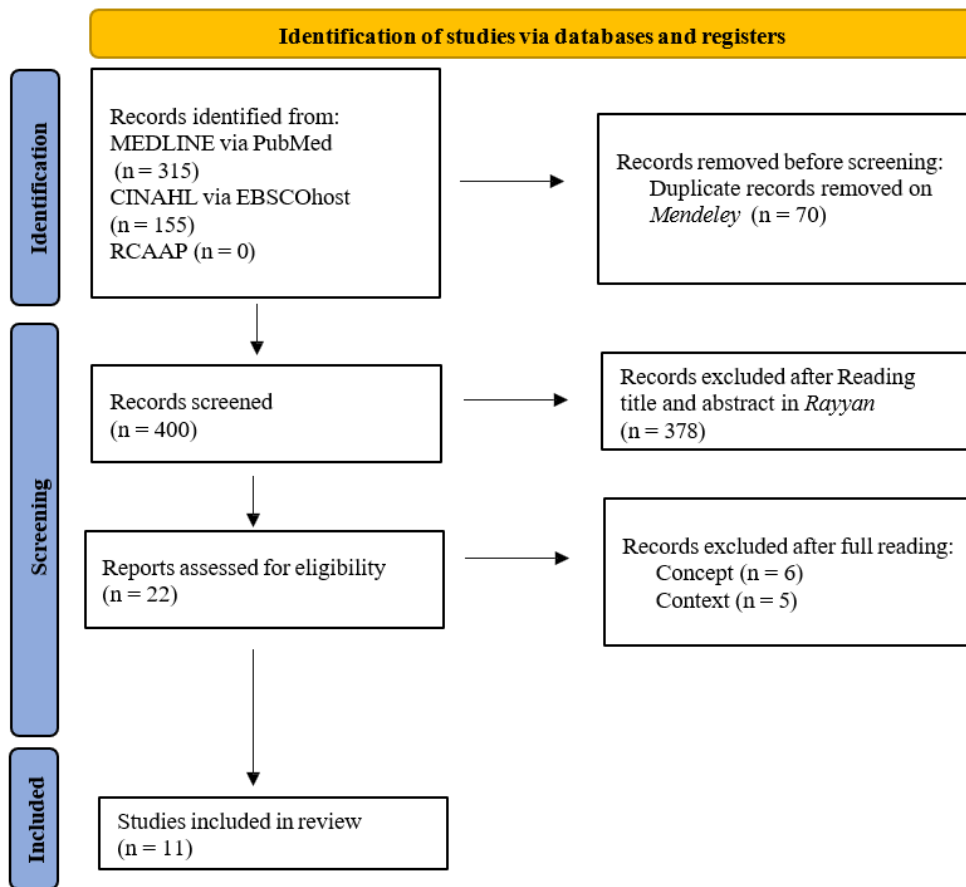


Figure 1. Adapted PRISMA 2020 flowchart of the study selection process.

in such occurrences, the healthcare professionals implicated, the location of the cardiac arrest incidents, and the strategies facilitating decision-making among healthcare professionals.

Eleven articles were identified, revealing several factors influencing the ethical dilemmas faced by healthcare professionals during CPA situations. These factors primarily fall into two categories: those associated with family members and those linked to the healthcare professionals involved. It was also observed that multiple healthcare professionals are involved in out-of-hospital care, albeit varying by country. Notably, the implementation of guidelines/protocols to aid professionals' decision-making and the significance of effective communication among members of the out-of-hospital emergency team emerge as notable facilitating strategies.

Future studies should aim to clearly delineate the factors impacting professional decision-making in ethical dilemmas and their implications for nursing practice. Moreover, there is a need to invest in randomized studies to ensure robust and transparent results, enabling evidence-based clinical decision-making. This would translate into practice recommendations in out-of-hospital settings and facilitate the updating of protocols and procedures based on the latest scientific evidence.

Peer Review: Externally peer-reviewed.

Author Contributions: Conception/Design of Study- A.P., L.P., S.B.; Data Acquisition- A.P., L.P., S.B.; Data Analysis/Interpretation- A.P., L.P., S.B.; Drafting Manuscript- A.P., L.P., S.B.; Critical Revision of Manuscript- A.P., L.P., S.B.; Final Approval and Accountability- A.P., L.P., S.B.

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