



## Clinical paper

## A survey of key opinion leaders on ethical resuscitation practices in 31 European Countries<sup>☆</sup>



Spyros D. Mentzelopoulos<sup>a,\*</sup>, Leo Bossaert<sup>b</sup>, Violetta Raffay<sup>c</sup>, Helen Askitopoulou<sup>d,e</sup>, Gavin D. Perkins<sup>f,g</sup>, Robert Greif<sup>h</sup>, Kirstie Haywood<sup>i</sup>, Patrick Van de Voorde<sup>j,k</sup>, Theodoros Xanthos<sup>l,m</sup>

<sup>a</sup> University of Athens Medical School, Athens, Greece

<sup>b</sup> University of Antwerp, Antwerp, Belgium

<sup>c</sup> Municipal Institute for Emergency Medicine Novi Sad, Novi Sad, Serbia

<sup>d</sup> Medical School, University of Crete, Heraklion, Greece

<sup>e</sup> Ethics Committee of the European Society for Emergency Medicine (EuSEM), London, UK

<sup>f</sup> Warwick Medical School, University of Warwick, Coventry, UK

<sup>g</sup> Critical Care Unit, Heart of England NHS Foundation Trust, Birmingham, UK

<sup>h</sup> University Hospital Bern and University of Bern, Bern, Switzerland

<sup>i</sup> Royal College of Nursing Research Institute, Warwick Medical School, University of Warwick, Coventry, UK

<sup>j</sup> University Hospital and University Ghent, Ghent, Belgium

<sup>k</sup> Federal Department Health, Ghent, Belgium

<sup>l</sup> University of Athens, Medical School, Athens, Greece

<sup>m</sup> Midwestern University, Chicago, IL, USA

## ARTICLE INFO

## Article history:

Received 9 June 2015

Received in revised form

25 November 2015

Accepted 25 December 2015

## Keywords:

Cardiac arrest

Resuscitation

Bioethics

End of life care

Emergency care

## ABSTRACT

**Background:** Europe is a patchwork of 47 countries with legal, cultural, religious, and economic differences. A prior study suggested variation in ethical resuscitation/end-of-life practices across Europe. This study aimed to determine whether this variation has evolved, and whether the application of ethical practices is associated with emergency care organisation.

**Methods:** A questionnaire covering four domains of resuscitation ethics was developed based on consensus: (A) Approaches to end-of-life care and family presence during cardiopulmonary resuscitation; (B) Determinants of access to best resuscitation and post-resuscitation care; (C) Diagnosis of death and organ donation (D) Emergency care organisation. The questionnaire was sent to representatives of 32 countries. Responses to 4-choice or 2-choice questions pertained to local legislation and common practice. Positive responses were graded by 1 and negative responses by 0; grades were reconfirmed/corrected by respondents from 31/32 countries (97%). For each resuscitation/end-of-life practice a subcomponent score was calculated by grades' summation. Subcomponent scores' summation resulted in domain total scores.

**Results:** Data from 31 countries were analysed. Domains A, B, and D total scores exhibited substantial variation (respective total score ranges, 1–41, 0–19 and 9–32), suggesting variable interpretation and application of bioethical principles, and particularly of autonomy. Linear regression revealed a significant association between domain A and D total scores (adjusted  $r^2 = 0.42$ ,  $P < 0.001$ ).

**Conclusions:** According to key experts, ethical practices and emergency care still vary across Europe. There is need for harmonised legislation, and improved, education-based interpretation/application of bioethical principles. Better application of ethical practices may be associated with improved emergency care organisation.

© 2016 Elsevier Ireland Ltd. All rights reserved.

<sup>☆</sup> A Spanish translated version of the abstract of this article appears as Appendix in the final online version at <http://dx.doi.org/10.1016/j.resuscitation.2015.12.010>.

\* Corresponding author. Fax: +30 2103218493.

E-mail addresses: [sdmentzelopoulos@yahoo.com](mailto:sdmentzelopoulos@yahoo.com), [sdm@hol.gr](mailto:sdm@hol.gr) (S.D. Mentzelopoulos).

## Introduction

Cardiac arrest is an unexpected but potentially reversible event and should be distinguished from the expected cessation of cardiorespiratory function as part of natural dying. Survival to hospital discharge following emergency medical service-treated out-of-hospital cardiac arrest is 8–10%.<sup>1</sup> This very low survival rate raises ethical considerations. Equally, significant ethical dilemmas have arisen from the rapid evolution of resuscitation science.<sup>2</sup> Indeed, as advanced and/or potentially beneficial interventions become widely available and applicable and patient outcomes are improving,<sup>1</sup> defining which patients might benefit from new treatments becomes increasingly important.

Healthcare bio-ethics has evolved as bioethicists endeavoured to accommodate dominant cultural and societal trends.<sup>3</sup> However, Europe is a patchwork of 47 countries with legal, cultural, religious, and economic differences. These factors affect how European societies interpret and apply ethical principles in resuscitation and end-of-life care. A previous European survey revealed variation in withholding or withdrawing cardiopulmonary resuscitation (CPR), euthanasia, family presence during resuscitation, death diagnosis by non-physicians, teaching on the recently dead, and communicating a failed resuscitation attempt.<sup>2</sup>

We sought to determine whether the variation in the practice of resuscitation ethics across Europe has evolved. Furthermore, as emergency care design and organisation also probably varies across Europe, we hypothesised that the level of organisation of emergency care might be associated with the level of application of ethical practices.

## Methods

Between February and March 2015 an on-line questionnaire was sent to 40 National Resuscitation Council (NRC) Representatives and/or acknowledged opinion leaders in emergency care from all 32 European countries, where the European Resuscitation Council (ERC) has organised activity [see electronic supplementary material (ESM)]. Questionnaire development was based on co-author consensus, and the principles of autonomy, beneficence, non-maleficence, justice, dignity and honesty.<sup>4</sup> Co-authors contributed to questionnaire synthesis, revision, and testing prior to dissemination.

Survey items were organised in an analytical framework comprising 4 domains:<sup>5</sup>

- (A) Ethical practices including approaches to end-of-life (i.e. end-of-life practices and decisions), and family presence during CPR,
- (B) Determinants of access to best resuscitation and post-resuscitation care,
- (C) Diagnosis of death and organ donation, and
- (D) Emergency care organisation.

Each domain consisted of subcomponents that could be grouped under its descriptive title as they exhibited conceptual/organisational relations or tight organisational/temporal interdependence. For example, regarding domain C, brain death diagnosis is an essential prerequisite for organ donation before circulatory death. Questions and response options are listed in Table 1; questions were based on the Basic Principles of Bioethics.<sup>3</sup>

Respondents had to choose either among 4 options, i.e. *never*, *sometimes*, *usually* and *always* or between *no* and *yes*. Respondents were also asked to comment on domain subsections. Subsequently, responses of *never/sometimes* and *usually/always* were respectively grouped as *no* and *yes*, because *never/sometimes* does not and *usually/always* does reflect common/everyday practice. For data

analysis, we used a dichotomous quantizing approach<sup>6</sup> by grading a positive response with 1 and a negative response with 0.

Discrepancies between respondents from the same country were resolved through consensus. Clarification was also requested from single respondents in case of initially absent, and/or contradictory responses (e.g. concurrent positive response(s) regarding advance directives and negative response regarding withholding of CPR). Respondents' comments were also taken into account. Single respondents were encouraged to consult with colleagues. Furthermore, following data review, we provided respondents with country-specific Microsoft Excel datafiles containing quantified responses and through a standardised e-mail message we asked them to (a) either confirm or correct the gradings of their original responses, (b) provide any still missing responses, and (c) correct any remaining inconsistencies in responses to domain subcomponents (e.g. reporting that citizens are allowed to defibrillate but nurses or police are not). In this message, we further clarified questions pertaining to death diagnosis and defibrillation (Table 1, ESM). Presented survey data reflect individual perceptions of respondents.

## Data analysis

For each group of questions of each domain subsection, we calculated a grading score by summing up the positive responses; the maximum possible score reflects the actual number of questions (Table 1). Subsequently, we calculated grading scores for domain subsections A1–A3, B1–B3, C1 and C2, and D1–D5 by adding the respective, subcomponent (group) scores. Lastly, again by subcomponent score summation, we calculated a total score for each domain. The normalities of the distributions of domain and subcomponent scores were determined by Kolmogorov-Smirnov test. Data are reported as number, number (percentage), and mean  $\pm$  SD or median (interquartile range) as appropriate.

Bivariate linear regression (see ESM for details) was performed to explore a possible association between domain A and domain D total scores. The dependent variable was domain D score. Statistical significance was accepted at  $P < 0.05$ . Analyses were performed with SPSS version 22.0 (IBM, Armonk, New York, USA).

## Results

Responses were originally received from 32/32 countries (100%) and revised Excel datafiles were returned by respondents from 31/32 countries (97%). Only revised data from these 31 countries were included in the final analysis. Respondents provided 73 (99%) of the 74 originally missing data-points. One respondent concluded that he could not answer 6 Domain C questions secondary to regional/local variation in clinical guidelines of healthcare services and/or absence of a specific legal framework. Consequently, 7 (0.16%) out of a possible total of 4402 data-points were ultimately missing (see also ESM, footnotes of Tables E1 and E3). Respondents corrected 199 (4.6%) and confirmed 4129 (95.4%) of the 4328 original response grades. Domains A, B, C, and D total score data exhibited normal distributions. Domains A, B, and D total scores exhibited greater variation compared to domain C total score (Table 2; variation coefficients' decreasing order:  $A > D > B > C$ ). Results on subcomponent scores are presented along with additional details in the ESM. Analysed survey data are provided in a supplemental, pdf-converted Excel file.

## Domain A (Table 3)

Euthanasia and/or assisted suicide in adults and euthanasia in children is allowed and commonly practiced in 4/31 (13%)

Download English Version:

<https://daneshyari.com/en/article/3007648>

Download Persian Version:

<https://daneshyari.com/article/3007648>

[Daneshyari.com](https://daneshyari.com)