

Ethical Issues of Resuscitation

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REFERENCES

- Beauchamp TL, Childress JF: *Principles of Biomedical Ethics*, 7th ed. New York: Oxford University Press; 2012.
- <https://www.ama-assn.org/delivering-care/ama-code-medical-ethics> (American Medical Association: *Code of Medical Ethics of the American Medical Association*. Chicago: American Medical Association Press; 1847.) Accessed September 5, 2017.
- <https://www.acep.org/Clinical—Practice-Management/ACEP-s-Code-of-Ethics-for-Emergency-Physicians> (American College of Emergency Physicians: *Code of Ethics*.) Accessed September 5, 2017.
- Code of ethics for emergency physicians. *Ann Emerg Med* 43: 686, 2008. [PMID: 15259159]
- Centers for Disease Control and Prevention: Out-of-hospital cardiac arrest surveillance: Cardiac Arrest Registry to Enhance Survival (CARES), United States, October 1, 2005–December 31, 2010. *MMWR Morb Mortal Wkly Rep* 60: 1, 2011. [PMID: 21796098]
- Chan PS, McNally B, Tang F, Kellermann A; CARES Surveillance Group: Recent trends in survival from out-of-hospital cardiac arrest in the United States. *Circulation* 130: 1876, 2014. [PMID: 25399396]
- Moretti MA, Cesar LA, Nusbacher A, et al: Advanced cardiac life support training improves long-term survival from in-hospital cardiac arrest. *Resuscitation* 72: 458, 2007. [PMID: 17307620]
- Baekgaard J, Viereck S, Moller T, Ersboll A, Lippert F, Folke F: The effects of public access defibrillation on survival after out-of-hospital cardiac arrest: a systematic review of observational studies. *Circulation* 2017; July 7 (epub ahead of print). [PMID: 28687709]
- Hirlekar G, Karlsson T, Aune S, et al: Survival and neurological outcome in the elderly after in-hospital cardiac arrest. *Resuscitation* 118: 101, 2017. [PMID: 28736324]
- Fredriksson M, Aune S, Bång A, et al: Cardiac arrest outside and inside hospital in a community: mechanisms behind the differences in outcome and outcome in relation to time of arrest. *Am Heart J* 159: 749, 2010. [PMID: 20435182]
- Herlitz J, Svensson L, Engdahl J, Silfverstolpe J: Characteristics and outcome in out-of-hospital cardiac arrest when patients are found in a non-shockable rhythm. *Resuscitation* 76: 31, 2008. [PMID: 17709164]
- Sasson C, Rogers MA, Dahl J, Kellermann AL: Predictors of survival from out-of-hospital cardiac arrest: a systematic review and meta-analysis. *Circ Cardiovasc Qual Outcomes* 3: 63, 2010. [PMID: 20123673]
- McNally B, Robb R, Mehta M, et al: Out-of-hospital cardiac arrest surveillance: Cardiac Arrest Registry to enhance Survival (CARES), United States, October 1, 2005–December 31, 2010. *MMWR Surveill Summ* 60: 1, 2011. [PMID: 21796098]
- Aufderheide TP, Yannopoulos D, Lick CJ, et al: Implementing the 2005 American Heart Association guidelines improves outcomes after out-of-hospital cardiac arrest. *Heart Rhythm* 7: 1357, 2010. [PMID: 20420938]
- Go AS, Mozaffarian D, Roger VL, et al: Heart disease and stroke statistics—2013 update: a report from the American Heart Association. *Circulation* 127: e6, 2013. [PMID: 23239837]
- Sung G, Bosson N, Kaji AH, et al: Therapeutic hypothermia after resuscitation from a non-shockable rhythm improves outcomes in a regionalized system of cardiac arrest care. *Neurocrit Care* 24: 90, 2016. [PMID: 26264064]
- Choi SW, Shin SD, Ro YS, Song KJ, Lee EJ, Ahn KO: Effect of therapeutic hypothermia on the outcomes after out-of-hospital cardiac arrest according to initial ECG rhythm and witnessed status: a nationwide observational interaction analysis. *Resuscitation* 100: 51, 2016. [PMID: 26774175]
- Kirkegaard H, Søreide E, de Haas I, et al: Targeted temperature management for 48 vs 24 hours and neurologic outcome after out-of-hospital cardiac arrest: a randomized clinical trial. *JAMA* 318: 341, 2017. [PMID: 28742911]
- Arrich J, Holzer M, Havel C, Müllner M, Herkner H: Hypothermia for neuroprotection in adults after cardiopulmonary resuscitation. *Cochrane Database Syst Rev* 2: CD004128, 2016. [PMID: 26878327]
- Jesus JE, Geideman JM, Venkat A, et al: Physician orders for life-sustaining treatment and emergency medicine: ethical considerations, legal issues, and emerging trends. *Ann Emerg Med* 64: 140, 2014. [PMID: 24743101]
- Marco CA, Schears RM: Prehospital resuscitation practices: a survey of prehospital providers. *J Emerg Med* 24: 101, 2003. [PMID: 12554050]
- Mirarchi FL, Costello E, Puller J, Cooney T, Kottkamp N: TRIAD III: nationwide assessment of living wills and do not resuscitate orders. *J Emerg Med* 42: 511, 2012. [PMID: 22100496]
- Rao JK, Anderson LA, Lin F-C, Laux JP: Completion of advance directives among U.S. consumers. *Am J Prev Med* 46: 65, 2014. [PMID: 24355673]
- Reuter PG, Agostinucci JM, Bertrand P, et al: Prevalence of advance directives and impact on advanced life support in out-of-hospital cardiac arrest victims. *Resuscitation* 116: 105, 2017. [PMID: 28323081]
- Taylor DM, Ugoni AM, Cameron PA, et al: Advance directives and emergency department patients: owners rates and perceptions of use. *Intern Med J* 33: 586, 2003.
- Schneiderman LJ, Jecker NS, Jonsen AR: Medical futility: its meaning and ethical implications. *Ann Intern Med* 112: 949, 1990. [PMID: 2187394]
- Council on Ethical and Judicial Affairs, American Medical Association: Guidelines for the appropriate use of do-not-resuscitate orders. *JAMA* 265: 1868, 1991. [PMID: 2005737]
- Morrison LJ, Verbeek PR, Zhan C, Kiss A, Allan KS: Validation of a universal prehospital termination of resuscitation clinical prediction rule for advanced and basic life support providers. *Resuscitation* 80: 324, 2009. [PMID: 19150167]
- Sasson C, Hegg AJ, Macy M, Park A, Kellermann A, McNally B: Prehospital termination of resuscitation in cases of refractory out-of-hospital cardiac arrest. *JAMA* 300: 1432, 2008. [PMID: 18812534]
- Richman PB, Vadeboncoeur TF, Chikani V, Clark L, Bobrow BJ: Independent evaluation of an out-of-hospital termination of resuscitation (TOR) clinical decision rule. *Acad Emerg Med* 15: 517, 2008. [PMID: 18616436]
- Ruygrok ML, Bynny RL, Haukoos JS: Validation of 3 termination of resuscitation criteria for good neurologic survival after out-of-hospital cardiac arrest. *Ann Emerg Med* 54: 239, 2009. [PMID: 19157652]
- Morrison LJ, Eby D, Veigas PV, et al: Implementation trial of the basic life support termination of resuscitation rule: reducing the transport of futile out-of-hospital cardiac arrests. *Resuscitation* 85: 486, 2014. [PMID: 24361458]
- Jordan MR, O'Keefe ME, Weiss D, Cubberley CW, MacLean CD, Wolfson DL: Implementation of the universal BLS termination of resuscitation rule in a rural EMS system. *Resuscitation* 118: 75, 2017. [PMID: 28713042]
- Morrison LJ, Kierzek G, Diekema DS, et al: Part 3: ethics: 2010 American Heart Association Guidelines for Cardiopulmonary Resuscitation and Emergency Cardiovascular Care. *Circulation* 122(Suppl 3): S665, 2010. [PMID: 20956219]
- Millin MG, Khandker SR, Malki A: Termination of resuscitation of nontraumatic cardiopulmonary arrest: resource document for the National Association of EMS Physicians position statement. *Prehospital Emergency Care* 15: 547, 2011. [PMID: 21843074]
- https://www.acep.org/Clinical—Practice-Management/Ethical-Issues-of-Resuscitation/?__taxonomyid=471106 (The American College of Emergency Physicians: Ethical issues of resuscitation.) Accessed September 5, 2017.
- Critchell CD, Marik PE: Should family members be present during cardiopulmonary resuscitation? A review of the literature. *Am J Hosp Palliat Care* 24: 311, 2007. [PMID: 17895495]
- Jabre P, Belpomme V, Azoulay E, et al: Family presence during cardiopulmonary resuscitation. *N Engl J Med* 368: 1008, 2013. [PMID: 23484827]
- Morrison LJ, Kierzek G, Diekema DS, et al: Part 3: ethics: 2010 American Heart Association Guidelines for Cardiopulmonary Resuscitation and Emergency Cardiovascular Care. *Circulation* 122(Suppl 3): S665, 2010. [PMID: 20956219]
- Mortelmans LJ, Van Broeckhoven V, Van Boxtael S, et al: Patients' and relatives' view on witnessed resuscitation in the emergency department: a prospective study. *Eur J Emerg Med* 17: 203, 2010. [PMID: 19734795]
- Hodge AN, Marshall AP: Family presence during resuscitation and invasive procedures. *Collegian* 16: 101, 2009. [PMID: 19831143]
- Doolin CT, Quinn LD, Bryant LG, Lyons AA, Kleinpell RM: Family presence during cardiopulmonary resuscitation: using evidence-based knowledge to guide the advanced practice nurse in developing formal policy and practice guidelines. *J Am Acad Nurse Pract* 23: 8, 2011. [PMID: 21208329]
- Itzhaki M, Bar-Tal Y, Barnoy S: Reactions of staff members and lay people to family presence during resuscitation: the effects of visible bleeding, resuscitation outcome, and gender. *J Adv Nurs* 68: 1967, 2012. [PMID: 22122510]
- Vincent C, Lederman Z: Family presence during resuscitation: extending ethical norms from paediatrics to adults. *J Med Ethics* 43: 676, 2017. [PMID: 28232392]
- Bossaert LL, Perkins GD, Askitopouloud H, et al: European Resuscitation Council Guidelines for Resuscitation 2015. Section 11. The ethics of resuscitation and end-of-life decisions. *Resuscitation* 95: 302, 2015. [PMID: 26477419]
- Iserson KV: Law versus life: the ethical imperative to practice and teach using the newly dead emergency department patient. *Ann Emerg Med* 25: 91, 1995. [PMID: 7802378]
- Goldblatt AD: Don't ask, don't tell: practicing minimally invasive resuscitative techniques on the newly dead. *Ann Emerg Med* 25: 86, 1995. [PMID: 7802376]
- Schmidt TA, Abbott JT, Geideman JM, et al: Ethics seminars: the ethical debate on practicing procedures on the newly dead. *Acad Emerg Med* 11: 962, 2004. [PMID: 15347547]
- Berger JT, Rosner F, Cassell EJ: Ethics of practicing medical procedures on newly dead and nearly dead patients. *J Gen Intern Med* 17: 774, 2002. [PMID: 12390553]
- U.S. Department of Health and Human Services, Food and Drug Administration: Protection of human subjects; informed consent and waiver of informed consent requirements in certain emergency research: Final rules. *Fed Reg* 96-24968, September 26, 1996.
- <https://www.acep.org/Clinical-Practice-Management/Ethical-Issues-at-the-End-of-Life/> (American College of Emergency Physicians policy statement: Ethical Issues at the End of Life. American College of Emergency Physicians, Dallas, Texas, Reaffirmed and approved by the ACEP Board of Directors April 2014.) Accessed July 3, 2017.