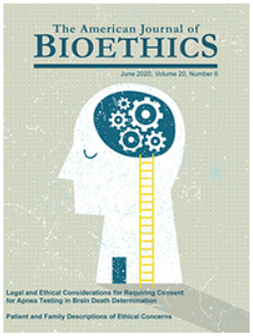

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Organization. *Intensive Care Medicine* 40(6): 788–797. doi: 10.1007/s00134-014-3242-7.
Tawil, I., L. H. Brown, D. Comfort, et al. 2014. Family presence during brain death evaluation: A randomized controlled trial. *Critical Care Medicine* 42(4): 934–942. doi: 10.1097/CCM.0000000000000102.
Uniform Determination of Death Act (UDDA). 2008. 12A Uniform Laws Annotated 777. http://www.uniformlaws.org/Act
Veatch, R., and L. Ross. 2016. *Defining death: The case for choice*. Washington: Georgetown University Press.
Wijdicks, E. F., P. N. Varelas, G. S. Gronseth, and D. M. Greer. 2010. Evidence-based guideline update: Determining brain death in adults: Report of the Quality Standards Subcommittee of the American Academy of Neurology. *Neurology* 74(23): 1911–1918. doi: 10.1212/WNL.0b013e3181e242a8.

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OPEN PEER COMMENTARIES

Informed Consent for Apnea Testing: Meeting the Standard of Care

Brian Michael Jackson

University of Colorado

In their article, Berkowitz and Garrett (2020) argue that it is ethically and legally mandatory for physicians to obtain informed consent prior to performing an apnea test. They argue that without informed consent from a legally authorized representative, apnea testing is battery and therefore legally and ethically impermissible. In this essay, I argue that their conclusion that informed consent is required is correct, but that the basis for this premise derives from a standard of care framework rather than a battery framework.

The principle of informed consent is classically defined as "authorization of an activity based on an understanding of what the activity entails and in the absence of control by others" (Grady 2015). Berkowitz and Garrett describe a range of clinical actions and their associated risks that range from very low risk procedures to much higher risk procedures. They argue that the formality and level of detail of the consent process extends along the same spectrum. Finally, they claim that apnea testing is on the high-risk/detailed consent end of the spectrum.

Apnea testing involves discontinuing the support of a mechanical ventilator in order to determine if a patient is able to initiate spontaneous breathing (Wijdicks et al. 2010). As the primary driver of the urge to breathe is the partial pressure of carbon dioxide ($PaCO_2$) dissolved in the blood, a patient with intact brainstem function will attempt to breathe as the $PaCO_2$ rises. Therefore, the absence of breathing with an elevated $PaCO_2$ is indicative of loss of the brain's normal drive to breathe. Importantly, an elevated $PaCO_2$ and its accompanying acidosis can cause other medical problems including arrythmias, hypotension, and increased cerebral blood flow causing a rise in intracranial pressure. All of these conditions have the potential to worsen brain injury and even to cause brain death where it did not previously exist.

Berkowitz and Garrett conclude that because these potential complications can occur during apnea testing, the apnea test can cause injury to patients and therefore is a high-risk procedure requiring a formalized consent process. This conclusion does not follow from its warrant. The cause of any potential brain injury resulting from an elevated $PaCO_2$ is not the apnea test; rather it is the brain injury itself. Imagine a person who has just been in a car accident and has a severe traumatic brain injury. A paramedic arrives on scene, but chooses not to provide bag-valve-mask ventilation because she is tending to another patient with less severe injuries. We do not conclude that the brain injury patient's subsequent cardiac arrest was caused by lack of ventilation from the paramedic; instead, we conclude that the brain injury caused apnea which in turn led to cardiac arrest. We may

CONTACT Brian Michael Jackson brian.jackson@childrenscolorado.org Department of Pediatrics, Section of Pediatric Critical Care, University of Colorado, Aurora, CO, USA.

conclude that the paramedic breached the standard of care by not ventilating her patient appropriately, but it would be absurd to conclude that she committed battery by failing to act to prevent harm.

Some may argue that because a patient is already receiving mechanical ventilation, any alteration to that ventilation is an affirmative act that requires informed consent. In ethics and in law, we have long claimed that withholding and withdrawing of life sustaining treatment have identical significance(AMA Council on Ethics and Judiciary Affairs 2013). Returning to our paramedic on the side of the road, if she had begun ventilating the patient and then stopped (for any reason) and the patient died, we may conclude that she unethically and illegally abandoned her patient or breached the standard of care, but we would not base that conclusion on the lack of informed consent and we would still conclude that the cause of death was traumatic brain injury, not injury caused by the paramedic.

If we fail to adhere to this principle, we risk confusing the action causing death across a spectrum of cases. Perhaps most concerningly, if we accepted that discontinuing a life sustaining treatment is causative of death, we undermine much of the work that has been done in palliative care where the illness is seen as the underlying cause of death (Ackermann 2000). We explicitly distinguish between a withdrawal of treatment that sustains life (where the physician takes no step to cause death, but neither does she take steps to prevent it) and euthanasia (where the physician takes an active step to end life) (Welie and ten Have 2014). A patient who elects withdrawal of life sustaining treatment does give informed consent, but that consent does not change how we view causality. Seen this way, viewing the apnea test as the cause of death is mistaken and therefore the idea of calling an apnea test a form of battery is incorrect.

A better way to look at the idea of informed consent for apnea testing is through the lens of medical malpractice and a breach in the standard of care. For medical malpractice to exist, four elements must be present: (1) a duty to care for the patient; (2) a breach in the standard of care; (3) harm to the patient; and (4) a causal link between the breach in the standard of care and the harm to the patient (Moffett and Moore 2011). We have already established that an ICU physician has a duty to care for her patient and that there is potential harm that is causally linked to the rise in $PaCO_2$ during the apnea test. The question, then, is whether a physician's decision to pursue an apnea test is a breach in the standard of care.

The term "standard of care" is not consistently defined in ethics or in law, but it generally refers to the provision of "minimally competent care" to a patient. A breach in the standard of care can be either active (intentional wrong doing or battery) or passive (negligence). Negligence can "occur though the failure to supply the patient or authorized surrogate with the information necessary to make a truly informed, voluntary choice…" (Kapp 2009). Clinical practice guidelines for brain death acknowledge the risk of complications during apnea testing, and it is reasonable to assume that a "minimally competent" intensive care physician would be familiar with these risks (Wijdicks et al. 2010).

Meeting the standard of care does not imply that no harm will come to a patient. An oncologist who discusses the risks and benefits of chemotherapy with a patient and whose patient decides to not pursue chemotherapy has not breached the standard of care if the patient dies. The key is that part of the standard of care is disclosing what harm may come from the disease if a treatment is not given. This same standard applies to the apnea test wherein a physician should disclose what the underlying disease could do during the apnea test, but the physician does not cause the harm by performing the test. Failure to disclose the risk that stopping treatment (even for a brief period during apnea testing) could result in disease progression constitutes negligence which is a breach in the standard of care.

Finally, the standard of care cannot be defined in isolation from a patient's goals and values. A "minimally competent" physician would provide different care to a patient who desires extension of life than to a patient who emphasizes quality of life. This shared decision making is encompassed within the definition of the standard of care and is included in professional care guidelines (Kon et al. 2016). A physician should obtain informed consent as part of the shared decision-making process with the surrogate decision maker to ensure that apnea testing is meeting the goals of treatment and thus within the standard of care. A physician who makes the decision to proceed with apnea testing without shared decision making is responsible, ethically and legally, for harm that comes to the patient as a result of the test because she has failed to meet the standard of care.

In conclusion, I agree with Berkowitz and Garrett that physicians should not proceed with apnea testing unless the patient's decision-making surrogate has given informed consent. The basis for this claim, though, comes not from the physician's actively

causing harm to the patient but rather from failing to disclose the harm that can come from withholding life sustaining treatment, even for a brief period. Recognizing this distinction between actively causing harm and passively allowing harm is important so that physicians and patients can have a consistent understanding of continuing and withholding treatments near the end of life.

DISCLOSURE STATEMENT

No potential conflict of interest was reported by the author(s).

REFERENCES

Ackermann, R. J. 2000. Withholding and withdrawing life-sustaining treatment. *American Family Physician* 62(7): 1555–1560, 1562, 1564.

AMA Council on Ethics and Judiciary Affairs. 2013. Opinion 2.20–withholding or withdrawing life-sustaining medical treatment. *Virtual Mentor* 13(12): 1038–1040.

Berkowitz, I., and J. Garrett. 2020. Legal and ethical considerations for requiring consent for apnea testing in brain death determination. *The American Journal of Bioethics* 20(6): 4–16.

Grady, C. 2015. Enduring and emerging challenges of informed consent. *New England Journal of Medicine* 372(9): 855–862. doi: 10.1056/NEJMra1411250.

Kapp, M. B. 2009. The interface of law and medical ethics in medical intensive care. *Chest* 136 (3):904–909. doi: 10.1378/chest.09-0037.

Kon, A. A., J. E. Davidson, W. Morrison, M. Danis, and D. B. White. 2016. Shared decision making in ICUs. *Critical Care Medicine and Medicine* 44(1): 188–201. doi: 10.1097/CCM.0000000000001396.

Moffett, P., and G. Moore. 2011. The standard of care: Legal history and definitions: The bad and good news. *The Western Journal of Emergency Medicine* 12(1): 109–112.

Welie, J. V. M., and H. A. M. J. ten Have. 2014. The ethics of forgoing life-sustaining treatment: Theoretical considerations and clinical decision making. *Multidisciplinary Respiratory Medicine* 9 (1): 14. doi: 10.1186/2049-6958-9-14.

Wijdicks, E. F. M., P. N. Varelas, G. S. Gronseth, and D. M. Greer. 2010. Evidence-based guideline update: Determining brain death in adults. *Neurology* 74 (23): 1911–1918. doi: 10.1212/WNL.0b013e3181e242a8.