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SPECIAL CONTRIBUTION

Donation After Cardiac Death and the Emergency Department: Ethical Issues

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Abstract

Organ donation after cardiac death (DCD) is increasingly considered as an option to address the shortage of organs available for transplantation, both in the United States and worldwide. The procedures for DCD differ from procedures for donation after brain death and are likely less familiar to emergency physicians (EPs), even as this process is increasingly involving emergency departments (EDs). This article explores the ED operational and ethical issues surrounding this procedure.

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The number of people waiting for organ transplants grows every year.[1] Donation after cardiac death (DCD; also called non–heart-beating organ donation or donation after cardiac or circulatory determination of death) has recently been proposed as a strategy to increase the pool of available organs. In DCD, organs come from donors who have died from cardiac arrest rather than from patients who are brain-dead but have heartbeats, as in the typical organ donation.

Although DCD has yet to be widely adopted in the United States, it is gaining traction and will likely become more widespread in the near future. The Institute of Medicine has strongly endorsed DCD as a means to increase the donor pool[1] and many hospitals have begun instituting protocols to identify DCD donors among their patients. Indeed, since 2007, The Joint Commission has required all hospitals to have DCD protocols for inpatients if they have facilities to implement them.[2,3] This mandate has not yet been fully implemented,[3] but it is only a matter of time until DCD protocols are in place, where relevant, throughout the United States.

As DCD protocols become more widespread, interest has been rising in protocols that extend DCD to patients who die in the field or emergency department (ED). Several European health care systems have implemented protocols to allow DCD in both of these settings, and some U.S. cities have piloted similar protocols.[4–8] Although emergency physicians (EPs) will likely have little involvement with inpatient DCD protocols and cases, these extended protocols directly involve EPs. Indeed, EPs will likely lead the way in implementing these protocols and even determining how widespread and accepted they are.

Given the leadership role emergency medicine will play in this process, it is essential that EPs become familiar with DCD protocols. In particular, as decision-makers, they must be familiar with the many novel ethical questions DCD protocols raise, both in general and specifically in the field and ED. The purpose of this article is to provide the necessary technical background regarding DCD and then present a comprehensive overview of the ethical issues involved. First, we review the potential contribution DCD may make to the shortage of transplantable organs and the experience of various emergency medical services (EMS) systems implementing DCD protocols. We then describe the various DCD processes. Finally, we discuss the ethical challenges raised by DCD protocols, both those that are raised by DCD protocols in general and those specific to DCD implemented in the ED. Our review and analysis will help prepare EPs to address the ethical challenges they will face both in determining where and how prehospital and ED DCD protocols should be implemented and in caring for such patients when they are encountered.

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THE NEED FOR MORE ORGANS AND THE ROLE OF THE ED

As of June 2013, over 118,000 people awaited organ transplants in the United States.[9] Yet, just over 25,500 organ transplants were performed during 2011 from a little over 14,000 donors.[9] This disparity between organ supply and demand continues to grow.[1]

Although only around 5% of all organs donated in the United States come from donors after cardiac death,[10] it is estimated that over 20,000 patients each year in the United States who suffer out-of-hospital cardiac arrest may be eligible to donate under DCD protocols.[1] Given that only 10,000 to 15,000 donors annually are eligible under neurological criteria in the United States,[1] out-of-hospital DCD protocols could more than double the number of potential donors. Furthermore, such estimates do not include patients in whom life support is removed in the ED or hospital; these patients may be eligible to donate as well and further augment the ED's role in organ procurement through DCD.

EXPERIENCES WITH DCD INVOLVING THE ED AND EMS

Several hospitals and EMS systems in the United States and Europe have developed ED- or EMS-based DCD protocols. One U.K. group studied the potential donor generation from DCD in EDs. Over a 5-year period in an ED averaging 100,000 visits a year, they found only 49 patients who had terminal withdrawal of life support, only 14 of whom would have been eligible for DCD.[4] Several other locales have developed out-of-hospital arrest DCD protocols. A recent pilot project in New York City yielded no donors after a 6-month trial period.[5] A similar project in Pittsburgh likewise identified no DCD donors.[5] These experiences seem to indicate limited utility for DCD protocols involving out-of-hospital cardiac arrest.

However, other data suggest greater potential benefit. In the late 1990s, Washington Hospital Center implemented a protocol to retrieve organs from patients who suffered fatal trauma.[6] Over a 3-year period, this group obtained organs from 19 donors. During the same period, 27 patients became organ donors after brain death in that hospital.[11] Thus, similar numbers of donors came from the out-of-hospital DCD protocol as from donation after brain death. The most extensive experience with DCD in the ED has been in Madrid, Spain. Since 1996, all patients who suffer out-of-hospital cardiac arrest and do not respond to resuscitation in the field have been transported to a central transplant center for potential organ retrieval.[7] In the first 3 years of the protocol, 53 donors were identified, accounting for 42% of the deceased donors in the transplant center.[12] In a more recent 4-year period, the protocol identified 96 donors.[7] Currently, the program retrieves organs from approximately 75 donors a year (A. A. Mateos Rodriguez, personal communication, February 10, 2012). A group in Paris has recently implemented a similar protocol and identified 27 donors over a 17-month period.[8] It is possible that other groups have instituted similar protocols, but have not published their experiences.

CATEGORIZING DCD PATIENTS

Potential DCD donors can be divided into categories according to the clinical circumstances of presentation. The most commonly used classification schema is the Maastricht classification. It has four categories. Category I patients present dead on arrival and do not have any attempted resuscitation, category II patients have undergone unsuccessful resuscitation, category III patients are awaiting cardiac arrest (usually as a result of planned discontinuation of life support), and category IV patients are critically ill and experience unexpected cardiac arrest.[13,14] More recently, a fifth category has been introduced,[14] but the original four-category system is still more commonly used.

These four categories can be divided into two simpler groupings. Cases that fall into category III, where cardiac arrest takes place in a controlled manner and the organ retrieval can be planned, are referred to as controlled DCD. Classes I, II, and IV, in which donors have already suffered cardiac arrest when organ retrieval is considered, are referred to as uncontrolled DCD. Each of these groups present their own characteristic technical and ethical challenges, and it is therefore most common to discuss issues in DCD as relating to controlled or uncontrolled donation, rather than to a given Maastricht category.

THE DCD PROCESS

While institutional DCD protocols vary widely, there are sufficient commonalities to allow for a general overview. Controlled donations are the most straightforward. These patients are usually in intensive care units (ICUs) pending terminal extubation. After the medical team and family have discussed prognosis and created a withdrawal of care plan, donation may be considered. If the patient is an appropriate donor candidate and consent is obtained, the procurement procedure begins. Even after the organ procurement team has become involved, the prospective donor is provided with palliative care as needed.[15,16]

Once the decision to procure organs has been made, but prior to extubation, heparin is often infused to minimize thrombotic risk to the organs. Phentolamine, and, on occasion, vasopressors, may also be administered at this stage. At the appropriate time, usually in the operating room, but sometimes in the ICU,[17] the potential donor is extubated and the patient's treating physician (not a member of the transplant team) assesses for cessation of cardiac activity as confirmed by cardiac monitor. Once the heart stops, this physician waits 2 to 5 minutes prior to pronouncing the patient dead (the interval necessary is controversial, but is meant to preclude the possibility of autoresuscitation of cardiopulmonary function). Notably, if cardiac activity does not cease within a specified time (usually 1 to 2 hours), the patient is returned to the ICU for terminal care.[18]

Once death is declared, the procurement team begins all relevant processes to maximize the quality and quantity of organs that can be obtained. One particular technique for organ preservation in potential DCD donors worth mentioning, especially as it may begin prior to the

declaration of death, is extracorporeal membrane oxygenation (ECMO). In donors who are brain-dead, the heart continues to perfuse the organs to be transplanted until they are removed. However, in DCD protocols, by definition, the heart is not pumping once the procurement process has begun. Therefore, DCD organs sustain some ischemic insult prior to retrieval, when they can be cooled. This "warm ischemic time" affects organ quality. ECMO circulates blood to the transplantable organs, thus limiting the warm ischemic time. A typical protocol for ECMO in controlled DCD involves an ECMO team inserting large-bore central catheters into the prospective donor prior to the cessation of cardiac activity. Once the requisite 2 to 5 minutes have elapsed after the heart stops, a balloon on the catheter is inflated to occlude the thoracic aorta and prevent cardiac reanimation and cerebral perfusion, and ECMO is initiated. Once the abdomen is opened surgically and organ preservation solution is introduced, ECMO is discontinued.[18]

Uncontrolled DCD proceeds in a less structured manner, in part because the process usually begins in the field. In the simplest prehospital protocol, after death is declared per usual standards, paramedics continue cardiopulmonary resuscitation (CPR) to continue perfusing the organs while the patient is transported to a transplant center. Simultaneously, surrogate consent for organ donation (if necessary) is obtained. Once in the hospital, cessation of cardiac activity is confirmed and the waiting period of 2 to 5 minutes commences, after which point the patient is taken to the operating room for organ retrieval.[19] Another variant, used in New York City, has two paramedic teams arrive for out-of-hospital cardiac arrests. The first team attempts resuscitation, ignoring the organ preservation interests of the second team. Once resuscitation efforts have been judged a failure and death is declared (and, in New York, consent obtained), the second team acts to preserve organ viability through specialized interventions such as heparin infusion, ECMO, and advanced CPR techniques. This team also coordinates with the organ retrieval team at the hospital.[20]

ETHICAL BENEFITS OF DCD

Supporters of DCD note several benefits of DCD protocols as weighing in favor of the process. First, they note that allowing DCD will increase the pool of donors and will thereby save lives.[1] Second, DCD protocols will allow providers to honor the wishes of patients who had previously indicated a desire to donate, but would not be eligible to be donors under brain-death criteria.[21,22] Finally, argue supporters of DCD, such protocols allow the health care team to honor the wishes not only of patients, but also of family members who would like to donate the organs of their loved ones.[22,23] Because relatives of the deceased may derive comfort from knowing that their relatives became organ donors, there is ethical value in facilitating this process.

ETHICAL CONCERNS REGARDING CONTROLLED DCD

Without discounting these benefits of DCD, commentators have raised two primary sets of ethical objections to controlled DCD. The first concern relates to the interventions carried out on potential DCD donors before life support is terminated. As noted above, prospective donors often have various medications administered antemortem to improve the viability of the organs. Furthermore, in ECMO-assisted DCD, vascular cannulas may be placed as well. Each of these interventions has the potential to cause harm to the patient (who has not yet been declared dead) and none are for their (direct) benefit. This potential for harm raises two concerns. First, it appears to violate the principle of nonmaleficence by causing harm to the patient, or at least exposing the patient to potential harm, with no corresponding benefit.[21,24,25] Second, it appears to violate our obligation to act only in our patients' interests and not those of another (in this case, a potential recipient).[22] Because of these issues, some have suggested that any antemortem intervention not for the benefit of the patient is forbidden.[1,24] A related critique argues that antemortem interventions that are of no direct benefit to the patient violate the intrinsic dignity of human life. The dying, but not yet dead, patient is treated as a means for someone else's benefit, as a thing, instead of as a person who is an independent source of value.

There are several responses made to these challenges. First, many argue that the concern that we may be harming the patient can be overcome with adequate informed consent. If the patient (or surrogate) has understood and consented to these interventions, they are permissible.[1,26] Related to this is the argument that autonomy trumps nonmaleficence, at least in this context. If a patient wants to be an organ donor, we best fulfill our obligation to honor his or her autonomy by maximizing the chances that donations will be successful, even if there has been no explicit consent to ante mortem interventions.[24,26,27] A third line of argumentation asserts that there is no evidence that antemortem interventions, at least via medications, harm the patient, and therefore these objections are misplaced.[1,24]

A further response to these concerns is based on the doctrine of double effect. This doctrine, often used in medical ethics, has several formulations. One way to put it is that an action that has both good and bad effects, such as administering morphine to a terminally ill patient, which can both relieve pain and hasten death, may be permissible if four conditions are met: 1) the act is not itself immoral—it may be good, but is at least indifferent; 2) the intent in performing the act is only the good effect, although the bad effect may be foreseen; 3) the bad effect must not be a means to the good effect; and 4) the act is performed for an adequately serious reason.[25]

Our antemortem interventions would seem to meet these conditions and thus be permissible based on well-accepted ethical principles.[22,25,28] Nonetheless, some have argued that since the benefits of the intervention do not accrue to the patient who is being harmed, as they do in most other cases where the doctrine is applied, we cannot use this principle to justify harming our patient in these circumstances.[23,24,29]

The final response to concerns about antemortem interventions, in particular to the worry that providers are not acting in their patients' interests, is that we

should not take too narrow a view of patients' interests. As we noted earlier, if a patient wants to become a donor, then facilitating this can be in his or her interests just as much as extending his or her life, and thus we need not worry that in doing so we are acting solely in the interests of someone other than our patient.[22]

The second significant ethical concern with controlled DCD, beside the concern about antemortem interventions, is that controlled DCD violates the dead-donor rule. This rule, which states that organ retrieval cannot cause death, is "the ethical linchpin of a voluntary system of organ donation, and helps maintain public trust in the organ procurement system."[23] It may not be immediately obvious how controlled DCD would violate this rule, as organs are not removed until after death is declared. The concern, however, arises from the way death is declared in these cases.

The generally accepted legal definition of cardiopulmonary death, based on the Uniform Declaration of Death Act (UDDA),[30] requires that cardiopulmonary function be "irreversibly" lost. To meet this criterion, most DCD protocols require 2 to 5 minutes to elapse after asystole before declaring death. This interval was designed to assure that the patient is past the point where the heart could restart itself,[1,31] and the impossibility of such autoresuscitation is taken to equal irreversibility

This process for declaring death may run afoul of the dead-donor rule in two ways. First, some claim that the data do not support the claim that auto-resuscitation cannot occur after 5 minutes,[1,13,31–33] let alone after 2 minutes. Indeed, there may be affirmative reports of autoresuscitations after 5 minutes.[34,35]

However, even if one accepts that autoresuscitation does not occur after 2 to 5 minutes, equating the impossibility of autoresuscitation with irreversible loss of cardiopulmonary function may be problematic, for it is clear that circulatory and pulmonary function can return after more than 5 minutes of asystole, as resuscitation efforts are sometimes successful even if started after more than 5 minutes of asystole. It therefore is not true that a potential donor meets the irreversibility criterion of the UDDA after a 5-minute delay.[35,36] Only once the organs have been removed does the loss of cardiopulmonary function become irreversible in most of these patients. Therefore, organ retrieval indeed appears to have killed these patients, in violation of the dead-donor rule.

Several responses to this challenge have been raised. The first is to say irreversibility should not be so strictly construed. Given that a decision has already been made not to resuscitate these patients, once the time frame for autoresuscitation has passed, they will in fact never regain circulation and thus are permanently dead. This permanence, it is argued, is functionally equivalent to irreversibility.[1,23,37,38] A second response is that although these patients do not meet the UDDA requirements, it is reasonable to consider these patients dead, as the UDDA is flawed[39] or should not be construed so strictly, given the unforeseeable advances in medical technology that have taken place since the UDDA was adopted in 1981.[40] The third and most radical response suggests eliminating the dead-donor rule.[41–43]

ETHICAL CONCERNS REGARDING UNCONTROLLED DCD

Uncontrolled DCD protocols avoid some of the ethical problems of controlled protocols, but generate some of their own. First, since uncontrolled DCD patients have already suffered cardiac arrest and failed resuscitative attempts before entering the protocol, there are no antemortem interventions. Furthermore, because these patients have failed resuscitative attempts, their cessation of circulatory function seems unequivocally irreversible.

However, uncontrolled DCD protocols raise their own problems about permanence, irreversibility, and the dead-donor rule. While it may be true that standard resuscitative techniques have failed, there is evidence that more aggressive techniques, albeit not ones that are generally used in resuscitation, such as ECMO, can resuscitate patients who have failed prolonged routine resuscitation.[44,45] In that case, we have not determined that the patient's resuscitation is irreversible, just that further resuscitation is impractical.[46] We have again potentially run afoul of the dead-donor rule, although the same responses as above may be given.

A second concern about uncontrolled DCD that does not arise in controlled DCD is one of conflict of interest. There is a concern that, although the possibility of organ transplantation is not supposed to have any effect on resuscitation attempts and the decision to declare death, those resuscitating the patient may not try as hard if they know that the patient's organs can be transplanted and, indeed, may be more valuable if the resuscitation is briefer.[21,47,48] The Institute of Medicine suggests that this problem be addressed by having two separate teams: one that attempts resuscitation and one that takes over only after failed resuscitation and deals with potential organ retrieval.[1] Although the New York City protocol has two separate teams,[20] this is not practical in all cases.[6] Furthermore, such a distinction does not prevent the resuscitating team from considering the value of further resuscitation versus potential transplantation.

A final problem with uncontrolled DCD protocols, at least in those countries like the United States that have "opt-in" systems of organ donation, is the question of consent. Who provides it and when? In cases of controlled DCD, the patient's surrogate, or in rare cases the patient, authorizes the process before it is begun. In uncontrolled DCD cases, by their nature as unplanned events, such prior authorization is impossible to obtain. If the patient is known to have filled out an organ donor card, this problem may be mitigated, as all of the uncontrolled DCD procedures may be considered carrying out the patient's previously expressed desire to donate. However, when the patient's donor status is unknown, some other rationale is needed for proceeding.[32] In the United States, at least, consent for transplantation will still likely be obtained from the appropriate surrogates, as was required by the New York City protocol.[30] However, consent is needed not only for the transplantation, but even for pretransplant organ preservation procedures, such as continued CPR or ECMO.[48] If the surrogate is not immediately available, the medical team

members have a difficult choice. Do they not start organ preservation and let the organs potentially go to "waste" (if consent would ultimately have been forthcoming) or proceed with organ preservation in the absence of consent?

The primary response to this set of problems is to rely on "presumed consent." We assume that that the patient would likely have wanted his or her organs saved and proceed under that assumption.[1,20] Such a weak form of consent is not considered adequate for organ donation, but may be adequate for short-term organ preservation interventions, which are (relatively) noninvasive. One concern about presumed consent is that even if it is in principle adequate, it relies on an empirical claim, that most people want to be donors, which is not obvious and has certainly not been substantiated. Therefore, when relying on presumed consent, it is important to have buy-in from the relevant community to provide a basis for the presumption.[32]

One important factor regarding the question of consent for uncontrolled DCD is that at the time decisions are made, the patient is dead. Therefore, the interests being protected are not as strong as those in usual questions of consent. There is no living patient whose autonomy must be respected. Thus, while the ethics (and law) of organ transplantation may require consent (in many countries), it may be appropriate for the type of consent obtained and its timing to be held to a different standard in uncontrolled DCD than is usual in clinical ethics.

ETHICAL CONCERNS REGARDING DCDS SPECIFIC TO THE ED

Emergency physicians may be called upon to participate in a hospital's controlled DCD protocol with very ill patients in the ED[4] and thus need to be familiar with controlled DCD. However, the most likely scenario in which EPs would become involved in DCD is through uncontrolled DCD, either with patients who are brought in from the field under such a protocol or with patients who fail ED resuscitation. Therefore, the EP is most likely to confront the challenges of uncontrolled DCD. Pre-DCD declarations of death in the ED will have all of the paradoxes regarding the dead-donor rule identified above and questions of who can consent will be the same. Likewise, EPs caring for potential uncontrolled DCD organ donors who have not yet been declared dead will face concerns regarding conflict of interest, especially as it will likely be impractical to have a second team designated to take over once death is declared.

However, there are some concerns that may arise that are more specific to protocols involving the ED. One such problem was identified as a practical concern for out-of-hospital DCD protocols, but on further consideration can be seen to be an ethical concern as well. In his review of the Washington, DC, experience, whose subjects were trauma victims, Light[11] notes that many of the subjects were victims of violence, and thus their cases involved the criminal justice system. He flags the coordination of DCD protocols with police work as a complication that needs to be resolved. However, the matter is not merely practical. Deciding when EMS should stop working with a potential donor and allow the police to begin their investigation has an ethical dimension as well. We must decide what types of patients' needs take precedence over society's need for law enforcement. It is clearly accepted that caring for a living victim has priority over preserving evidence and other police matters. But what of caring for a patient who is not there, i.e., the potential organ recipient? Preserving organs may be just as life-saving as treating a trauma victim. Does the precedence of EMS work over police work extend to these cases? Or do we say that when there is no identifiable patient before us to be saved, society's need for justice outweighs the potential medical benefits of organ preservation? Although the decision in this matter will likely be resolved by legislatures and courts rather than by ethicists, the question at hand is ultimately an ethical one of prioritizing societal values, a prioritization that has not yet been made.

A further ethical issue arises because most if not all of these patients are brought into the ED dead. Even in those protocols where death is not declared until the patient arrives in the ED, this is to some extent a formality, as the patient has already failed resuscitation in the field, and the transplant team may already have been notified.[12] Given that the patient is effectively, and possibly legally, dead on arrival at the ED, any involvement the EP has with the case will involve treating a cadaver and preserving organs, not treating a living patient. While it is true that all cases of organ donation reach a stage where physicians are caring for organs and not patients, outside the ED this is done either by physicians who were already caring for the patients before death, and can thus feel that they are continuing the care they began before death, or by physicians who are devoted to the transplant process. Only in the ED might physicians whose professional orientation is to care for living patients need to care for cadavers with whom they had no prior relationships. Some might consider being required to act as organ preservers an inappropriate diversion from the primary duty of EPs to treat patients who have arrived in the ED seeking their help. The problem will be all the more acute as uncontrolled DCD cases must be treated as a top priority to maximize organ viability. One solution to this problem, implemented in Spain, is not to have the EPs involved in these cases after death has been declared.[12] Rather, transplant teams take over immediately. This may not be practical, however, in cases where death has been declared in the field and there has not been sufficient notification of the hospital. Another potential solution is to bypass the ED altogether and have EMS bring potential uncontrolled DCD donors directly to the operating room and determine the potential for transplantation there.

Some physicians may object not only to caring for cadavers rather than patients, but also to being involved in the transplant process altogether. Certain cultural groups, such as some Orthodox Jews[49] and Shintos,[50,51] have strong aversions to tampering with dead bodies. Physicians from such groups may have entered emergency medicine expecting to be able to avoid situations in which they would need to interfere with cadavers or

be involved in processes that will lead to such interference. Although it is not clear that it would be practical to allow such physicians to refuse to take part in DCD protocols, and indeed, the number of such objecting EPs is likely to be small, the possibility of such moral objections should be anticipated.

Another objection EPs may have to DCD protocols, and which may be more widespread, is precisely the protocol-driven nature of DCD. There is little or no scope for professional decision-making; one simply follows the procedures to preserve the organs. Many physicians may feel that being asked to follow such a cookbook process undermines their professionalism, or shows that the procedures being carried out should be done by technicians and not physicians. Again, although this objection applies in principle in all transplant situations, it may be felt more strongly by EPs, and for the same reasons noted above regarding potential reluctance to treat cadavers. The best response here is that there is nothing unprofessional about helping preserve organs for transplantation, and if the best procedures for doing this have been worked out, then there is nothing unprofessional in deviating from them.

A further ethical matter is not one of potential conflict or objection, but of responsibility. Once EDs become engaged in DCD, all those involved have a strong obligation to act in such a way that no concerns are raised as to the propriety of the procedures. We saw above that uncontrolled DCD protocols can raise questions of conflict of interest and concerns that patients were not fully resuscitated before deciding to proceed with DCD. These concerns are real and can undermine communal acceptance of an extremely valuable, but new and unfamiliar, method of expanding the donor pool. A recent case in California, although not involving the ED, raised a much publicized accusation of hastening the death of a potential DCD donor.[52] The ED is the most publically accessible and visible part of the hospital and, as such, the potential for the medical team's behavior to be misunderstood is highest in the ED. The obligation to avoid misunderstandings is thus highest as well.

A related obligation is only to implement out-of-hospital uncontrolled DCD protocols with local community involvement. Although this is often done,[6,20] it does not always happen.[46] However, both to preserve support for uncontrolled DCD, as discussed above, and to assure that the community is comfortable with the questions noted above regarding the dead-donor rule and presumed consent, the community must be involved. Indeed, if the community does not provide adequate antecedent support for the project, it may be unethical to continue it in all but the most limited circumstances. As we saw, continuing organ preservation while waiting for consent relies on the presumed consent of the family in many circumstances. If the community has expressed its objection, then this consent may *not* be presumed. Nor would it be any more appropriate to avoid contacting the community than it would be to avoid asking an individual patient for consent to avoid the possibility that he or she would say no. A model for such community involvement can be found in the consultations that are required before research can receive emergency exception from informed consent.[53,54]

CONCLUSIONS

A shortage of transplantable organs is a significant problem in health care. Donation after cardiac death protocols represent a potential way to expand the donor pool that is currently being pursued, and the ED is one frontier in this expansion. The use of emergency medical services and the ED in donation after cardiac death protocols, however, is still in the earliest stages, and its parameters have yet to be set. Emergency physicians, therefore, have the opportunity and indeed the obligation to be local, national, and international leaders in the discussion about how, and to what extent, prehospital and ED donation after cardiac death should be implemented. For this conversation to occur, a firm understanding of the ethical issues involved is essential. The goal of this article has been to provide this understanding, so that this urgent conversation can proceed.

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