



The NEW ENGLAND JOURNAL of MEDICINE

PERSPECTIVE ROUNDTABLE

Organ Donation after Cardiac Death

Transcript

1. Introduction

Atul Gawande: Welcome to a Perspective Roundtable from the *New England Journal of Medicine*. I'm Atul Gawande, a staff surgeon at the Brigham and Women's Hospital in Boston and an associate professor at the Harvard Medical School and Harvard School of Public Health. In the August 14th issue of the *Journal*, Boucek and colleagues report on the three pediatric heart transplantations they did, using hearts donated following the declaration of death of three infants in Colorado.

These were dying infants who had severe neurological injuries but who did not meet the criteria for brain death. The parents in each case had requested withdrawal of life support and also given written informed consent for donation after the cardiac death of their child.

So 3 minutes after cardiac activity ceased in the first child, and only 75 seconds after it ceased in the second two children, the doctors declared death and removed the hearts for transplantation. These cases, then, raise some fundamental ethical questions.

And with me here to discuss these issues are Dr. Robert Truog, professor of medical ethics, anesthesiology, and pediatrics at Harvard Medical School and the coauthor of a current Perspective article on the dead donor rule; George Annas, a professor in the Department of Health Law, Bioethics and Human Rights at Boston University School of Public Health; and Arthur Caplan, a professor of bioethics at the University of Pennsylvania.

2. Criteria for Death

Professor Caplan, what is the dead donor rule?

Arthur Caplan: The dead donor rule says we take organs, vital organs, only from those who've been clearly, unequivocally pronounced dead. So nothing will happen in terms of procurement, requests, anything, until you've got a team that establishes death.

Atul Gawande: Dr. Truog, how, in your own hospital, and the way you've seen it done in other children's hospitals, do we know if a child is actually dead and eligible for transplant?

Robert Truog: The ways that children die where they can be organ donors traditionally has been through the brain death pathway, where, in children with devastating neurological injury, we examine them, to make sure that there's nothing that's potentially reversible, to make sure that they're comatose, that they're apneic. They have no brain-stem reflexes. And then we declare them dead while they are on the ventilator and the organs are still being perfused by blood from the heart.

Now, donation after cardiac death is relatively new in pediatrics. But this is where you wait until the heart has stopped for a certain period of time. There's been a lot of discussion about how long one has to wait after the heart stops before we say it is irreversible. And there has been a general consensus with very little data that needs to be somewhere between 2 and 5 minutes. The rationale for that's a little murky, frankly. The thing that people often cite is that we don't know of any hearts that have ever started on their own again after having stopped for 65 to 75 seconds.

But that's not to say that, if you try to restart the heart after 2 minutes, 3 minutes, even 5 minutes, that it couldn't be successful. And so, it calls into question what we mean by the word "irreversible," since the declaration of death requires the irreversible cessation of cardiac function. By "irreversible," do we mean that the heart could not be started again, in which case, 5 minutes may not be long enough? Or, by "irreversible," do we mean it's enough that we've simply chosen not to try to start the heart again, and that's the ethically relevant way of thinking about it?

3. Dying vs. Dead

Atul Gawande: Well, so this is where it cuts to the chase. Did these cases abide by the dead donor rule?

George Annas: Well, I think they did not. I think they're trying to change the dead donor rule by saying that, you know, historically, irreversible cessation of cardiac and respiratory function meant it's irreversible, that you can't reverse it. You can't try. So the argument is, well, if we're not going to do it, if the parents said "Don't reverse it," then it's irreversible. Of course it's not. It's a play on words.

Atul Gawande: The fact that you could bring the heart back here, in your mind, just because you could transplant it in another child successfully, meant that they were not dead in your mind.

George Annas: It's not just in my mind, it's — I think it's the law. And also, I think it's the most critical thing — and Arthur's pointed that out — is to distinguish dying people from dead people. We want to take care of dying people. Dying people are persons with Constitutional rights. Doctors have an obligation to take good care of them, right? So they don't suffer, at least? And not to kill them.

And dead people, who are not persons anymore, have no Constitutional rights, no rights at all, who can reasonably, with their own assent or with the assent of their parents be used as organ donors. And that's— that's always been the rule. Our question, the question that the Denver group raises is, should we change the rules?

4. Rethinking the Dead Donor Rule

Robert Truog: I think in my view, the whole discussion about whether they're dead or not is really to miss the point. And I think that these cases from Denver are very illustrative of the issue, because, you know, here you have three babies who are certainly going to die. You have their parents who are apparently highly motivated to donate their organs. You have three other babies whose only chance of survival is to be able to receive this gift.

It's a situation where, you know, all of the ethical vectors are kind of lined up in the right direction. I mean, I think that for many people looking at that, they'd say "It seems unethical not to allow this to happen. There's only good things that can come out of this." And yet we have the dead donor rule, which says that we can't remove these organs unless these babies are declared dead. And yet the problem is, is that the babies don't look very dead. In fact, everyone here is saying they're not dead.

And so I think that the solution to that has been exactly the wrong way to go. The solution that medicine and society have taken is to continue to tweak and manipulate the definition of death, so that we can progressively include different kinds of patients under that umbrella. And, you know, to me, it seems that that's the problem. And that, what we really ought to be going back to is, what's the patient's prognosis? What's the neurological condition? What are the preferences of the patient and the family? And we should respect those. And the dead donor rule, for all of its historical significance, really misses the point.

Atul Gawande: What you would suggest substituting is a mix of consent from a surrogate, most of the time, for you to have your organs donated when you've had loss of nearly all of the higher functions, loss of major ability to provide consciousness in the brain. But wouldn't that just be death by organ removal?

Robert Truog: Yes, it would be. But I think that there's two caveats that would be very important safeguards there. The first is a strong emphasis upon informed consent, and making sure that you have the permission of the patient, if possible, before their injury, or the appropriate surrogate, if not. And then, you know, you don't want people committing suicide to donate their organs if they're otherwise healthy. So you need to have safeguards, to make sure that this person has, for example, such devastating neurological injury that the loss of their vital organs is really no longer a harm to them.

And, under those circumstances, I think, actually, it's a much cleaner way to go, and avoids all of the crazy stuff that we're talking about, here, in terms of how do we diagnose death.

Atul Gawande: Professor Annas, can doing away with the dead donor rule allow us to keep more people who are on waiting lists from dying, or at least some of them, and have access to organs, if you follow something like what Dr. Truog is suggesting?

George Annas: Bob said "Well, they're going to die soon anyway." Maybe. But that doesn't mean we can go in and shoot them, for example, to take a pretty gross analogy. That would still be murder.

The question is whether they're alive now. And then the next question, what are their interests? Bob would argue they have no interest in their organs. Well, I think a lot of people would contest that. A lot of people think just keeping their baby alive another day is important.

And we did have this case years ago — the anencephalic baby. I mean, that's even a better case, if you'd say the baby never had a brain, never will have a brain, has zero chance to survive. Has a brain stem, which is why its heart is still beating. But we had couples — one famous couple in Florida went to court, saying — they demanded the right to donate the organs from their anencephalic newborn. And the court said, “No, it's not dead. You want to do that? That's fine. But you have to change the definition of death to include babies born without a higher brain, just a brain stem.” No state did that. We could do that. But we have never changed the definition of death. I think that Bob's wrong to think that we're playing around the margins of death. The definition, since the adoption of the brain-death definition as an alternative to circulatory and respiratory function, has never been changed. The question we're debating is whether it should be changed. And I think it's very dangerous to change it.

5. Public Trust

Arthur Caplan: The whole area of organ donation relies on the public trusting physicians, in that they believe they won't murder them or commit homicide. They won't hasten their deaths. We ought not underestimate public unease. I was in a room last night with people and asked them how many had donor cards. And then I asked the ones who said they didn't— and it was not the majority, but it was a significant minority— why not. And it's because they feared that they might have their lives shortened. And I think they were thinking about quality life. But nonetheless, the fear was there that they might be shuffled away too soon, because a celebrity, or a rich person, or someone who could pay more for these operations would get it. So that worry is out there. Making people wonder if you're going to cut corners on their care in order to salvage organs from them is a very dangerous area to be in. We might be able to do this if we confine what we're talking about to newborns. Start to take that into the adult population, I worry I'm going to lose organs.

Robert Truog: You know, I think having practiced critical care medicine, now, for 20 years, I think the strong concern that physicians may give up too early, that I might not get all the resources I need, is something that we have lived with, now, for decades. You know, 30 years ago, physicians were not willing to withdraw ventilators from patients in the ICU, because they felt that in doing so they would be killing the patient.

Today, we recognize that respecting the wishes of the patient and family is more important than those concerns about killing. In that way, I think that the discussion we're having now isn't really new.

6. Consent and Prognosis

I am arguing that the decision is not based upon the irreversibility of cardiac function. The ethical justification is consent and prognosis.

Arthur Caplan: So it seems to me, there, the difficulty in bringing this forward to the public is going to have to be, do you have the rock-solid evidence to be sure that the prognosis you are making is error-free?

Robert Truog: Sixty to 90% of deaths in the ICU follow the withdrawal of life-sustaining treatment, where doctors and families get together, and they say “What do you think the prognosis is here?” And then we will

decide, in those cases where we think it's not good enough, to take away the ventilator. And we'll start to give morphine so that, if there was a chance that the person was going to breathe, they're probably not going to breathe after they've gotten a fair amount of morphine. And that patient dies, amidst great uncertainty as to whether they might actually have been able to survive the ICU admission or not.

This is daily life in the ICU. What we're talking about with these small number of organ donors is a very small part of the spectrum, way off at one end, where no, the uncertainty does not go to zero. But it's at the edge of what we're dealing with all the time. So again, I'd come back to saying that there's nothing new going on here. The new thing is that there's, now, this conflict of interest, in that, when we're just withdrawing, in the ICU, without the option of organ donation, the only interest is the well-being of the patient. And presumably, we're doing it for that. And that's absolutely correct. We've now put a conflict of interest in, in that there's going to be organs coming out for the benefit of another. And that does introduce complexity.

Arthur Caplan: I think that what we're looking for here is a little bit of national standard-setting. Could we not get the kind of equivalent of the Harvard Brain Death Committee, not far from where we sat in 1968, the criteria and definition — totally reversible loss of all brain function — the criteria to establish it were laid out by a blue ribbon panel that had national standing. You could certainly expand that these days, I think, to take testimony or have people come and talk about their views on this.

But having an ethics committee do it, locally — and I hate to put it this way, but I'm going to — I think there's even some conflict of interest when ethics committees at children's hospitals that do transplants want to sort of set the standards on what the donors are.

Atul Gawande: Well, it's a curious place to come to, though, isn't it, that a community-based decision would not be acceptable, but a Harvard committee would be acceptable. I think the real test was that the Harvard committee had to be approved by the public because each state had to go one by one to change their laws. And when they changed their laws, it made transplantation possible.

7. Conclusions

Atul Gawande: Were they wrong in Denver to have pushed here against the limits of our definitions? Did they actually cross the line to violate law here?

George Annas: The law has always been you're dead when the doctor says you're dead, as long as he makes that decision following good and accepted medical practice.”

And it appears, at least, that the coroner was right there in the room. And the coroner does have the authority to make sure somebody is dead. So I don't think it's a legal question, in that sense. But it's certainly a heavy-duty ethical question, and a big medical practice question.

Atul Gawande: Bob and Art, do you feel that they were within bounds to have gone ahead with this protocol without seeking more than their own community consensus?

Robert Truog: We know that if they said “We’re not going to do this until there’s a national panel and we get approval,” that it’s never going to happen. And the way change happens in medicine is somebody goes out and does it. And I think, to that, I have no objections at all. And I think they’ve done us a service by bringing the issue forward.

Arthur Caplan: I think, in cardiac death pronouncement, like I was suggesting even with adults and resuscitation measures, there is a kind of collective decision. There’s some sense of professional judgment coming in that the effort has to be suspended. It may not be effectively understood by the public, but that’s why I’m not quite sure that we can’t sell this as they are dead, as pronounced, relative to some set of criteria, without modifying the dead donor rule.

Atul Gawande: Well, out of the discussion what comes is a glimmer of the possibility of public consensus, some clear wish for some stronger scientific evidence, however it could be gotten, to understand when you can bring people back and when you can’t, when they’re that sick. And also, a very provocative set of concerns that our dead donor rule still isn’t perfect.

I think these are, very clearly, crucially important questions about the precise limits that we in medicine must abide by. And so I want to thank our three panelists, Arthur Caplan of the University of Pennsylvania, Robert Truog of Harvard Medical School, George Annas of Boston University School of Public Health. For the *New England Journal of Medicine*, I am Atul Gawande.

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