

Waking the dead? Some things you should know about dying

August 9 2013, by Peter Saul



Cardiopulmonary resuscitation (CPR) prevents many deaths across the world, but it doesn't bring dead people back to life. Credit: NATO Training Mission-Afghanistan

Not content with saving lives, doctors are now credited with (accused of?) bringing the dead back to life. But how true are the stories we hear about people "coming back" from being dead and how does it work?

Here's a definition of death that gets to the heart of why this is all very

complicated:

Death: 1. The end of life. The cessation of life. (These common definitions of death ultimately depend upon the definition of life, upon which there is no consensus.)

Cardiopulmonary resuscitation (CPR), first popularised in the 1960s and widely taught to both [first responders](#) and the general public, prevents many deaths across the world.

But it doesn't bring dead people back to life. And the distinction is an important one.

The problem can be easily stated – death is a process, but is forced to be an event. Organisms die in a piecemeal manner, with the most vulnerable bits going quickest.

Some residual function can be found up to several hours past the point where the heart has stopped beating (though, contrary to myth, the [fingernails](#) do not continue to grow).

Why "when" is important

But there are cogent medical, legal and philosophical reasons for death to be considered an event.

Medically, there has to be a moment at which attempts to prolong life should cease (organ donation being a rare but important reason). Organ donation puts great pressure on doctors to define a moment of death. This is to honour the "dead [donor](#) rule", which states that only dead people can be donors.

Legally, time of death is important for determining who out-survived

whom, and thus how the deceased person's [possessions](#) will be distributed.

Philosophically, it appears, at least to some, that the categories "alive" and "dead" are to have no overlap. Consider this [from a research paper](#) about defining death:

If we regard death as a process, then either the process starts when the person is still living, which confuses the "process of death" with the process of dying, for we all regard someone who is dying as not yet dead, or the "process of death" starts when the person is no longer alive, which confuses death with the process of disintegration.

Hmmmm.

Now we have a problem: we need to know what death is, and we need irrefutable tests to prove it. How are we doing?

Kinds of death

Obviously, it all got much harder when laws were introduced that defined two distinct kinds of death – circulatory (traditional) death and the new kid on the block, brain death.

These laws were introduced in Australia in the early 1980s to legitimise brain death as a form of dying. This had the benefits of allowing treatment withdrawal and permitting organ donation without breaking the "dead donor rule".

Circulatory death is the "irreversible [cessation](#) of circulation of blood in the person's body", while brain death is the "[irreversible cessation of all function](#) of the person's brain".

Many researchers are scrambling to [unify these two definitions](#), by asserting that loss of circulation would inevitably cause irreversible cessation of all brain function.

But, given that we don't know how long the circulation has to stop before we can be confident that all brain function has stopped in all cases, it seems we are stuck with two definitions for now.

The operative word in each definition is irreversible. The reason why CPR, however prolonged and enhanced by new technologies, does not bring people back to life is that clearly the cessation of circulation and brain function are not irreversible.

So people who are "brought back to life" were, in retrospect, not dead in the first place.

Who is responsible?

But seemingly miraculous results from CPR do pose a serious challenge: how are we then to be certain that cessation of function is irreversible?

The law is steering clear of getting involved in Australia, and the decision is delegated to doctors. This was challenged in a legal case but the law, as it stands, was confirmed.

Irreversible loss of [brain function](#) does have a set of tests that appear extremely reliable, as long as they are properly conducted. And nobody declared brain dead in Australia has ever lived to tell the tale.

Irreversible loss of circulation is more difficult to certify, and has been brought into sharp focus by the re-introduction of [organ donation](#) after circulatory death, which demands both high certainty and an exact time of death.

Organ donation after circulatory [death](#) has become widespread in Australia over the past ten years as a response to the very low numbers of donors, and now accounts for about 25% of all donors.

What we know empirically is that a heart that has stopped will not spontaneously start again after quite a short time (so-called autoresuscitation).

So cessation of circulation is permanent, but is it irreversible? It is, but only in one context; a morally and medically defensible decision not to keep trying to reverse it.

Such decisions are commonplace in modern medical practice (the no-CPR or "Do Not Resuscitate" order), and have a history almost as long as CPR itself.

There are people who cannot be, should not be, or do not want to be resuscitated. For them, permanent loss of circulation is irreversible. For the rest – go for it!

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