Cardiopulmonary resuscitation is leading a double life: are we giving it an alibi?

When the Royal College of Physicians report *Talking about Dying: How to begin honest conversations about what lies ahead* was published in late 2018 (Bailey and Cogle, 2018), a seemingly unrelated BBC news story (BBC News, 2018) was causing significant debate on social media.

An 89-year-old woman had died at her home in Wales. An inquest heard that a community district nurse had attended her home, found her alive yet very unwell and had dialled the emergency services. She had initially been called to see Mrs P at her home because of ongoing and worsening health concerns. The district nurse recounted that the patient appeared frail and weak. The nurse initially called a GP, then phoned the emergency line and said assistance was needed urgently – within 4 hours. Within minutes of her call, the ambulance trust's clinical team called back to establish whether a faster response was required. However, by that time, Mrs P had died in the nurse's presence. The nurse did not perform cardiopulmonary resuscitation.

The health board said after the hearing that it had learned lessons from the case, and that its new guidance now meant that cardiopulmonary resuscitation should be performed in all cases, unless a 'do not resuscitate' request had previously been made. The coroner concluded that the woman's death was a result of natural causes after heart problems.

Commentators on social media, including patients and carers, were left wondering how we have arrived at this unsettling point, when a do not attempt cardiopulmonary resuscitation form, a 'code status', or advance care plan is required in all cases before, during and after a dying event, if such a death event is to remain undisturbed by the trappings of interventional medicine. How did she die?

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The nurse was called out, so presumably this woman had felt unwell and wanted help. One would assume that her deterioration escalated to a cardiac event such as a myocardial infarction or a pulmonary embolus. The result may have been a fatal rhythm leading to cardiac arrest or a rhythm compatible with a natural dying process, if she had been unwell and deteriorating for some time. So would cardiopulmonary resuscitation have added anything during the time the nurse attended? One might logically assume that the health board thinks it would, but others might see cardiopulmonary resuscitation in this situation as a needless attack on her body and her dignity.

A natural death

Natural dying is when the heart stops last, cardiac arrest is when the heart stops first. Cardiopulmonary resuscitation is not indicated for natural dying, but it is for cardiac arrests. But even in the context of cardiac arrest, the body requires a lot of resilience to return to life with cardiopulmonary resuscitation. Most older people with fragile health do not have such resilience (Ebell and Afonso, 2011).

The extreme physical sequences in cardiopulmonary resuscitation are mainly a way to bridge the time until electric shocks can be applied via a defibrillator. These shocks can sometimes flip a reversible terminal rhythm back to a normal rhythm, but the underlying problems remain the same and the cardiopulmonary resuscitation will have added new problems, like internal bleeding, fractured ribs or a damaged brain. For cardiopulmonary resuscitation to be successful, it often requires a patient already being in hospital, and even then success can be very limited.

The health board's conclusion and solution, of delivering the sequences involved in cardiopulmonary resuscitation by default in such situations where there is no prior refusal via a do not attempt cardiopulmonary resuscitation form, may seem logical to some: where paramedics, nurses or doctors arrive in a situation, say in the community, when a person's heart and breathing cannot be ascertained, there is just no time to lose if there is going to be any chance of survival. But looking at the successes and failures of cardiopulmonary resuscitation in more detail makes such blanket guidance look not just flawed, but also based on a fallacious and narrow-focussed logic.

A fallacy sequence that starts with the belief that cardiopulmonary resuscitation works well, based on fictional media narratives or success stories from in-hospital arrests, for instance in intensive care or coronary care units. A fallacy that continues with the notion that cardiopulmonary resuscitation is indicated in all cases – 'let's even give it to an already dead body so that we are covered in case someone complains'. A fallacy that believes that even when it is potentially indicated, in a cardiac arrest situation where there is a reversible fatal cardiac rhythm, it will be successful regardless of age or comorbidities –- it is not, especially in the frail and elderly where survival rates are minuscule and survival comes at a price. A fallacy that recalls successful cardiopulmonary resuscitation on athletes liked the footballer Fabrice Muamba (Ferguson, 2012) and thus applies this example to all endeavours.

Are we 'opting in' to cardiopulmonary resuscitation?

We appear to have reached an effective presumed 'opt-in' system to full blown cardiopulmonary resuscitation, even in those situations where it will not work at all (natural dying and dead bodies), or where it has very limited success (cardiac arrest in the frail elderly and/or in those with several life-limiting palliative conditions). The stance that the health board has taken, i.e. to make cardiopulmonary resuscitation an opt-in for all, is in fact unlikely to stand ethics committee trial, given the harm it will do to the many and the questionable beneficence

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that such a policy might conceivably give to the few. I have spoken to many bereaved relatives and friends who have asked me why their loved one had to go through such a final act of indignity, however dutiful the healthcare team were.

I have tried to ascertain more information from the health board about the nature of their reason for this blanket decision making and what their new guidance to staff states, but have not been successful. While it is difficult to draw conclusions about this case without all the facts, it is possible to conclude that in today's world, cardiopulmonary resuscitation is living a double life. On the one hand, it is the heroic saviour of life, a life-prolonging intervention for those who go into a reversible decline. Ensuring that we get to defibrillation requires bystander cardiopulmonary resuscitation, which requires chest compressions and airway management. All good. All necessary.

On the other hand, we see cardiopulmonary resuscitation leading its other life, the interventional apologist, the brash excuse for not pausing, asking, comforting, the unwelcome guest that cannot easily be refused. Had the nurse, as it appears the health board would have seen fit, given cardiopulmonary resuscitation to an already dead body, only to wait for a defibrillator to arrive, it would not have saved this woman. Most likely the defibrillator would have concluded that this is not a shockable rhythm, and the manual labour of push-down cardiopulmonary resuscitation would have stopped and left its debris. Speculating that cardiopulmonary resuscitation would have been successful is a step too far, yet, sadly, that is the message that this news report gives us.

The Lancet Commission on the Value of Death (Smith, 2018) convened for the first time in 2018, tasked with looking at the medicalization and possible de-medicalization of death and dying. Chaired by Richard Smith, stories like the one described in this article must act as discussion prompts. Whether in hospitals or in the community, the values we are currently using to dictate necessary measures when someone is close to death and dying, or actually dead, are aggressive and based on fallacious logic sequences and defensive medicine. This is advocated by some coroners, lawyers and lawmakers, some of whom may never have actually attended the final moments of a gravely ill person's life.

We need a more humane and intelligent focus. **BJHM**

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KEY POINTS

- Cardiopulmonary resuscitation has had many success stories, but for those with multiple long-term conditions and palliative patients it is hardly ever successful and often not indicated at all.
- Cardiopulmonary resuscitation can work in cardiac arrest situations, when, for instance, ventricular fibrillation may be reversed by giving an electric shock. However, the cardiac rhythms involved in less acute natural dying situations are not reversible so cardiopulmonary resuscitation has no chance of success.
- While we should aim for as many people with serious life-limiting illnesses to have advance and future care planning documents and clearly documented decisions on cardiopulmonary resuscitation before a deterioration, it is completely unrealistic to do this for all.
- Health board guidance to health-care professionals to administer cardiopulmonary resuscitation no matter what, when a do not attempt cardiopulmonary resuscitation or advance care planning form is not in place at the scene, is likely to mean that many people will be denied a peaceful death and will receive traumatic interventions that are either not indicated at all, or very unlikely to lead to survival.
- Whether in hospitals or in the community, the values we are currently using to dictate necessary measures when someone is close to death and dying, or actually dead, are aggressive and based on fallacious logic sequences and defensive medicine.

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