

A time to die

Michael J Mackay

Is there something wrong with the way CPR is presently practised?

“That doctor — he should be sacked!” An elderly gentleman was talking about me, and he was doing it on the local television news! My crime was to make the observation in a letter to the *MJA* that “. . . regular involvement in cardiopulmonary resuscitation (CPR) makes me wish the technique had never been introduced.”¹ I had waved a red rag in front of bulls. To disparage CPR creates fury in those who, professionally or otherwise, see it as the reason for their existence. My wife had warned me that I would be painted as the bad guy, and, when this happened, my daughter asked cheerfully, “Is Daddy going to be like Pauline Hanson?”

My first inkling of the coming storm was on the Monday the *Journal* appeared. A Perth radio personality wanted to interview me. I was not told that, immediately before me, he would be interviewing the head of St John’s Ambulance in Western Australia. “Doctors Give CPR Shock Treatment” was the headline in *The Australian*. A flurry of phone calls from journalists followed. The local paper picked up the story, and over the next few days a local general practitioner, the local ambulance chief, a surf-lifesaving identity and an editorial in the paper all attacked my purported position. I had several conversations with the medical superintendent of the hospital where I was working: I was free to express an opinion in the *MJA*, and I was not being reprimanded — as some in the media wished. But, he indicated that he was going to publicly distance the hospital from my remarks, and reaffirm hospital policy — to commence CPR in an emergency whenever a person has stopped breathing or has no pulse. (I am grateful to this medical superintendent, who expended time and effort publicly defending the hospital, and defending me for opinions which — like those expressed here — are mine alone, and not those of the hospital.)

The local television station made the topic their main story, and repeatedly replayed the clip of the elderly gentleman who had survived two cardiac arrests and wanted me sacked. The story finished with the words, “Dr Mackay declined to be interviewed”. I did not know I had been invited. Someone had received and declined the invitation for me!

An advanced healthcare directive

Should I have my cardiac arrest while going about my duties in the emergency department — immediate defibrillation please! And maybe a whiff of oxygen. (If I don’t survive, I will be quite surprised.²) Should I arrest in the hospital dining room, forgo the mouth-to-mouth (I am squeamish about these things). I may (grudgingly) accept some chest compression, until the defibrillator arrives. But if you have not got me back after three shocks — call off the circus. Go back and finish your lunch. If I arrest in the street, you will do what you will. But I won’t be happy. I doubt you will be able to get a defibrillator to me quickly enough. If I arrest at home, I know it will be very difficult for you to do nothing. But it will be 15 minutes before the ambulance arrives. And to end up brain damaged on a ventilator is something I do not want. (But if you are clever enough to call the ambulance so that I arrest after it arrives, by all means use the defibrillator.) When I am in a bed in a hospital ward “old and grey and full of sleep”, do not use your hands to commit violence upon me — use them to comfort me.

I became a member of a hospital cardiac arrest team in 1973. Formally or informally, I have been part of such teams ever since. Two things I have learnt from this: there are things I do to patients that I do not want done to me; and, an advanced healthcare directive can never be found when you want one — so I hope I will be forgiven for placing mine here (Box).

I would have attended at least a couple of hundred cardiac arrests. My guess is that, sadly, only a dozen or so of these people survived to leave hospital. (A meta-analysis of 39 studies involving 33 124 out-of-hospital cardiac arrests has shown a survival rate of 6.4%.³) Some of the survivors I remember well. While one middle-aged man was telling me about his chest pain, I noticed the cardiac rhythm on the monitor change to ventricular fibrillation. I charged the defibrillator as he continued to talk. I waited until he lost consciousness and then shocked him. In seconds, he was asking me what happened. Such episodes are not unusual in emergency departments (or in the back of ambulances).

Of the vast majority who have not survived, I have a clear memory of only a few. I was visiting a patient at his home. He was telling me about his “gallbladder pain” when he had a cardiac arrest. His wife phoned an ambulance while I began resuscitation. When the ambulance arrived, his wife and I had a pink patient with small pupils. At that time ambulances did not carry defibrillators. By the time we arrived at the hospital, which was only a hundred yards away, the patient was blue, his pupils were fixed and dilated, and he could not be revived. It is difficult to maintain effective and continuous external cardiac massage while loading and unloading an ambulance, and while the ambulance is in motion.

An editorial in the *MJA* in 2003 bemoaned the fact that “cardiac arrest is more successfully treated in Chicago or Heathrow airport, on an American Airlines or Qantas jet, or in a Boston post office, than in the vestibules, corridors or general wards of Australia’s premier hospitals”.⁴ A review of 28 cardiac arrests occurring at the Melbourne Cricket Ground (MCG) revealed a quite extraordinary survival rate of 71%,⁵ compared with a 3% survival rate from out-of-hospital resuscitation reported, at about the same time, in metropolitan Melbourne as a whole.⁶ Each minute from the onset of ventricular fibrillation to the use of a defibrillator results in a 10% reduction in survival.^{7,8} Thus, there is every reason to encourage anything that can shorten the time between the onset of cardiac arrest and defibrillation.⁹ But there is a big difference between the population of the MCG and that of a general hospital

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ward. The former has been able to get to the MCG, whereas the latter may be unable to get to the bathroom.

Patients in a general medical ward may have failing hearts, lungs, kidneys and brains; they may be dying of cancer, they may be failing to respond to treatment for severe infection, or they may be otherwise very unwell. Most *MJA* readers will be familiar with the following scene, which takes place regularly in hospital wards. The curtains are barely closed around the bed of an elderly woman; two people are taking it in turns to rhythmically compress her chest; three doctors are attacking her oedematous limbs with needles, unsuccessfully attempting to insert them into veins; a fourth is poking around her groin trying to cannulate her femoral vein; and a fifth has a laryngoscope in her throat. But on this occasion, I notice something rather unusual (though I have seen it before). As I ventilate her lungs through the endotracheal tube, her eyes are wide open, her pupils are small, she blinks, she seems to be looking straight at me. Someone remarks, "She has a dying heart". Eventually, we allow the rest of her to follow.

In the past, nurses used experience and common sense when deciding not to use CPR in most patients when they died. Now, they are expected to start CPR on anyone who collapses and does not have a "not-for-resuscitation" order. This order is supposed to be discussed with the patient. This exceptionally difficult task may fall to the most inexperienced doctor on the ward. The results of CPR in this ward population are likely to be poor, even if immediate defibrillation is available (which it is not¹⁰). If cardiac arrest in a general medical ward is to be treated, could management be limited to prompt defibrillation, oxygen by bag and mask, and little else?

The management of out-of-hospital cardiac arrest seems particularly prone to controversy. During the 1990s, ambulances regularly arrived at emergency departments carrying patients on whom cardiac massage was being performed. Subsequent discussion with relatives revealed that many of these patients had not had a witnessed cardiac arrest. They had been found dead. It was treating these patients that made me wish that the technique of CPR had never been introduced. In the five years since I wrote those words (and while the notes for this piece were gathering dust), it has become accepted that "... survival for the victim of cardiac arrest not resuscitated by a determined trial of advanced cardiac life support at the scene is negligible and not improved by further emergency department efforts".¹¹ Ambulance officers now have authority to cease resuscitation at the scene when it has clearly failed. This has reduced the incidence of futile resuscitation being performed in ambulances, which then has to be continued for a respectable period of time in the emergency department. But it may not prevent futile resuscitation efforts being performed in patients' living rooms. An 85-year-old woman may phone "triple 0" after finding her husband collapsed on the floor. She may be advised to commence CPR. Sometimes, mightn't it be quite reasonable for her to disregard this advice, and, when the ambulance arrives, to ask the paramedics to let her husband remain undisturbed?

One hundred and five paramedics, emergency nurses, and emergency physicians who regularly took part in CPR were asked at what point they would like CPR stopped if they were the patient.¹² Ten per cent did not wish to have CPR started at all; and only 3% wished to complete a full CPR protocol based on standard American Heart Association guidelines. Does not this suggest that there might be something wrong with the way CPR is presently practised?

I was explaining to an elderly woman that her dying brother would be unlikely to last the hour. I asked if she wished to be with him when he died. Her husband turned to her and said, "No. You don't want to be there when they put the paddles on." The assumptions behind this remark startled me. Should cardiopulmonary resuscitation be a futile deathbed ritual — a secular last right?

There are many ways to die. To die without fuss, here one minute gone the next — that is the best.

Competing interests

None identified.

References

- 1 Mackay MJ. Decision making in CPR [letter]. *Med J Aust* 1999; 170: 46.
- 2 Callan DJ. Out-of-hospital cardiac arrest — the solution is shocking. *N Engl J Med* 2004; 351: 632-634.
- 3 Nichol G, Stiell IG, Laupacis A, et al. A cumulative meta-analysis of the effectiveness of defibrillator-capable emergency medical services for victims of out-of-hospital cardiac arrest. *Ann Emerg Med* 1999; 34 (4 Pt 1): 517-525.
- 4 O'Rourke FM, Davies CS. Cardiac arrest in Australian hospitals [editorial]. *Med J Aust* 2003; 179: 461-462.
- 5 Wassertheil J, Keane G, Fisher N, Leditschke JF. Cardiac arrest outcomes at the Melbourne Cricket Ground and Shrine of Remembrance using a tiered response strategy — a forerunner to public access defibrillation. *Resuscitation* 2000; 44: 97-104.
- 6 Bernard S. Outcome from prehospital cardiac arrest in Melbourne, Australia. *Emerg Med* 1998; 10: 25-29.
- 7 O'Rourke FM. Surviving cardiac arrest [editorial]. *Med J Aust* 2002; 177: 284-285.
- 8 Marenco JP, Wang PJ, Link MS, et al. Improving survival from sudden cardiac arrest: the role of the automated external defibrillator. *JAMA* 2001; 285: 1193-1200.
- 9 Caffrey SL, Sherry L, Willoughby PJ, et al. Public use of external defibrillators. *N Engl J Med* 2002; 347: 1242-1247.
- 10 Finn JC, Jacobs IG. Cardiac arrest resuscitation policies and practices: a survey of Australian hospitals. *Med J Aust* 2003; 179: 470-474.
- 11 Gray WA. Prehospital resuscitation. The good, the bad, and the futile. *JAMA* 1993; 270: 1471-1472.
- 12 Hauswald M, Tanberg D. Out-of-hospital resuscitation preferences of emergency health care workers. *Am J Emerg Med* 1993; 11: 221-224. □