

# The Dilemma of Technology: At What Price?

Tim Fleming, MD

I had a dream the other night.

The dream took place in the dim light of future days. Streets were filled with masses of people—mostly the elderly—walking about aimlessly. All had little black boxes about the size of a pager on their hips. Suddenly, a person collapsed to the ground. The little black device began to glow, gave the person a jolt, and they arose to continue their wanderings.

I awoke in a sweat. Was it a nightmare?

A little far-fetched you might say, but after all, that's what dreams are all about. And symbolically, the dream represents to me a growing situation in the world of emergency medical services that eventually will touch us all.

The hottest items on the EMS frontier are defibrillators—both automatic and semi-automatic. The cover article in the [New Mexico EMS] newsletter centers on these devices and our situation in New Mexico with this ever-evolving new procedure. Advertisements for the "little boxes" fill EMS journals. There is tremendous vendor pressure to market the devices, even before the system is ready to accommodate them. We recently had word from a public swimming pool in a northern New Mexico community that had purchased an automatic defibrillator and was wondering what to do with it.

This technology is expanding rapidly. High-risk heart patients often are sent home from the hospital with automatic defibrillators and their families instructed in its use. There is a prototype of a cardiac rhythm device for home use which is tied in by telemetry to the intensive care unit in the hospital and designed to "shock" over the airways should a critical rhythm develop. Feeling a little puny today—just plug in your defibrillator. Forget about those heart troubles—just carry your little black box with you. It's the 1990s version of the "forever young" mindset, except it goes one step further by offering the subtle promise of immortality as well.

I view widespread availability of automatic defibrillators as a major symbolic leap in the world of EMS, and one which gives us a longer life expectancy, freedom from suffering, and the pleasures of the moment. But in some instances, at what price?

The technology which most dramatically illuminates this trade-off is nuclear energy. That promise of unending power is countered by the horrible possibility of making the planet uninhabitable for further generations. I don't want to imply that an automatic defibrillator in your local restaurant and on every street corner is as complex an issue as nuclear weapons and meltdowns at Chernobyl. But there is a factor in the widespread acceptance of automatic defibrillators which causes me concern. The implied promise is that if we can recognize a critical heart rhythm and shock it quickly enough, the patient will be saved and go on to experience the full pleasures of life. With this false promise, there has to be the growing public expectation that as emergency providers, we can accomplish *anything*. All EMTs, doctors, nurses—if given the right "tools"—can reverse any of the human conditions which bring death and suffering. Heart stopped—give it a shock. Coronary artery clogged?—give it a new high-tech drug like TPA brewed from vats of mutant bacteria and dissolve that clot like some high-priced Drano. Got a kidney stone?—let's blast it in to the cosmos with some ultra-ultrasound. But the reality is that we cannot do everything. We cannot reverse most sudden death or the natural course of aging. And I'm concerned that as we arm ourselves with slick devices like defibrillators, we are pressured to accept the lie that we can save everyone—despite the fact they may be on the natural and inevitable journey that is human experience.

I have seen it in the faces of paramedics. I have felt it too often myself. We feel that deep frustration after having worked for hours trying to resuscitate someone who is in ventricular

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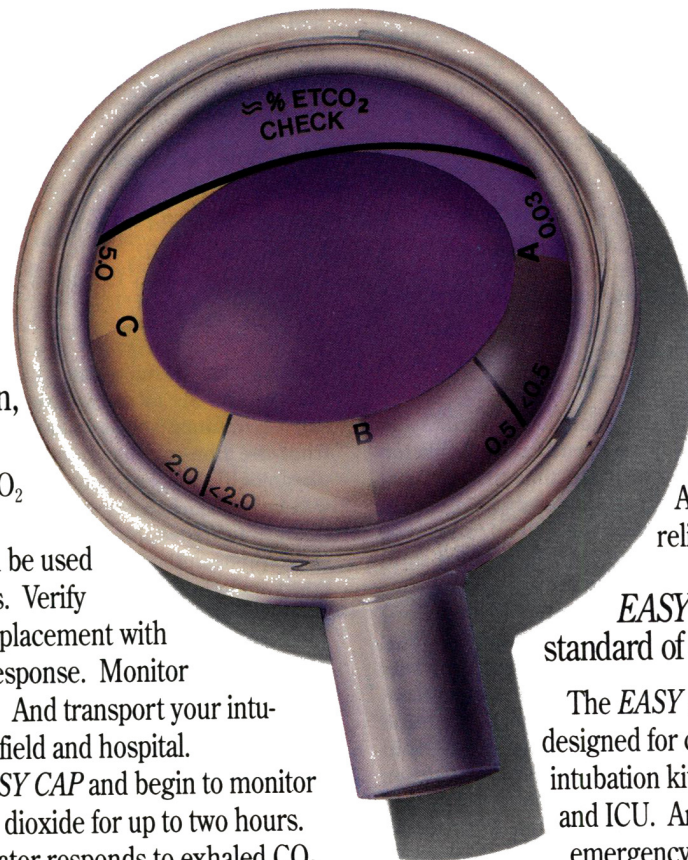
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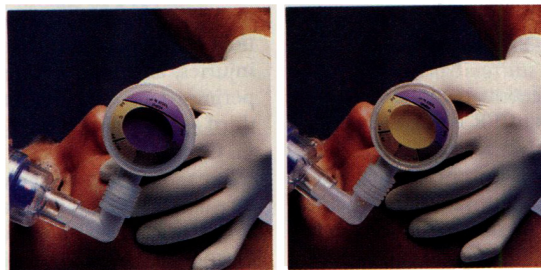
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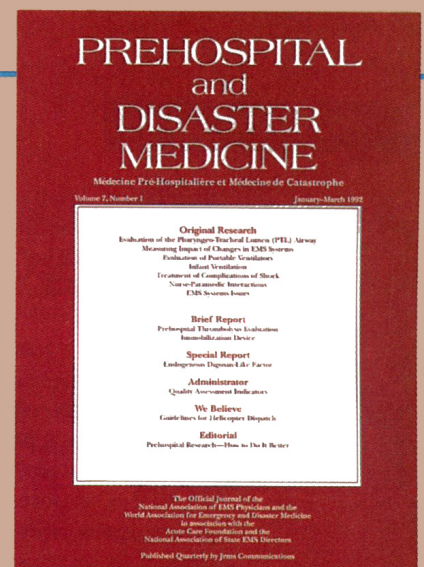


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fibrillation. We have given all the right drugs, we have shocked repeatedly on what should be a reversible condition. But still we can't change the inevitable.

The lie that we can do everything is one we desperately wish was true, for in large measure, we are in this world of EMS to save lives and alleviate suffering. It is what we do. It is our purpose.

So, I don't want to "Ban the Defibrillators." It is a potentially important device that does save lives in specific situations and should be a part of our bag of tools.

But how can we impact this trend toward uncontrolled technology so that automatic defibrillators are not being advertised in Sears catalogues or sitting next to the pay phones in your corner restaurant?

As the "experts" in emergency care, we must educate the public, the institutions, and the government agencies on what this technology means. There are appropriate uses of the device, as long as it becomes part of the system of EMS and not an isolated phenomenon promising resurrection and eternal life.

And we need to spend a measure of time asking those more metaphysical, philosophical questions about the promises and expectations we make to the public and ourselves. What can we realistically provide? This includes ongoing discussion of living wills, "Do Not Resuscitate" orders, and the quality of health care for all members of society. We need to question what technological advances do—and don't do—for our world.

There are no ready answers to these difficult ethical questions, but in the asking, answers eventually may come. And then the "little black boxes" may become our allies rather than our rulers.