

## Shock It to Me

**New automated defibrillators are saving lives — and making money for an upstart manufacturer**

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When an engineer at a semiconductor factory in Watertown, Mass., collapsed from sudden cardiac arrest, David Collins, the plant's health-and-safety manager, was on the scene in two minutes with an automated external defibrillator (AED), a device that can jolt a heart back to its normal rhythm precious minutes before paramedics could arrive, Collins followed prompts from the AED and gave the engineer two electric pulses that saved his life.

The engineer, now well and back at work, is among the thousands of Americans who have been rescued by AEDs. For years defibrillators were used only by doctors, like the ones on ER who yell "Clear!" before they shock a patient. But the new automated variety can be used by almost anyone. The devices have spread to all sorts of public places, and their U.S. sales, already worth \$200 million, are growing at about 30% a year. The engineer probably didn't much care that the AED used on him was made by a little company now called Cardiac Science. But the firm has its own back-from-the-dead story to tell.

Based in Irvine, Calif., Cardiac Science was teetering on the edge of oblivion in 1996 and had no sales — none — as recently as 1998. At that time it was trying to sell a different type of defibrillator to hospitals and was getting crushed by medical-equipment giants like Medtronic Physio-Control and Philips Medical Systems. But then it abruptly changed its game — and its fortunes.

In late 2001, Cardiac acquired Survivalink of Minneapolis, Minn., for its AED technology and Artema Medical of Sundbyberg, Sweden, for its international sales channels. Last year Cardiac increased its direct-sales force from 18 to 55. It also added eight international sales managers to sell to 40 countries and aggressively went after nascent segments of the market, like schools, employers, doctors and dentists.

While Survivalink was on track to sell \$19 million worth of AEDS in 2001, Cardiac sales in 2002 more than doubled, to \$39 million. Though precise industry numbers are elusive, Cardiac controls 15% to 25% of the market. "We're small and nimble," says president and CEO Raymond Cohen, 44.

When New York State last year required public schools to have AEDs, Cardiac dedicated four employees to winning the district-by-district contracts and walked away with at least a third of them. "If you were selling this device to a hospital, they would know the Medtronic name, and that would influence the buying decision," says Keay Nakae, a

medical-device analyst at Wedbush Morgan Securities in Los Angeles. But in schools and other venues, "you can compete on features. Cardiac Science matches up pretty well."

Others aren't so bullish. Robert Dickinson, an analyst at Frost & Sullivan, a consulting firm based in San Jose, Calif., says that without the corporate heft to cut deals with distributors like drugstore chain CVS (which sells AEDs made by Philips), Cardiac won't ever graduate from being a "mid-tier player."

The young company is still losing money, though it predicts it will break into an operating profit this quarter and a net profit by the end of the year. Several sobering statistics are on its side: some 250,000 Americans will die this year from sudden cardiac arrest. And one study found that using an AED and CPR within three minutes of collapse raised survival rates to 74%. As everyone from school and office administrators to hotel managers and private homeowners looks to buy AEDs, Cardiac Science expects healthy sales for years to come.

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