

CPR Training

More than 18 million Americans a year learn this emergency procedure, which is administered to nearly half the people who experience cardiac arrest outside a hospital.

Brain death starts to occur four to six minutes after someone experiences cardiac arrest. Up until the mid-20th century, even if you were rushed to a nearby medical facility, doctors would cut open your chest and try to manually restart the heart, a procedure with very low success rates. However, with the advent of CPR, first endorsed by the American Medical Association (AMA) in 1958, the survival rate for victims of cardiac arrest more than doubled. Today, thanks to the training of millions of Americans in CPR, up to half of all victims receive CPR before professional help arrives, a wide-scale effort that has helped save millions of lives.

What did it take to equip bystanders around the world with life-saving skills? The earliest attempts to explore interventions for sudden cardiac arrest date back to Dutch canal rescues in the mid-18th century. By 1957, with the help of a \$10,000 Army grant (\$90,000 in 2017 dollars), Baltimore physician Peter Safar, working with Buffalo doctor John Elam, had codified and conclusively demonstrated the effectiveness of modern

This case study is part of a series that accompanies The Bridgespan Group article “[Audacious Philanthropy: Lessons from 15 World-Changing Initiatives](#)” (*Harvard Business Review*, Sept/Oct 2017). See below for [15 stories of social movements](#) that defied the odds and learn how philanthropy played a role in achieving their life-changing results.

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mouth-to-mouth resuscitation. Their method won endorsement the next year from the AMA. They next joined forces with Dr. William Kouwenhoven of Johns Hopkins Hospital to add chest compressions to their method, and, after advocating for years, in 1966 won the backing of the National Academy of Science for what we call CPR today. While Safar and colleagues were developing the practice, another physician on the opposite side of the Atlantic had been working on how to proliferate it.

In 1966, Dr. Frank Pantridge, with modest funding from the British Heart Foundation, rolled out the first mobile coronary care unit in Belfast, Northern Ireland—taking CPR to the patient rather than confining it to the hospital. Within five years, a handful of individuals led shifts toward paramedic-staffed (rather than physician-staffed) units. In 1968, hospitals in the United States began to follow suit. A breakthrough in diffusion came when Dr. Leonard Cobb of Seattle in 1970 received major funding (\$2.85 million in 2017 dollars) from the Washington/Alaska Regional Medical Program to begin training non-medical personnel in CPR, starting with city firefighters.

Cobb soon realized that the methods could be spread to the general public. When the regional medical program reduced its grants, individual contributions and the Rotary Foundation kept training afloat, and within a few years they had trained 100,000 ordinary citizens in Seattle. By 1981 the training effort included 9-1-1 dispatchers, who could, in turn, coach callers. Building on Cobb's success, other cities followed suit, and the American Red Cross and American Heart Association (AHA)—two of the largest and most influential nonprofits in the country—began using their considerable reach to train millions of Americans in CPR and millions more around the globe. The AHA today has a network of 4,000 training centers worldwide. In the United States, even though 88 percent of out-of-hospital cardiac arrests occur in the home, today 32 to 46 percent of those who suffer an out-of-hospital cardiac arrest now receive some sort of CPR or first aid before professional help arrives.

Philanthropy's Stake in Large-Scale Change

Our research shows that breakthrough social initiatives share a set of [five practical approaches to large-scale change](#). In the case of CPR, philanthropy helped to fund the following three approaches:

- **Build a shared understanding of the problem:** Research and clinical trials supported by modest government and philanthropic funding played a key role in evolving an evidence-based model, starting with data showing high rates of death from cardiac arrest that usually occurred within the home. With a small Army grant, doctors Peter Safar and John Elam demonstrated a bystander resuscitation method could be effective. With a British Heart Association grant, Dr. Frank Pantridge addressed the need to treat arrests outside the hospital via mobile coronary care. The best practice was clarified, as physicians around the world working on the problem shared their findings and collaborated.
- **Design for massive scale at the outset:** A scalable solution required both refining CPR techniques and teaching these techniques to millions of ordinary citizens. State, individual, and Rotary Foundation grants helped simplify CPR from a method designed for medical staff to a practice easy enough to teach lay people. Government and philanthropic funding continued to support the evolution and demonstration of the approach, with a focus on increasing its scalability: first training firefighters, then ordinary citizens, and eventually developing a method for 9-1-1 operators to effectively coach *any* caller responding to an emergency to administer the procedure. As a result of this continued evolution, the American Red Cross and American Heart Association were also able to embed CPR in thousands of training programs across the country, including lifeguarding, first aid, and workplace safety.
- **Drive (don't assume) demand:** When Dr. Leonard Cobb's plan to use Washington/Alaska Medical Program grant monies to roll out CPR to 100,000 residents of Seattle suffered funding cuts, he appealed to ordinary citizens. With the help of Seattle's fire chief, Gordon Vickery, and firefighters across the city, Cobb enlisted support from local barbers, bakers, newspapers, and others to get the word out. They raised twice as much as required from individuals, businesses, and the Rotary Foundation to plug the gap. Then, as the training of firefighters across the city progressed successfully, Vickery and Cobb transitioned to training ordinary citizens, with the goal of teaching 100,000 Seattle residents how to perform CPR. Leveraging local newspapers and radio stations to publicize the effort, they recruited thousands of community groups, churches, and others interested in hosting a training. Seeing their success in Seattle, over the next few years, other cities followed their lead and began to sponsor their own mass trainings, as did the Red Cross and American Heart Association. By driving broad-based support, the CPR effort eventually widened its reach from medical staff and firefighters to millions of citizens.

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