

Case 42

The Emergency Medical Services Program of the Robert Wood Johnson Foundation

Robert Wood Johnson Foundation, 1973

Scott Kohler

Background. By 1972, it was evident that emergency medical response mechanisms in most of the United States were severely lacking. Victims of accidental trauma were, in most cases, unsure which telephone number, if any, to dial in case of an emergency. Instead, they were forced to choose between different options, depending upon whether the emergency was a fire, car accident, violent crime, or some other occurrence. In the metropolitan Kansas City area, for example, there were no fewer than seventy-eight different emergency phone numbers from among which to choose!⁶⁴⁹

And even when the caller had a phone book available, or knew a number to call, ambulance service was a far cry from what it is today. In the early 1970s, roughly “half of the country’s ambulance services were provided by 12,000 morticians, primarily because in their areas they owned the only vehicle that could accommodate a patient on a stretcher.”⁶⁵⁰ Ambulances were intended only to transport accident victims to the nearest hospital. This had several disadvantages. First, trauma patients rarely received medical attention before arriving at the hospital, a delay that often cost lives and exacerbated any medical condition. In fact, fewer than half of all rescue personnel had medical training at the Red Cross level of advanced first aid.⁶⁵¹ Second, in bringing victims to the *nearest* hospital, ambulance drivers did not always get their passengers to the *right* hospital. Not all hospitals are equally well-equipped to treat all types of injuries or other medical emergencies. So, for example, a burn victim might be taken to a hospital lacking a burn clinic, while he or she would have been better served somewhere else nearby. Another part of the problem was that ambulance drivers almost never had any way to communicate with hospital personnel while on the road. When a victim arrived at the emergency room, doctors and nurses were often not ready and had no way, in advance, of knowing what kind of treatment an incoming patient might require. In addition to the lack of communications equipment, ambulance drivers were hindered in their work by complex jurisdictional problems. First responders were often delayed by debates over in which ambulance service’s territory an accident had occurred. Looking back, Blair Sadler, who, in the early 1970s, was co-director of the trauma program at the Yale University School of Medicine, recalled that, “. . . in Connecticut, we had ambulance personnel literally fighting over patients.”⁶⁵²

These many shortcomings were particularly significant because the first hour of medical treatment in trauma cases—often called the “Golden Hour”—is tremendously important in determining a patient’s fate. Delays in emergency medical response cost lives. In a 1972 report, the National Academy of Sciences estimated that 1.5 million people each year were injured in accidents, and 115,000 of them were killed. Worst of all—the report claimed that 90,000 of these fatalities each year might have been prevented by better emergency treatment.⁶⁵³

By the early 1970s, public awareness of these flaws was on the rise. It did not hurt that a popular television show, beginning in 1972, focused attention on the work of first responders. *Emergency!* told the story of a team of Los Angeles paramedics, and its popularity helped to increase awareness of the importance of society’s emergency response mechanisms. In the same year, the Department of Health, Education, and Welfare began to fund emergency medical systems (EMS) demonstration programs in Arkansas, Illinois, and several cities. Five years earlier, “the President’s Commission on Law Enforcement and Administration of Justice had recommended the institution of a single nationwide telephone number for reporting emergencies.” The first 911 test call was made in February of 1968 by Representative Rankin Fite of Alabama, but over the next few years, the idea

was slow to take off.

The Robert Wood Johnson Foundation first operated as a national philanthropy in 1972. The foundation's creator, General Robert Wood Johnson, had, upon his death, endowed it with over \$1 billion in shares of the Johnson & Johnson Company, of which he had been CEO.⁶⁵⁴ That gift made the Robert Wood Johnson Foundation instantly the second largest private foundation in the United States.

Strategy. From the beginning, the Foundation's exclusive focus was on health and health care, and it quickly turned its attention to the ramshackle American non-systems of emergency response. In April of 1973, the Foundation announced a \$15 million grant program to assist the development of regionalized emergency medical services. The Foundation's president, David Rogers, was an early proponent of EMS reform. Robert Blendon, who, in the early '70s, was a senior vice president of the Foundation, recalls that "[David Rogers] believed that there was something wrong in America if people who could benefit from the best of medicine never got to the hospital before it was too late, or they got to the wrong place."⁶⁵⁵ Rogers initiated a partnership between the Foundation and the National Academy of Sciences, which would "set up a screening process for grant proposals, monitor the projects, and evaluate the impact of the program."⁶⁵⁶ Meanwhile, Robert Blendon sought out experts in EMS, including Blair Sadler and others, to help the Foundation determine how best to increase the quality and reach of regional emergency response systems.

Ultimately, the \$15 million were distributed to forty-four emergency response organizations in thirty-two states. Those forty-four were selected from 251 applicants, and the average grant was \$350,000, while the largest was about \$400,000. As Digby Diehl writes in his report on the program for the Robert Wood Johnson Foundation Anthology, "[t]he Foundation actively recruited prospective grantees." In particular, grant-seekers were encouraged to form coalitions with other local agencies operating in the field of emergency medical response.

According to Sadler, there were three main components of the Foundation's program.⁶⁵⁷ The first of these was to increase access to technology. In practice, this primarily meant equipping ambulances with radios that would allow them to communicate with dispatchers and hospital personnel. The second element of the strategy was training, both of ambulance drivers and of central dispatchers, who would answer emergency phone calls and initiate a response. The third component of the program was the promotion and facilitation of interagency coordination. This, Sadler recalls, "was perhaps the most difficult [element] of all." Competition between, for example, police and firefighters, or between rival ambulance companies, was fierce; and complex, sometimes overlapping fields of jurisdiction impeded cooperation.

The Foundation was very clear in telling grantees exactly what they needed to do in order to receive the money. Funding was conditioned upon the fulfillment of seven requirements.⁶⁵⁸ Grantees were expected to:

- ensure "central and immediate citizen access to the emergency medical system"
- establish "central control of EMS communications"
- guarantee a prompt response to emergency calls for help
- employ "adequately trained dispatch and ambulance personnel"
- develop "emergency system capacity"
- ensure that all their emergency personnel would have access to open phone lines and radio channels, and

- provide “assurance that the program could become self-sufficient after a two-year period”

It was not, however, a thoroughly rigid strategy. As Blair Sadler, who was hired as an assistant vice president of the Foundation for the Emergency Medical Services program, describes, the Foundation, an advocate of coalitions in each region, did not care “who the lead [grant-receiving] agency was, as long as that entity had the ability to bring all the key EMS players to the table.”⁶⁵⁹ Diehl describes the Foundation’s role as that of “a funnel for EMS information, bringing knowledge of hardware and procedures to grant recipients.”⁶⁶⁰

The Foundation believed that emergency responses had to be coordinated regionally. But this meant centralization, although on a regional level, as Foundation dollars supported central dispatchers, uniform standards of medical training for ambulance drivers, and one central phone number (usually, although not always, 911) that people in a given region could call in the event of an emergency.

Outcomes. Progress in the emergency response capabilities of the forty-four grant recipients was considerable. One of the most visible developments associated with the program was the expansion of the 911 emergency system. In 1973, only 11 percent of people in the areas supported by the Johnson Foundation program had access to 911, or some equivalent emergency phone number. By the program’s end, in 1977, 95 percent of them did. These outcomes were not mirrored in the nation as a whole. In 1979, only 25 percent of the U.S. population was covered by 911 or its like. Even today, the 911 system is available to only 85 percent of the population.⁶⁶¹ But progress in the Foundation’s forty-four grant areas did serve as a model of the emergency phone number’s effectiveness. In this way, Foundation dollars were the spur that encouraged subsequent federal support.

Interagency cooperation in the grant-supported areas was also improved. As Diehl explains, “[b]efore the program began, none of the grantees had any linkage between the central emergency dispatcher [when there was one] and the police and fire departments; by 1977, however 86 percent of them did.”⁶⁶² In 1973, none of the Foundation-supported organizations communicated with their counterparts in other regions, even those nearest-by. By 1977, 61 percent of the forty-four had established such links, facilitating the resolution of jurisdictional uncertainties in cases on or near a border.

Ambulance service was also enhanced. In 1973, there were 6,000 emergency medical technicians (EMTs) and 240 of the more highly-trained paramedics in the forty-four areas. By 1977, those same regions were served by 26,000 EMTs and over 3,200 paramedics.⁶⁶³ This more qualified pool of ambulance personnel also had better technology at its disposal. By 1977, 91 percent of all ambulance services in the program areas had radios installed in at least half their ambulances. In 1973, that percentage had stood at twenty-five.⁶⁶⁴

From the program’s conception, the Foundation planned to evaluate its success. This was done in two outside evaluations: one by the Rand Corporation and one by the National Academy of Sciences. The Rand Corporation’s evaluation was, according to Diehl, “lukewarm at best.” It examined a sample of seven grantees from among the forty-four, but was frustrated by the grant-recipients’ limited ability to produce empirical evidence of their progress. This “shortage of data” led the Rand evaluators to exclude three of their seven subjects. David Rogers acknowledged the problematic lack of data, and believed that the Foundation had “looked too soon . . . to obtain solid answers to the questions of most compelling interest to us.”⁶⁶⁵ The National Academy of Science’s evaluation, on the other hand, was overwhelmingly positive. It cited the increased access to a 911 dispatch system, the rapid proliferation of EMTs and paramedics, and the expansion of ambulance-hospital communication as evidence of the program’s success. While these data are valid, it must still be noted, as Diehl warns, that the Academy could not help but have a “built in bias in favor of the

program, as its staff had actively participated in administering the grants.”

Impact. When the Robert Wood Johnson Foundation got involved, EMS reform was an idea for which the time had obviously come. Otherwise, the Foundation would not have been able to tackle the inefficiencies of every region in the nation. Nor did every good idea originate at the RWJF headquarters. The idea of the 911 number, linked to central dispatch systems, went back to the 1960s, and the regionalization of emergency medicine had already been endorsed by such leading institutions as the Yale School of Medicine.⁶⁶⁶ But the Foundation advanced the spread of both ideas by using funding as a lever to get these and other response mechanisms tested in thirty-two states. In addition to the benefits conferred on the citizens served by the Foundation grantees, the success of these mechanisms led to their implementation on a larger scale.

That larger implementation required federal support, and the government soon recognized the excellence of the Robert Wood Johnson Foundation’s work. David Boyd, a member of the Foundation’s advisory committee, was hired to coordinate the federal government’s EMS program. According to Sadler, this “ensured that the feds would be supportive of [the Foundation’s] effort.”⁶⁶⁷ And, indeed, Boyd recalled that the government “picked up the Robert Wood Johnson effort in the federal program in every one of those forty-four projects.” Where the Johnson Foundation had enticed EMS providers with grant money, “Boyd’s Division of Emergency Medical Services made regionalization a prerequisite for [any federal] funding.”⁶⁶⁸ By 1977, the U.S. Congress had appropriated over \$454 million for the enhancement of emergency response services.⁶⁶⁹

Clearly the Foundation was not alone in its efforts. Federal involvement was important, as was the involvement of other organizations, including the National Academy of Sciences. Enterprising individuals within the emergency services field have also contributed mightily. Progress does not occur in a vacuum. The Foundation brought in outside voices, collaborated with interested organizations in the public and private sector, and, ultimately, used its funds to make a point, encouraging the federal government to use its own vast resources in a way that the Foundation had shown could strengthen the safety net beneath American citizens. Robert Merkel, president of the Louisiana Hospital Association believes that “[w]e continue to see the fruits of the [RWJF Emergency Medical Services] program every day, and people still remember where it came from. The program was sorely needed at the time, and it pushed everyone to upgrade the level of care.”⁶⁷⁰

Notes

649. Digby Diehl, “The Emergency Medical Services Program.” *To Improve Health and Health Care 2000: The Robert Wood Johnson Foundation Anthology*, Stephen L. Isaacs & James R. Knickman, eds., (San Francisco: Josey Bass Publishers, 2000).

650. Ibid.

651. Ibid.

652. Ibid.

653. Ibid.

654. M. A. Farber, “\$1-Billion Legacy Makes Foundation the Second Biggest,” *New York Times*, 12/6/1971.

655. Diehl, “The Emergency Medical Services Program.”

656. Ibid.

657. Ibid.

658. Ibid.

659. Ibid.

660. Ibid.

661. Ibid.

662. Ibid.

663. Ibid.

664. Ibid.

665. Ibid.

666. Robert Wood Johnson Foundation, *Annual Report*, 1972.

667. Diehl, "The Emergency Medical Services Program."

668. Ibid.

669. Ibid.

670. Ibid.