



SEEDS OF EMERGENCY CARE

THE FIFTIES: HAPPY DAYS FOR SOME

The period between the end of World War II and the 1960s generally is regarded as one of economic prosperity and social stability in the United States. The mid-1950s have been described as “prosperous, stable, bland, religious, moral, patriotic, conservative, domestic, and buttoned-down.”¹ The energy, industry, and sense of purpose that came out of battlefield victory manifested a modern, fast-moving America. The millions of veterans who returned from war ambitiously worked to develop new suburban communities, shopping malls, and superhighways.

Society became much more mobile and less parochial in the ensuing decade, and the national scope of business and the media expanded exponentially. By the end of the decade, McDonald’s restaurants were popping up in many cities around the country, and nearly every home had a television set.¹ Although popular culture often idealizes the decade as placid and harmonious, uneasiness and discord rippled beneath the surface.

After paying a dear price to defeat fascism, the US found a new antagonist. The dominant foreign preoccupation, which also became a domestic obsession, was to halt and eradicate communism (*Figure 1.1*). Strong ideology meant strong economics as the country’s aggressive arms buildup and involvement in the Korean War fueled American prosperity.^{1,2} Cold War politics, like a boogeyman in the closet, affected the psyche and sometimes the structure of people’s lives. Children were introduced to Bert the Turtle, a government cartoon figure who instructed them on how to “duck and cover” in the event of an atomic bomb attack. Mothers stocked up on food and supplies for the family bomb shelter.^{3,4} Senator Joseph McCarthy’s infamous pursuit of perceived American communists created fear, uncertainty, and eventually embarrassment for the country.

In addition to persistent racial tensions, the decade was plagued with great economic disparity between the well to do and the poor, regardless of race.² The American Dream was not realized on a large enough scale to prevent the existence of a poorly educated, downtrodden class of people. This underclass lacked the political power and resources to gain attention at the federal level. Nowhere was this powerlessness felt more acutely than in health care.^{5,6} Health insurance was nonexistent for most poor Americans in this pre-Medicare and pre-Medicaid era. Without the ability to pay for care and no mandate that private doctors treat them, the poor often sacrificed their own well-being, except in the direst of circumstances.

American medicine was not quiescent in the 1950s. Spurred on by an infusion of federal funding for medical research, significant strides were made in the treatment of disease. Perhaps the era’s greatest medical triumph was the development of the polio vaccine. The work of Jonas Salk, MD, was being closely followed by the media, and the success of the vaccine was trumpeted in the news (*Figure 1.2*).⁷ Advances in the prevention and treatment of other diseases and improvements in the surgical care of trauma that came out of the Korean War increased public awareness about the potential for technological and scientific progress. Society pushed medicine — and medical discovery pushed society — toward a new type of health care.

One significant change in the post-World War II period was an increased public reliance on hospital emergency rooms (ERs). In other medical fields, scientific discovery and academic growth often preceded or coincided with clinical demand. This was not the case with emergency care. Despite the volume of patients flocking to ERs, clinical expertise and a system



FIGURE 1.1
Cover of a 1947 comic book warning Americans about the subversive nature of Communist infiltration

for providing quality emergency care were sorely lacking. Medicine was being forced to catch up to public demand, but the professional solution to the ER problem would not arise for another decade.

R.R. HANNAS, MD: THE EX-MARINE

From 1952 to 1965, the rural Oklahoma town of Sentinel was fortunate to have as one of its two physicians a wiry, energetic former Marine. Although Ralston R. (R.R.) Hannas Jr, was Ivy League educated, he was a salt-of-the-earth midwesterner. His father was an educated poultry man who became the editor of the *American Poultry Journal*. As a young man, Hannas was attracted to the order and discipline of military life. Following his undergraduate studies at Purdue University, where he was involved in the ROTC, he initially turned down an acceptance to Harvard Medical School to enlist in the Marine Corps in 1939. Stationed in the Pacific Theater, he “never had to fire an angry round” in World War II, yet he was known as a galvanizing leader by those under his command.⁸ He organized troop movements and support, and by the end of the war, had risen to the rank of Lieutenant Colonel at age 26.

Perhaps his most important contribution to the Marines, and one that foreshadowed his organizational skills in the world of medicine, was his role in developing a program to facilitate the return of veterans to civilian life. Following his military service, Hannas reapplied to Harvard Medical School and was accepted in 1946. Now with a wife and young children to support and struggling to stay financially solvent, he asked his father for advice on moonlighting as a chicken farmer to help feed his family:

He said to get some New Hampshire Reds ... that is the best breed for that area; they will do fine. I bought 100 of them ... and I made a little incubator in the basement. I got 95 to maturity, and at a certain point, when they were fryer stage, I killed and dressed them myself ... froze them and put them in a locker. We ate those for the rest of my four years in medical school.⁸

Dedicated and hardworking, Hannas thrived in medical school, receiving the Maimonides Award from Beth Israel Hospital. Despite his academic success, he and his wife suffered an unexpected tragedy when their 5½-year-old daughter, Margaret, developed an infectious illness and died. Hannas felt the horrible irony of “going to medical school to learn to cure and treat people and you can’t do it in your own family.”⁸

Following an inspiring medical school rotation at Boston Children’s Hospital, he set his sights on becoming a pediatric surgeon. After an internship at the University of Kansas Medical Center and another year of surgical training, however, he was so far in debt that he was forced to cut his education short. He joined a practice in the tiny town of Sentinel, where he fell in love with the tough and self-sufficient nature of the people of southwest Oklahoma. As a general practitioner who also had surgical training, Hannas did just about everything that a physician of those times could do for his patients, including house calls (Figure 1.3): “If they called you, by God, you had better go!”⁸

I can think of some experiences that were just unbelievable. I got called over to Rocky, a little town six miles east of Sentinel ... probably a town of about 500. I got called over to see



FIGURE 1.2
Jonas Salk, developer of the polio vaccine, 1958

this lady ... she had this pain in her left side and was in her 70s. Anyhow, I went over and checked her, and she was tender. I probably drew a blood sample and took it back with me. I gave her something to settle her down a little bit, probably 50 mg of Phenergan or something like that. I got called the next morning — well, then felt like an ass. There was something going on here. So I brought her over to the hospital, and got her typed and cross-matched.... Called a donor in, drew the blood myself ... a couple of pints from two different people.

So, I got her prepped, put a tube down [her throat], took her into surgery, gave her a spinal, and opened her up. She had herniated a loop of her small intestine through the tubo-ovarian ligament. It got caught, and was getting gangrenous, so I calmly proceeded to excise the bad segment and get [it] out from under there ... and put her back together. She didn't bat an eye during or after the procedure. I'm sure she went home in four or five days, something like that. You do it by yourself ... what the hell? You can't wait for 5,000 guys to come in and help you. Those were the experiences that I will never forget.

A few years later, the same lady fell and busted her hip. I brought her down and pinned [it]. You know, you just did it ... but you had to have training. When I was in my surgery residency, a couple of my best friends were orthopods, and I said, "Goddamn it, you've got to teach me how to do these things or you are wasting my time!" They did. It was great.⁸

THE GENERAL PRACTITIONER: AN ANCESTOR TO THE EMERGENCY PHYSICIAN

R.R. Hannas's scope of practice was not unique in that era of medicine. Until the late 1960s, many general practitioners (GPs), most of whom had had only a rotating internship, provided medical, minor surgical, obstetrical, and pediatric care. Although they had far fewer options for diagnosing and treating even common illnesses than they do today, GPs were readily accessible, and were the first — and often only — point of care. Despite this central role in American medicine, general practice

had been under threat since the 1930s by the growing emphasis on medical specialization. GPs who had trained in the early century attended medical schools of varying quality and received little clinical instruction. Most went into practice immediately after graduation, without the benefit of an internship or residency.

The Flexner Report of 1910 helped to improve and standardize basic medical education. By promoting alliances between medical schools and hospitals, the influential study also played a pivotal role in creating the infrastructure for internships and residency training.⁹⁻¹¹ By the end of the 1920s, a one-year internship was considered standard preparation



FIGURE 1.3
House call, 1950

for a general practitioner. A year of internship was required by the Surgeon General in World War I for a medical school graduate who wished to enlist in the Army Medical Corps.¹¹ Internships were largely unsupervised and viewed as a way for the medical school graduate,

who primarily had gained only book knowledge, to master practical clinical skills through long hours of immersion in hospital work.¹¹ During the Great Depression, internships became even more valued for economic reasons. Historian Rosemary Stevens, PhD, explained:

There was every incentive for the intern or resident to stay on in his hospital post, where he at least had board and lodging, rather than to brave the financial uncertainties of private practice.¹¹

When the early medical specialties of surgery, ophthalmology, otolaryngology, and internal medicine declared themselves and began to organize in the 1920s and 1930s, GPs were forced to compete with residency-trained physicians who had certification and better access to hospitals. For example, as the field of surgery (Figure 1.4) evolved toward more complex, longer, intra-abdominal procedures, its requirements began to surpass the skills of the average GP, trained only in simple surgical techniques. The competence of any general practitioner who performed surgeries was now being scrutinized more carefully, and some hospitals even began to consider American College of Surgery fellowship status in granting privileges.¹¹

By the late 1920s, most physicians were providing care in their offices, clinics, or hospitals. The number of house calls dwindled, especially in urban and suburban areas.¹¹ Most physicians had begun to recognize the importance of being affiliated with a hospital. This connection was even more essential for specialists. One Chicago physician, Quentin Young, MD, described the demise of house calls:

The house call became the hostage, and ultimately the victim, of high tech. You'd say to the patient, who would describe a high fever, coughing, headache, and something severe, "Go to the emergency room." There, you had the equipment for a proper exam. That was the beginning of subverting the emergency room into an alternative, very costly, primary care setting.¹²

The era also saw movement toward the establishment of formal requirements and certification for GPs, primarily by the National Board of Medical Examiners (NBME) and the American Medical Association (AMA) and its Committee on Medical Education. As Stevens described, these efforts fizzled after World War II:

A logical solution ... would have been for the specialty certifying boards to come together, pool their resources, and offer a structure for graduate education and certification in all fields and branches of medicine, including general practice. Logic, however, had little to do with the case.¹¹

A Dying Breed

General practitioners were suffering from an identity crisis — they were a mixed group of doctors with varying qualifications and practices, and no clear voice in the world of medicine. In the 1920s and 1930s, training in general practice was viewed as a prerequisite for all physicians. By mid-century, however, it was no longer considered the foundation for specialist training.^{11,13} Prior to World War II, three out of four physicians classified themselves as GPs. By 1955, this number had decreased to two out of three; a decade later, it was down to one in three.

In the mid-1940s, GPs officially organized by establishing a General Practice Section in the AMA House of Delegates and the American Academy of General Practice (AAGP). Although a proposal for a certifying board in general practice was submitted by the AMA's Committee



FIGURE 1.4
Operating room, 1953

“The nature of general practice was changing — less emphasis on surgery and obstetrics, and fewer house calls, but more patients per day.”

on Medical Education to the Advisory Board for Medical Specialties in 1945, it was regarded as premature and was turned down. The AAGP declined to petition further and instead focused on helping GPs obtain hospital privileges and postgraduate or continuing medical education.¹¹

Specialists, especially surgeons, built a mutually beneficial relationship with hospitals and came to dominate medical care by the 1950s. GPs, on the other hand, were forced to fight a little harder for hospital privileges. Claiming restraint of trade, they took their complaint to the courts in 1945; as a result, hospitals and specialty organizations became more lenient about granting hospital appointments. While this trend made it easier for GPs to obtain work, it may have also contributed to the permissive attitude that later allowed the hiring of poorly qualified physicians to staff emergency rooms.

As general practitioners felt the pinch from specialists, their survival as a medical group was threatened by reduced numbers of medical students choosing general practice as a career. Even those who entered medical school with plans to pursue general practice were often seduced by the prestige and higher incomes promised by medical specialties.¹⁴ The nature of general practice was also changing — less emphasis on surgery and obstetrics, and fewer house calls, but more patients per day. GPs who had hospital privileges also had to take care of increasingly complex hospitalized patients. By the mid-1950s,

The traditional family doctor was under siege and found he could not be the 24-hour-a-day, 7-days-a-week, 365-days-a-year bonesetter and pill roller to the thousands who rang his office phone.¹⁵

It is notable that in a 1957 *Time* magazine physician survey, the respondent who reported the most house calls — 77 in a week — was 70 years old. Most younger physicians were making far fewer home visits and increasingly were steering their patients to their offices or to the hospital, where better resources for diagnosis and treatment existed.

There was a conflicted sense of responsibility in the medical world. On one extreme, a Montana physician said in the survey:¹⁶

A doctor's justified in refusing at any time he doesn't want to serve the patient. We're no more obligated to give service than is the grocer.

A more traditionally rooted Michigan physician responded:

Nothing about medicine is as impressive to the layman as our willingness to get up and go out at midnight. Doctors must maintain their reputation on this score.¹⁶

“... early emergency pioneers were able to learn from the hardships faced by their general practice ancestors; in their quest for recognition, they prioritized the need for residency training, the creation of a specialty board, and greater academic development.”

Setting Limits

Another change in the way GPs practiced stemmed from how physicians had come to view their professional lives. In the early decades of the 20th century, physicians were romanticized by their communities much like clergymen — educated, selfless, always available, and more likely to comfort than to cure. The post-war era brought increased business and larger incomes to physicians. The same advances that spurred specialization made medicine less accessible to the layman but created a public that was more in awe of the physician as a professional scientist-healer.

In the prosperous 1950s, Americans with means (including physicians) began to place a premium on leisure and family time. Some doctors began to refuse to provide around-the-clock coverage or take calls at night. This trend caused some public outcry, as examples of physician unavailability leading to poor patient outcomes hit newspapers and magazines.^{17,18} In response, doctors began to look for ways of alleviating the 24-hour-a-day commitment that went with some general and specialty practices without abrogating their duty to their patients.

Some community physician groups established 24-hour exchanges to respond to emergency calls. In Louisville, Kentucky, the Jefferson County Medical Society developed a plan in which one of a rotating pool of 25 physicians would promptly answer calls. A magazine article describes how the system worked:

... an emergency panel doctor was called at 3 AM to see a man with fever, sore throat, and stiff neck. The doctor found him semiconscious, diagnosed meningitis, put him in the back seat of his car, and rushed him to a hospital.¹⁷

By the late 1950s, these exchanges were widespread; it was claimed that no community in the United States with a population of more than 20,000 was without one.^{17,18} Dr. Frederick W. Carr, MD, a GP in Knoxville, Tennessee, took this concept a step further. As a recent medical graduate in 1954, he became a total “night man.” With his station wagon loaded with medical supplies and drugs, he worked solely from 6 PM to 6 AM, taking referrals from other doctors and answering emergency calls that came in through the telephone exchange. This practice was welcomed by the Knoxville medical community.¹⁹

Even as they changed with the times or were forced into different roles by the pressures of medical specialization, the GPs of the era became the ancestors of both family practice and emergency physicians. Pioneers like R.R. Hannas left their general practices to become emergency physicians, only to encounter the same issues that GPs had faced for decades — less training than their specialist peers, an insurmountable clinical demand, and a reputation for being unskilled and out of touch with modern medical science. However, these early emergency pioneers were able to learn from the hardships faced by their general practice ancestors; in their quest for recognition, they prioritized the need for residency training, the creation of a specialty board, and greater academic development.



FIGURE 1.5
US Army medics treat wounded soldiers at a portable surgical unit in Burma during WWII.

THE POTENT EFFECTS OF WAR ON 20th CENTURY AMERICAN MEDICINE

Military experiences had a profound influence on many of the men who would pursue medicine after completing their service. R.R. Hannas, for one, came to admire his defense battalion doctor, Orrin Levin, MD, who later became an influential mentor.⁸ The number of physicians who served during World War II was staggering. By 1945, about 52,000 doctors were deployed in the medical departments of the US Army and Navy, and another 94,000 were left home in civilian practice.²⁰

As would be expected from an institution that values rank and classification, the Army’s medical department emphasized the importance of advanced training and specialty certification by reviewing and categorizing nearly 22,000 medical officers as A, B, C, or D.

The more prestigious A and B classifications were given to those who were board certified, had completed a residency, or had extensive experience in a medical specialty. Considered less qualified, GPs usually were relegated to group D.^{10,11,20}

Military medical practice and research during WWII had a major effect on American medicine (Figures 1.5 and 1.6). For the first time ever, antibiotics were being used on a widespread basis to treat and prevent infections in soldiers. Army researchers and physicians discovered preventive measures for typhoid fever and perfected a vaccine. The treatment of shock and multiple-trauma casualties was improved through a better understanding of the

role of blood and fluid resuscitation. Psychiatric conditions in soldiers were also studied, and new treatment strategies were developed.²¹

A more rapid response and transport to field hospitals allowed wounded soldiers to receive emergent treatment in time for it to make a difference. Clinical research in the military was conducted on a larger scale and was arguably more sophisticated than research at US medical schools. The improvements in military health systems and medical advancements in the 1930s and 1940s markedly improved outcomes for soldiers. The mortality rate for battlefield wounds in World War II was 4 percent, compared with 8 percent in World War I. Improvements were even more striking for those with illness. The mortality rate of soldiers with pneumonia was 28 percent in World War I, a statistic that was reduced to less than 1 percent in the second World War. Overall, the annual death rate per 1,000 soldiers for nonsurgical diseases was 0.6 in World War II compared with 15.6 in the first World War.^{20,21}

For most US physicians, the military was about more than service; it was also a valuable training ground for the diagnosis and treatment of acute medical and surgical problems. In addition, doctors also gained an appreciation for how a medical care system that utilized multiple providers for disease prevention, triage, the acute management of injuries and illnesses, and convalescence could function. This understanding contributed to the shift in American medicine away from a physician-centered approach to a health system model.^{11,13,22} Even nonphysician soldiers became accustomed to care that did not revolve around one physician. Robert Rathburn, MD, a founder of the American College of Emergency Physicians (ACEP), noted that the hundreds of thousands of servicemen returning from WWII were oriented toward this kind of “sick call medicine.”

In the army when you were sick, you didn't call a doctor, you showed up at sick call, got your shot or your aspirin, and that was that.¹⁵

Lasting Impact

Military policies continued to influence American medicine well after the war ended. The Veterans Administration (VA) required all physician specialists working in their system to carry specialty board certification.⁹ The military also encouraged specialty training through the GI Bill, an educational program for veterans that provided a residency subsidy of up to four years with a living allowance. Hospitals, both academic and community, also received a subsidy for offering residency positions to general infantrymen (GIs).^{11,23,24} General practice physicians and veterans who were considering careers in medicine had received a clear message from observing their military counterparts: Specialists were part of a higher class.



FIGURE 1.6

US sailor dressed in pressure bandages after suffering burns during a Kamikaze Attack in WWII. He is being fed aboard a Naval Hospital.

Thousands of veterans took advantage of the GI Bill to pursue specialty medical training in the post-World War II years. The number of residency positions increased from 5,000 in 1940 to nearly 19,000 by 1950. By 1955, more than 25,000 resident physicians were training to become specialists.⁹⁻¹¹

Advances in drug therapy, surgical procedures, and technology rooted in World War II and refined in the next decade also were applied during the Korean War. For the first time in history, surgical specialists were used in field hospitals, and the rate of limb amputation and deaths from hemorrhage due to vascular injuries was reduced dramatically. New methods of transporting casualties to field hospitals, improved battlefield triage systems, and the helicopter transport of injured soldiers to nearby hospitals (MASH units) also became commonplace. More than 17,000 wounded soldiers were evacuated by UH-1 (Huey) helicopters during the Korean War. This improvement in wartime emergency surgical and medical services further reduced morbidity and mortality.^{21,25}

Although the incorporation of these principles into US civilian emergency care would take another two decades, the lessons that military physicians learned in Korea directed greater scrutiny on the care of acutely injured and ill patients back home. The experience also raised the possibility of developing a career around the care of trauma victims.^{9,10,26,27}

Although military medicine was extremely important to health care in the second half of the 20th century, it was not the primordium of American emergency medicine. Even the Vietnam War, as will be seen in subsequent chapters, did not have as much influence on the field as one might imagine. Wartime advances in the management of shock and multiple traumatic injuries garnered new interest, but these injuries remained in the domain of surgeons.

World War II may have been the first time that a functioning system for triage, transport, and acute attention to casualties resulted in improved outcomes. The Korean War emergency medical service (EMS) took battlefield care to a new level. Although the significance of this success was not lost on physicians and other health care providers, the dissemination of the principles of EMS to the civilian world was very slow. In Great Britain, emergency medical services in the civilian sector were acutely needed during the German attacks of World War II, and the knowledge gained from this experience helped to organize British EMS years before the same process occurred in the United States.²⁸

In World War I, the task of triage and directing initial care in the “sorting tent” had been passed off to the most inexperienced medical officers. Conversely, triage and early battlefield casualty management during World War II became the job of highly experienced military physicians, a factor believed to have reduced morbidity and mortality. Unfortunately, the obvious parallel between an untrained intern in a busy ER and an inexperienced medical officer in battle was not drawn in the medical literature until 1958.²⁹

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DAVID WAGNER, MD: QUAKER WITH A LIBERAL HEART

A Depression-era baby, David Wagner was born in 1931 and brought up in the small midwestern city of Jackson, Michigan:

I was born to a rather liberally focused, well-educated, dirt-poor minister ... [in] an era when money was scarce and progressive movements were rampant. My father was active very early on in Michigan labor movements with Walter Reuther and ... was an activist cleric, you might say.³⁰

Wagner's parents, who were influenced by the Quaker philosopher D'Elton Trueblood, encouraged their son to attend Earlham College, a small Quaker school in Indiana. Although his parents could not pay for his entire education, Wagner described his father's generosity:

“The ability to diagnose and monitor diseases with new technologies such as x-rays, electrocardiograms, and laboratory blood tests, coupled with the ability to treat patients with antibiotics and other drugs, meant the hospital was no longer just a place where one went to die.”

... when I went to college, there wasn't any money. He went to the upper drawer of the desk, I can still see it, which was our bank. That's where all the money was, so I could always know how much we had — it was always there. He pulled out \$600 and said, "You know, that's all I've got, but here it is ... go to college." I never got another penny from home, [but] I was able to find ways to get through college and subsequently medical school without going to a well that didn't have much in it. Looking back, that was a wonderful thing.³⁰

Wagner did not initially do well at Earlham College.

I really goofed around the first couple of years, and then all of a sudden there was a moment when I told myself ... I had better get my act together. I got a bead on medicine ... and then went from near the bottom of the class to graduating with some nice credentials.³⁰

Wagner interviewed at the University of Missouri in 1952 but was disheartened when several of the school's administrators expressed displeasure about the federal government's new affirmative action regulations, which were requiring them to enroll black medical students for the first time. Discrimination did not sit well with him: "...so when I got an acceptance there, I made a point of sending them a letter and saying 'Thanks, but no thanks, you're not the type of school that I want to go to.'" Wagner eventually settled on St. Louis University Medical School, where only about 10 percent of the student body was non-Catholic, but he found his experience as a religious minority to be interesting and enriching.

After graduating in 1956, he embarked on an internship at the Milwaukee General Hospital, where he discovered a unique system that provided an early taste of emergency medicine.

Milwaukee, at the time, had an emergency hospital down in Center City ... all the emergencies from the towns went there for initial triage and treatment. They had a second floor on which people who needed to be hospitalized were hospitalized. This would be considered today a broad-based holding unit ... you were there for 24 hours and then dispersed to the hospital of your choice. It was way ahead of its time.³⁰

Although the concept of an emergency center was new, the emergency hospital utilized the physician-staffing pattern of the times. The least experienced doctors (rotating interns) were put in charge of the ER. Always up for a challenge, Wagner was attracted to this environment.

I liked it so much that I juggled my internship to go back and do another couple [of] months.... You were on 12 then off 12, then on 24 and off 24, and you worked with the medical resident who was in charge of the upstairs. [Looking] back, it was pretty scary, but it was the typical model.³⁰

Military service was a requirement for young men in the 1950s, but Wagner's Quaker beliefs were incompatible with this demand. Fortunately, an alternative existed. After his internship, he and his new wife moved to New Mexico, where he served a two-year stint at the Indian Service Hospital. The clinical experience was enriching and rewarding, and Wagner developed a new passion outside of medicine. As he told medical students who sought career counseling:

You wind up making ... what turn out to be life-defining [decisions] on very serendipitous, flimsy bits of information.... Well, I had gotten the skiing bug. I had discovered skiing in Santa Fe at the Santa Fe Basin. I just wanted to ski more than anything else in my life. My wife sort of went along with me ... so we looked around the

country and asked, “Where can we ski?” We decided the Northwest was going to be it, because [you] could ski up there 11 months of the year. I didn’t want to be a psychiatrist and I didn’t want to be a pediatrician. They had an open surgery position, and I said, “I’ll take it!” That is how I made the decision to go into surgery. It was clearly because I was absolutely nuts to go skiing. Of course, we didn’t get to ski a lot.³⁰

Wagner went from the Indian Service Hospital to the general surgery residency at the US Public Health Service Hospital in Seattle, Washington, in 1959. During his four years of surgical training, he developed a strong interest in pediatrics, eventually completing a pediatric surgery fellowship at St. Christopher’s Hospital for Children in Philadelphia. After another brief stint in New Mexico in 1964, he and his wife returned to Pennsylvania, where their children could attend Quaker schools and Wagner could settle into a pediatric and general surgery practice.

THE CENTRAL ROLE OF THE HOSPITAL IN THE ADVENT OF EMERGENCY CARE

Prior to World War II, hospitals played a less dominant role in patient care; many arose from 19th century almshouses, which were better equipped to minister to the poor and address social problems than to provide health care.³¹

During the war, the federal government provided a strong stimulus for all types of scientific research, including medicine, through sponsored programs. Academic hospitals transitioned from being places of humane care and convalescence for mostly incurable conditions, to hotbeds of scientific discoveries. The ability to diagnose and monitor diseases with new technologies such as x-rays, electrocardiograms (ECGs), and laboratory blood tests, coupled with the ability to treat patients with antibiotics and other drugs, meant the hospital was no longer just a place where one went to die.^{9,10,22,32}

The health care workforce also changed dramatically during this era. In 1900, physicians accounted for 35 percent of those in health occupations. By 1967, this percentage had decreased to 9 percent, as the number of nurses, technicians, and ancillary hospital staff greatly increased.³³ The shift of diagnosis and treatment from the doctor’s office to the hospital also meant that physicians could see more patients in a day without bearing all the costs of new medical devices and equipment.

The ready availability of the rudiments of diagnosis and treatment also changed the way that people reacted when confronted with an acute medical problem. Patients now considered going to the hospital instead of their physician’s office when they were acutely ill. In 1964, an Ohio physician described how his office practice began to change:

Thirty years ago, my office was much better equipped to handle accidents than our hospital emergency room was. I had a nurse, lab technician, x-ray, fluoroscope, ECG, closet full of plaster and splints, Kirschner drills and wire, all kinds of operating sets, facilities for anesthesia, etc. Today I have no x-ray, no ECG, no lab technician, and my office is not cluttered up with splints, plaster, and Vincent tubes for transfusion, etc. Were I to do the procedures I formerly did in my office, I would be held for malpractice simply because we now have adequate and better facilities in the hospital emergency room.³⁴

Another effect was the geographic localization of health care; hospitals became magnets for physician practices. Many doctors had relocated their offices from their homes or immediate communities to settings adjacent to hospitals. Some enterprising entrepreneurs built

outpatient clinic buildings and rented space to physicians. This clustering of private practices lead to the logical next step — doctors began to band together to work in groups.

The federal government also began to provide large-scale support. The Hill-Burton Act of 1946 allocated federal funds to help build new hospitals, especially in rural and smaller communities. This legislation was the result of haggling between legislators who wanted a full, national health care plan and those who preferred the federal government to take a hands-off approach. Although the national health plan stalled, legislators could agree to send major funds back to their districts and states to build hospitals.

Between 1946 and 1968, the Hill-Burton initiative, a cooperative program between voluntary hospitals and the states, spent more than \$10 billion on new construction. The number of hospitals increased from 4,523 in 1946 to 5,736 in 1965.¹⁰ Some of the Hill-Burton money went to renovate existing facilities and build new emergency departments.^{10,22} Despite significant federal support, many communities in the 1960s still lacked an adequate number of hospital beds, and many municipal hospitals — once the palaces of medical care — were in a sorry state of disrepair.³⁵

Location, Location, Location

Hospital development failed to keep up with the demographic shifts of the 1950s and 1960s; suburbanites often found themselves without a quality hospital nearby. The regulation and accreditation of hospitals became formalized in 1952 with the formation of the Joint Commission on Accreditation of Hospitals (JCAH), a nongovernmental program developed by

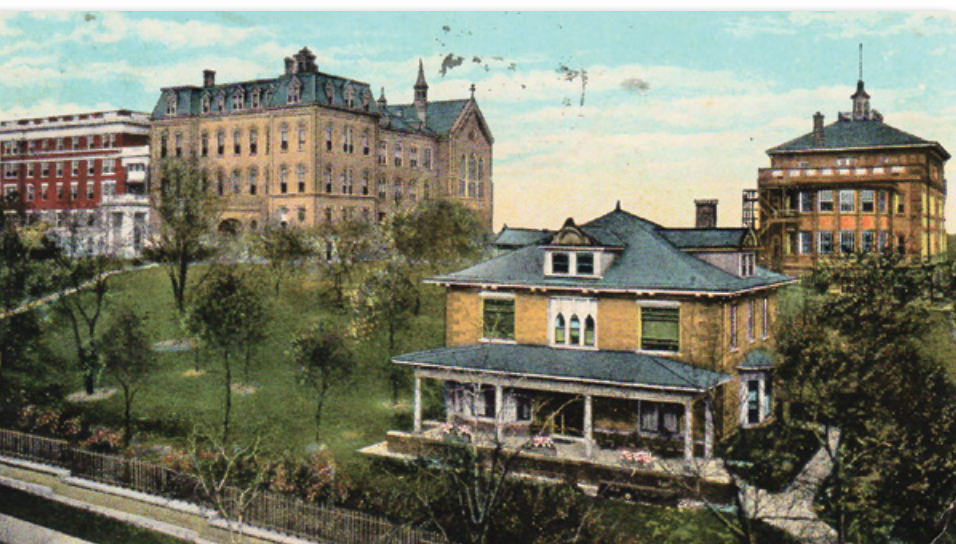


FIGURE 1.7
Postcard depicting the
Milwaukee County Hospital

the AMA, the American Hospital Association, the American College of Surgeons, and the American College of Physicians.¹⁰ Along with the shift in specialist care, the Hill-Burton legislation increased the number of hospitals and created an “if you build it, they will come” phenomenon in emergency departments.

The Milwaukee Emergency Hospital, where David Wagner did some of his internship training, was an early attempt to address care in the inner city. The Milwaukee County Board has a history dating back to the 1840s of providing care for those who cannot pay for it. The original county hospitals, including a 600-bed facility constructed in 1927, were built about six miles west of Center City. Two explanations are given

for this location — first, the hospital was built where the population was most concentrated, and second, the county administrators were trying “to get these unfortunate folks out of sight, and perhaps as a result, also out of mind.”³²

By the 1930s, the city’s poor expressed a growing displeasure with the remote location of the county hospital (*Figure 1.7*), a discontent that prompted the construction of what came to be known as Milwaukee Emergency Hospital. This facility, built in Center City, opened in 1929 and served as a receiving hospital for acutely ill or injured residents. Patients might be transported to the emergency hospital by the Milwaukee County ambulance service in customized Cadillac hearses. Indigent patients were attended to, and might even undergo surgery at the emergency hospital, but were then transferred out to the county facility if a longer hospital stay was required. Those who had the ability to pay were transferred to a private hospital.

Although Milwaukee's protocol for providing emergency care to indigent patients was ahead of its time and may have planted a seed in David Wagner's mind, it was more of a triage system than an early model for emergency medicine. Emergency care in Milwaukee and elsewhere in America continued to be provided by the least-trained physicians. County boards and hospitals could ensure access for their citizens, but they could not guarantee quality patient care.

The concept of emergency hospitals carried through to the 1960s and was proposed in the National Health Forum on emergency care in 1962. By then, however, the Milwaukee Emergency Hospital had become inferior to the county hospital for the management of trauma patients and the critically ill. With improved ambulance transport, not much rationale could be found for taking critically ill patients to an inadequate facility, and then transferring them several miles to the county hospital.

Three surgeons who had worked for decades in the Milwaukee County Hospital system wrote a scathing review of the city's emergency hospital in the *Journal of Trauma* in 1963. Provocatively titled "The Trauma Patient vs. Emergency Care," the article maintained that the facility treated few trauma cases and was ill-equipped to manage sicker patients or provide emergency medical backup. "Emergency care is every physician's responsibility" became an often-quoted statement from this article by surgeons who felt the burden of an increasing number of trauma victims and saw no involvement in the emergency department by their medical colleagues.³⁶

City hospitals were the default centers of care for black and other minority patients, regardless of their ability to pay (*Figures 1.9 and 1.10*). Black patients who were treated at Chicago's Cook County Hospital between 1950 and 1960 actually had higher incomes and were more likely to have health insurance than white patients, but they were forced to use the public hospital because of their race.³¹ In the South, the problems of poor-quality hospital and emergency care were felt even more acutely by black citizens, who were denied access to the normal medical care received by whites.

Most hospitals in the South were segregated by race. In some cities, separate hospitals existed for blacks and whites; in others, the hospital itself had segregated wards. In Memphis, middle-class blacks resented being forced to seek care in the charity wards of municipal hospitals, a discontent that spurred construction of the E.H. Crump Hospital in 1956. Named for a prominent black politician, the hospital would become a state-of-the-art academic facility for black patients, staffed by black doctors. Although this was a partial solution to the problem, it perpetuated medical racial segregation in Memphis.³⁷

“The rapid growth of the National Institutes of Health, which generated significant grants to academic medical centers, shifted the focus of medical schools from merely educating students to building biomedical research programs.”

JOHN WIEGENSTEIN, MD (1930–2004): FINDING HIMSELF

Born in a farm cabin in rural Missouri, John Wiegenstein had no official record of his birth; years later, he had to request an affidavit from the doctor who delivered him so that he could obtain a birth certificate.³⁸ John's father was a foreman for the Missouri highway department, a job that required travel to construction sites around the state. John and his sister spent their preschool years living in various Missouri motels.

He eventually entered the St. Louis Preparatory Seminary, a six-year program for aspiring priests. While he enjoyed his seminary experience and performed well enough to earn a scholarship to American University in Rome, he soon began to have second thoughts.

I was asking a lot of questions in class about why we go to hell. Religion has to be rational, and it didn't seem to me that some parts were rational. They made appointments for spiritual counseling, and I decided I'd had enough ... I didn't feel I had the vocation. The seminary had Polish nuns, and they started looking good to me. I thought that was a bad sign.³⁸

Looking for direction, he consulted a pastor, who looked at John's excellent math and science grades and advised him to study engineering at the General Motors Institute of Technology in Flint, Michigan. He soon discovered that engineering was not for him, either, nor were brief studies of business and economics. He and a friend decided to pursue the military and enrolled in the Aviation Cadets program in the United States Air Force. Although he was excited to learn how to fly, he would soon realize that he had, yet again, missed his calling.

After earning his pilot's license, Wiegenstein "washed out" during a required 60-hour flight check, gave his Air Force instructors "a ride they'll never forget," and returned to Flint at the age of 19. Newly married and thinking about starting a family, he took premedical courses and borrowed the \$20 application fee to apply to the University of Michigan Medical School. He was accepted into the class of 1956.³⁸

To make ends meet, the industrious student drove a cab at night and worked at the hospital information desk. He often nodded off during his morning classes, and ended up failing pathology. In his clinical years, he worked a different night job — as the covering ER physician at Beyer Memorial Hospital in neighboring Ypsilanti. Wiegenstein was hired by the hospital administrator and was pleased to be paid \$1.50 per hour. He recalled one of his experiences:

I got a lot of lacerations. People in Ypsilanti had a tendency to have slasher fights and so I got lots of training — no training! I had [patients with] foreign bodies that were embedded in a cornea and I'd call the ophthalmologist and he'd say, "Well, just flip it out." I'd say, "No it's too deep, I tried with a Q-tip." "Well, do you know how to curette this?" I said, "I'm going to leave you on the phone while I do this. I don't want to perforate this guy's cornea." "He's tough, don't worry about it!" In other words, they forced you into doing these things. Good experience I suppose, but not well directed.³⁸

ER PHYSICIAN STAFFING: PRE-1960

Like many of the pioneers of emergency medicine, John Wiegenstein's first experience in an ER was as a largely unqualified provider. Why would a hospital in a well-populated area need to resort to staffing its emergency room with medical students? Why were some of the sickest and most emergent patients being attended to by the least qualified physicians? The answers to these questions lie in the peculiar physician demographics of post-World War II America and the evolution of hospitals and access to care.

The emphasis on scientific development during the war helped spawn huge federal and private corporate initiatives in medical research. As health scare scholar Paul Starr noted, the four major federal postwar programs — medical research, mental health, the VA, and community hospital construction — boosted the resources and capabilities of the medical profession and institutions but did not threaten their sovereignty.⁹ The rapid growth of the National Institutes of Health (NIH), which generated significant grants to academic medical centers, shifted the focus of medical schools from merely educating students to building biomedical research programs. More students became interested in academic and scientific

careers, and the faculty ranks swelled. The growth in the percentage of physicians who practiced as researchers, teachers, or as employees of governmental or other institutions was accompanied by an attrition of general practitioners. The number of US doctors in private practice per capita declined from 108/100,000 people in 1940 to 91/100,000 people in 1957.^{9,13}

Supply and Demand

While physician numbers were waning, however, the number of emergency cases continued to grow. In 1954, an estimated 9.4 million patients were seen in American ERs, and by 1965, that number had tripled to 28.7 million.³⁹ A 1956 study of 90 eastern and midwestern hospitals found a nearly 300 percent increase in ER visits from 1940 to 1955.⁴⁰ At the same time, hospital admissions and nonemergency outpatient visits were increasing at a more modest rate.^{40–44} At Hartford Hospital, ER visits went from fewer than 2,000 per year in 1938 to almost 22,000 per year in 1957.⁴³

Health and hospital experts attributed this spike in ER visits to the relative physician shortage during World War II; however, the increase was higher *after* the war than during it. From 1940 to 1945, ER visits increased by only 8.4 percent. From 1945 to 1950, the increase was 60 percent, and from 1945 to 1950, visits rose by 64 percent.⁴⁰ This growth, which continued unabated into the 1970s, could not be attributed to population swell or shift; hospitals reported a marked increase in ER visits, even when the local population remained steady.

A common method of ER staffing for smaller and midsized nonacademic hospitals in the 1950s (and even until the 1970s for some) was to assign a nurse (Figure 1.8) to assess patients, make triage decisions, and then call an appropriate physician to deliver care.^{22,45} Physicians were not obligated to provide treatment, however, and some with busy practices found emergency care to be a significant distraction from their regular duties. In critical cases, the time spent trying to locate a willing doctor could be fatal.

By 1960, most larger hospitals began to staff their ERs with physicians, residents, or medical students like John Wiegenstein, but finding able providers was difficult.^{38,46,47} In some cases, the medical students hired by hospitals were better trained and qualified than the physicians staffing the ER. Since emergency practice was not considered a “real” occupation, only doctors without a regular job were for hire. Hospitals often resorted to employing those who were troubled, transient, or aged. Some were alleged to have alcoholism, drug abuse, or criminal records. Emergency practice was not something that any self-respecting physician would do for a living. It might be a brief part of one’s career journey, but it was never a *destination*.

The debate about the US physician workforce had been ongoing since the end of World War II. The large influx of veterans who entered medicine or did residency training under the GI Bill increased the number of physicians in the United States and led to complacency regarding the recruitment of new medical school students. There was no master plan for physician supply at the federal level or within the medical professions. The prevailing philosophy was that private practice was “... taken to mean professional privacy — the privilege of a responsible profession to regulate its members and to dictate its destiny....”¹¹



FIGURE 1.8
Nurse Joanne McGarry is pictured at the Boston Children's Hospital in Massachusetts.

This philosophy, which was put into action by the AMA, effectively minimized public and governmental input in the supply and practice patterns of physicians until the 1960s. In 1951, the AMA's Committee on Medical Education recommended reducing the number of internships; however, hospitals vigorously opposed this, and no restrictions were put in place. The Hill-Burton legislation had increased hospital construction, but little thought had been given at the federal level to how these new facilities would be staffed.¹⁰ The transition of medicine to a more business-oriented, profit-driven enterprise meant the application of corporate principles — one of which was the search for cheap labor.

Foreign Occupation

The lack of coherent policies regarding the physician workforce among medical schools, the federal government, and the growing health care industry had begun to create an intern deficit. In 1957, American medical schools were graduating fewer than 7,000 students per year,

while hospitals were seeking to fill more than 12,000 internship positions. Seizing the opportunity, foreign physicians made their way to the United States in droves.

In the early century, it was common for American graduates who aspired to greater clinical knowledge and exposure to seek additional education in Germany or other European nations.²² However, by the end of World War II, massive US federal support of medical science had helped to build strong biomedical research and medical education systems. Doctors from other countries began to regard the United States as the best training environment in the world.^{11,48}

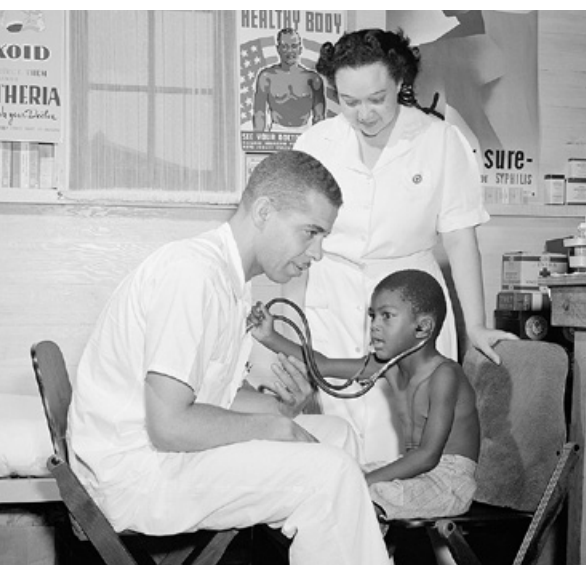
Prior to the 1950s, most foreign physicians came from Northern European countries, where training was like that of the US. In the 1950s and 1960s, a swell of emigrant physicians arose from Asia, Latin America, and the Middle East; 20 percent were from the Philippines. Public concern about the number and questionable expertise of these international recruits spurred the creation of the Educational Council for Foreign Medical Graduates (ECFMG) in 1956. The organization developed an examination, first administered in 1958, to assess medical knowledge and English competency. As hospitals and residency programs began to require successful completion of the test, the number of foreign medical graduates available for intern and residency positions temporarily slowed.⁴⁹

By 1965, one-quarter of all the country's interns and residents were foreign graduates.⁵⁰ The prior medical training of these new emigrants was inconsistent, and once in the United States, their education was often hampered by limited English language comprehension. The 1965 amendments to the Immigration and Nationality Act perpetuated this flood of international physicians. Foreign physicians were given preference for immigrant visas, presumably because of the domestic shortage. Much like all major decision-making in American medicine, policies for controlling the influx of foreign physicians was spastic, with the AMA, federal and state governments, hospitals, and political groups all grappling for control of the process.^{48,49}

Unlike today, many smaller community hospitals offered internships in the 1940s and 1950s. These trainees were a key element in the symbiosis of hospital and private physicians and played a pivotal role in ER staffing. They provided cheap labor, while ostensibly receiving quality training. This allowed hospitals to

keep their beds full without having to rely on busy community physicians for basic patient care. Private practice physicians were freed of many hospital tasks and could spend their time seeing patients in the office or doing surgery.^{11,51}

While most academic medical centers could compete for US medical school graduates through the National Residency Matching Program established in 1952, community and



FIGURES 1.9 AND 1.10
Amidst racial tensions, the number of segregated hospitals grew.

inner-city hospitals were less desirable to American graduates. This shortage of domestically trained doctors, which often led ERs to turn to foreign physicians, coincided with a problematic increase in patient volumes.^{40,43,46} In Ernest C. Shortliffe's 1956 survey of 90 hospitals with a range of 150 to 1,000 beds, 71 percent reported staffing their ERs with house officers, and 21 percent used private physicians.⁴⁰ Academic medical center ERs were routinely staffed by interns, with occasional supervision by resident physicians (and less often by a faculty-teaching physician).⁵²

It became increasingly common for foreign physicians to be assigned to the ER during their intern year. Although many of these young doctors were strong students in their native lands, they failed to receive adequate supervision at American hospitals.⁴⁸ As a result, the rest of the medical profession and the public came to perceive the ER as a bastion of poor-quality care — a place where Frances Mills, the wife of an emergency medicine pioneer, noted: "...the great unhappiness with the ER at that time was that people couldn't understand the doctors, they were all foreign."⁵³ Kenneth Iserson, MD, an emergency physician who worked on a rescue squad in Maryland in the 1960s, described Holy Cross Hospital at that time:

... there were a few emergency docs working there, and if they spoke English, that was good. It was clear that most of them would have had trouble working anyplace else.⁵⁴

After their internships, foreign physicians were usually less competitive for residency training or for quality jobs; many sought employment in undesirable locations. Starr describes three groups of physicians in 1960 America — academic physicians (including interns and residents); private, office-based community physicians; and physicians in rural or inner-city areas or state institutions. This third group included doctors who worked in ERs:

Smallest in number, lowest in prestige, these were often older general practitioners or, increasingly, younger foreign medical graduates. They were the most professionally isolated of physicians, though some worked in the shadows of the great medical centers.⁹

By the early 1960s, serious concerns were developing about both the number of foreign physicians practicing in the United States and the inadequate training for American doctors. Eleven of New York City's major municipal hospitals had house staffs entirely composed of international medical graduates.⁵⁰ Ray E. Trussel, MD, commissioner of hospitals in New York City, described the situation in the Harlem Hospital in the late 1950s:

A state of crisis developed. A large number of interns and residents had to be removed from patient care responsibilities because they had failed the examinations given for foreign medical graduates. I was requested immediately to conduct an independent survey. The conditions found were incredible. Injured and sick patients were sitting on benches because there were no more beds.... Patients were lying in bed with fractures five days old that had not been set....⁵⁰

This example, which would eventually help spur a reorganization of New York hospitals, illustrates the pattern of condemning foreign medical graduates for the ills of the health care system of the late 1950s. It was easier to place blame on a convenient scapegoat than to admit that organized medicine had failed to address the marked increase in ER visits.

In 1958, the ECFMG educational requirement made it more difficult for some foreign-trained physicians to train in the US. In 1959, the State Department ruled that foreign-born interns and residents could remain in the country for a maximum of five years. Many circumvented this restriction by marrying American citizens. In 1963, Congress finally passed legislation to increase the number of health professionals, and medical school enrollment rose significantly.^{9,48}

Two of the pioneers of US emergency medicine were emigrants, but unlike most foreign-born physicians who landed in the ER, Reinald Leidekmeyer, MD, and George Podgorny, MD, had amassed advanced training long before launching their careers.

REINALD LEIDELMEYER, MD: THE AMBITIOUS DUTCHMAN

Born in The Netherlands in 1924, Reinald Leidelmeyer grew up amidst the hardships of the German occupation. He remembered, “My mother made a diary of the starvation winter. We lived on 400 calories a day, which consisted of sugar beets and tulip bulbs, and no other food.”⁵⁵ Leidelmeyer joined the Dutch resistance to the Nazis in the final years of WWII and was arrested and banished to a prison camp:

Five of my high school friends were executed, and my physics teacher was executed ... I have pictures of it. I was walking with a stack of underground papers one day on one of the back streets, and I was suddenly surrounded by five German Gestapo police on bicycles, guns and all. I was taken to the Gestapo headquarters. We were put in a cattle car on a train ... we traveled very slow[ly] ... only at night. Finally, two or three days [later], I got to Germany. I became an interpreter that day because I could speak four languages ... it probably saved my life. At some point they asked for gardeners. I said, “I am a gardener.” I wasn’t, but ... they took me [aside]. My jobs were, among others, getting water out of the electrical company’s basement, where the generators were. I had to get in with a shovel and a bucket [to] get a layer of water out of the floor every day. Then they took me to the public park in a nearby town ... and I had to clean the public latrines.⁵⁵

Confined to the camp for three months, Leidelmeyer was released as the war was ending. Undeterred, he walked back home to Holland:

The only thing I remember of that is that I crossed the Dutch border and a little old lady gave me fried potatoes, which I had not seen for God knows how long...a little further somebody with a horse and buggy picked me up and took me to a Sanitary Red Cross Station, [where] they deloused me...from that moment until I reached my house, I have no memory. Anyhow, when I came home, the war was just about over and the Americans and the British came over very low flying and throwing food because the population was starving. The next day I got diphtheria. There were no medicines. My mother finally found a doctor who had one ampule of serum left, which she shot in my leg right here. For years I had a numb spot here, it was a bubble. It was 20 cc, I’d say. But I survived.⁵⁵

When the Dutch universities reopened in 1945, Leidelmeyer enrolled in medical school at Leiden University. After completing a two-year rotating internship in 1953, he packed his bags for the United States. Following an internship in Richmond, Virginia, he was drafted into the US Army — just one year after emigrating. After two years as the Commanding Officer of a dispensary in Germany, he completed further training in internal medicine and pulmonary diseases in a tuberculosis sanitarium affiliated with the University of Virginia. Somewhat bored with the idea of limiting his area of specialization, the ambitious young doctor moved to Fairfax, Virginia, in 1960 to establish a general practice. Fairfax Hospital, a state-of-the-art facility, had just been built, and the administration was grappling with how to staff its ER. Reinald Leidelmeyer would become the solution to that problem.

“Despite its role as a lifeline for the growing volume of critically ill patients and a rich hotbed of clinical training and research, the ER remained the forgotten stepchild of academia.”

GEORGE PODGORNÝ, MD: A BOY FROM PERSIA

As the only child of a Czech father and Armenian mother who had separately fled their countries in the aftermath of World War I, George Podgorný was born and raised in Iran. His father was in charge of physical education at the military academy in Tehran and served as head of the Iranian Olympic Committee, where he had the formidable duty of training the unathletic son of the Shah. Podgorný was a playmate of the young Shah-to-be and remembered riding horses and playing games with the royal family.⁵⁶

Although he was interested in medicine, his parents believed that universities in Iran would fail to provide their son with an adequate education. In an effort to help curb the spread of communism, the United States welcomed a new wave of foreign students to American colleges in the mid-1950s. The rationale was that emigrants who were taught the merits of capitalism and democracy would promote this type of society when they returned to their countries of origin. This policy did not account for the seductive influence of American culture; many foreign trainees, particularly those in postgraduate medicine, never returned to their native lands.

Podgorný used a private US agency to learn about American colleges and universities. In a catalog from Maryville College in Tennessee, he noticed a familiar name — Commodore Fischer, a Presbyterian missionary and historian who had taught at Tehran University. Podgorný, who had played soccer with Fischer's children in Iran, contacted him and secured admission to Maryville College. His mother, a writer, had just published a book in Armenian, the proceeds of which funded her son's journey to the United States to start college in 1958.⁵⁶ He majored in biology and chemistry with the intent of going to medical school but was not always encouraged by his faculty:

I applied to med schools, and you know you have to have some letters of recommendation from college professors. I went to one of my advisors, who was a chemistry professor, for whom I was an assistant in the lab, and who professed a great deal of affection and interest for me ... and he said, "What are you going to do?" I said, "Well, I am planning to go to medical school." He said, "You'll never get in, and you'll never make it."⁵⁶

Podgorný persisted and was accepted to three medical schools, eventually choosing Bowman Gray Medical School, where he was drawn to the surgical fields. As a second-year student he learned how to suture on a rabbit but hungered for more experience:

I started hanging out in what was then called the emergency room. People working there were interns ... and not only clinical interns, but radiology interns were there, pathology interns were there, people who hardly knew anything, so to say, about [clinical] medicine. These people were extremely unhappy. So, I offered to suture, and though it probably wasn't an appropriate [duty for] a sophomore medical student, [the interns] just didn't want to suture.⁵⁶

Podgorný stayed in Winston-Salem and began a surgical internship and residency at North Carolina Baptist Hospital in 1962. He went on to complete a program in general and thoracic surgery and serve three additional years as a chief resident in general surgery and thoracic and cardiovascular surgery. He finished in 1969, but despite his extensive training, actually never practiced as a surgeon. Rather, he found himself drawn to the field of emergency medicine.

INDISPENSABLE AND IGNORED: ACADEMIC EMERGENCY MEDICINE

Emergency care was not on the radar screen of mainstream medicine in the 1950s. Despite its role as a lifeline for the growing volume of critically ill patients and a rich hotbed of clinical training and research, the ER remained the forgotten stepchild of academia. Both medical and surgical subspecialties were burgeoning. Technology was making new procedures possible, and general medicine and broad-based skills were no longer prized in the academic setting. Emergency subspecialties such as trauma care, acute cardiac disease, and toxicology would not emerge as major areas of medical scholarship for another decade.

This is not to say that all academic physicians were unaware of what was happening in the ER. The first “modern” English language book on emergency care was produced by the British physician C. Allan Birch in 1948.⁵⁷ The text focused on medical rather than surgical emergencies, and the first chapter describes an “emergency bag” stocked with medications and tools of the time for “every physician who is liable to be called in an emergency....”⁵⁷

In 1949, two American academic physicians from the State University of Iowa College of Medicine, Stuart Cullen, MD (chairman of anesthesiology), and E.G. Gross, MD (head of pharmacology), wrote the *Manual of Medical Emergencies*, which also was limited to acute medical conditions and did not address surgical issues. Cullen and Gross dedicated the book to “the general practitioner who is expected to see all, know all, and do all in the field of medicine and who, to his everlasting credit, fulfills these expectations admirably.”⁵⁸

The first comprehensive post-World War II text on emergency care in the United States was written by Thomas Flint Jr, MD, and published in 1954. *Emergency Treatment and Management* was favorably reviewed in the *Journal of the American Medical Association* and consisted of an alphabetical listing of acute presentations, from abdominal pain to wartime emergencies. Most conditions, including allergic reactions, cardiac emergencies, and head injuries, were addressed in a few concise paragraphs. Flint included sections on bunions, “ingrowing” toenails, insomnia, and gonorrhea. The section on poisons — the most extensive in the book — accounted for 115 of its 300 pages. Flint was the first author to include injuries and trauma in his text and may have been the first to use the term *emergency physician*. He noted that the term is used:

*... to designate the physician in charge of the patient in the emergency room, department, or private office. In large hospitals, this physician may be on a full-time basis; in smaller units, he may have numerous other duties, or be on part-time emergency call. Too often, he is an intern, resident, or general practitioner of very limited experience in the management and treatment of acute conditions.*⁵⁹

Flint was the director of the Division of Industrial Relations for the Permanente Medical Group and chief of the Emergency Department at the Kaiser Foundation Hospital in Richmond, California. While he did not regard emergency medicine as a legitimate area of specialization, his hospital was more progressive than most, referring to its ER as an “emergency department.”

Quest for Better Care

Emergency care received very little attention in medical school curricula in the post-Flexner era, a limitation that was bemoaned by physicians who were interested in accidents and

injury. Robert H. Kennedy, MD, the surgical director at New York City's Beekman-Downtown Hospital and a major advocate for improved trauma teaching and care, noted in 1937:

There has been no organized effort to train the medical profession in first aid. The medical schools which [sic] give any instruction in this subject are a rare exception. The result is that the average medical student on receiving his degree knows less about it than a first-class Boy Scout.⁶⁰

ROBERT H. KENNEDY, MD: THE FATHER OF TRAUMA CARE

Robert Kennedy, whose mission it was to improve the care of accident and trauma victims, lived a long and colorful life. After contracting typhoid fever as a young surgeon, he claimed to be a victim of Typhoid Mary. During World War I, Kennedy narrowly escaped death again — but not on the battlefield. As the war was ending, he began courting a young French woman. While pushing her on a swing, he suffered a severe blow to his head. Drunk from celebrating the war's end, the doctors back at the military camp put the wounded surgeon aside and let nature take its course. Kennedy claimed the girl's farmer father had to raise his depressed skull fracture with a crowbar. He recovered, but the dent in his head remained obvious for the rest of his life.

Most of his career was spent at Manhattan's Beekman Hospital in New York City, where, from the 1920s to the 1950s, he was a surgical leader with a keen interest in the management of traumatic injuries. He also served stateside as a lieutenant colonel during World War II. Like many other surgeons who returned from war, Kennedy was exasperated by the substandard quality of civilian trauma care, which was woefully undeveloped and disorganized compared to battlefield care. A meticulous man who monitored the amount of water his visiting granddaughter used when washing dishes, Kennedy took this same approach to his medical career.

Kennedy initially focused on improving first-aid techniques, such as the use of tourniquets for hemorrhage and traction devices for femur fractures, and later turned his attention to enhancing hospital readiness and the ambulance transport of accident victims. Although he was sometimes viewed as intimidating, he could also be quite mischievous. When his Beekman Hospital staff helped themselves to the bowl of chocolate candies on his desk, he refilled it with chocolate covered ants — and those were eaten, too.

“The ERs of the 1950s, and many of the people they served, were in the same boat: disenfranchised, lacking a voice, and largely ignored by the ‘powers that be.’”

Eighteen years later, Kennedy, who served from 1939 to 1952 as chairman of the Committee on Trauma of the American College of Surgeons, lamented that the words he had written in 1937 remained true — the medical profession had made little progress in the treatment of traumatic injuries and the quality of prehospital care.⁵²

At Hartford Hospital, a major teaching facility outside the large shadow of Boston, two physician administrators, Shortliffe and T. Steward Hamilton, MD, were witnessing a boom in emergency visits. Their article, “The ER and the Changing Pattern of Medical Care,” which was published in the *New England Journal of Medicine* in January 1958, was a compilation of historic data and current surveys that addressed ER usage, reasons for the boom in patient visits, and strategies for addressing the developing crisis. It was a watershed publication for emergency medicine, garnering the widespread attention ERs so desperately needed. The article's closing sentences echo its authors' focus on the physician component of emergency care:

Plans should also be made for modernization of staffing patterns in emergency rooms. As load and complexity increase, it is increasingly important that these areas be well staffed with professional personnel of adequate training and mature judgment.⁴⁰

The editors of the *New England Journal of Medicine* also seemed concerned about the lack of trained physicians in the ER. In an accompanying editorial, they state:

*There is nothing to take the place of a physician experienced in the treatment of emergency-ward patients, medical or surgical. The public is increasingly demanding good facilities for emergency-ward care, but in the last analysis, the experience and judgment of the physician who directs this care is the indispensable sine qua non.*²⁹

The problem was that there were few “indispensable” physicians to dispense to ERs. A number of other physicians and organizations also appreciated the need for emergency medical services. As early as 1947, the AMA had created a National Committee on Emergency Medical Services, the primary focus of which was disaster preparedness and civilian defense in the event of a war on domestic soil. While routine civilian emergencies were not receiving much attention from organized medicine, hospitals were dealing directly with the increase in ER visits and had become more attuned to the problem.

Surgeon Charles Lindquist, MD, the chief of emergency service at Santa Monica Hospital, was among the first to view the ER as a positive and important component of health care.⁶¹ In his 1953 paper, “Hospital Facilities Required for Emergency Care,” he describes the components required to create a functional “emergency department” in a large hospital and endorsed its role in fostering public confidence.⁶¹ The following equation, which he wrote in capital letters, was well ahead of its time: “GOOD EMERGENCY CARE = GOOD PUBLIC RELATIONS.”

Other publications also provided recommendations for running a quality emergency department, with tips on architecture, ancillary services, supplies, and staffing. In 1957, the *Journal of the American Hospital Association* devoted an entire issue to emergency care in community and small teaching hospitals.^{45,62} However, this positive publicity didn’t make much of an impression on the world of academic medicine, which was preoccupied by a frenzy of scientific discovery.

The fruits of basic science research were generating a great deal of excitement among clinicians. The announcement in 1955 of Salk’s transcendent polio vaccine demonstrated how well-supported research with large-scale clinical trials could result in victory over disease.⁹ Buoyed by this success, academic medical centers focused on building strong biomedical research programs, laboratories, and clinical research units. Considerable rewards would go to universities that could compete well for federal and foundation research support. Between 1955 and 1960, Congress increased NIH funding from \$81 million to \$400 million.^{9,11,13}

Because the emergency room was a place where interns and residents often were left to their own devices, a faculty member who spent much time there might be perceived as taking a step backward. This view of the ER as the kindergarten of academic medicine was compounded by the lowly reputation of ER physicians in nonacademic hospitals. Any faculty member who had a sincere interest in emergency medicine would be forced to battle a deeply rooted negative stigma.

The fields of surgery and orthopedics had demonstrated modest interest in emergency care through trauma management and emergency medical services. “Surgery men” were often appointed to run academic ERs. Two such individuals — Peter Rosen, MD, and Ronald Krome, MD — would have an irrevocable impact on the development of academic emergency medicine.

PETER ROSEN, MD: THE STREET FIGHTER

Peter Rosen may have been genetically predisposed to his legendary toughness. He recounts the time his father, a general practitioner in Brooklyn, attempted to make firewood by chopping up a railroad tie with an ax. When the ax became stuck in the wooden block, Rosen's 5-foot-6-inch, 300-pound father lifted the tie above his head, only to have it disengage and fall on his foot. He screamed, cursed, and hopped about, then proceeded to chop the tie into pieces. Not realizing that it had been soaked in creosote, which produces thick, black smoke, he carried his bounty inside and lit a fire. The Brooklyn fire department soon arrived, entered by hacking through the front door, and extinguished the flames.

A self-ascribed "street fighter from Brooklyn" who often mirrored the persistence and outrage of his father, Rosen would start more than one "fire" in his academic career.⁶³ In 1951, the young nonconformist enrolled at the University of Chicago, where he honed his critical thinking abilities and became comfortable expressing his opinions:

I remember one night in the dormitory, I picked up a book of Picasso prints ... I had never seen anything like it; it was his "blue" period. I looked at this and I said, "What is this painting all about?" The house head [asked me] something that nobody had ever said to me before in my life, "Well, what do you think?" It was kind of like a light switch went on in my brain. I started free-associating to the painting, and I guess I've been doing it ever since.⁶³

Those who later opposed him in the development of academic emergency medicine would wish the house head never asked Rosen that question. As bright and spirited as he was, he struggled to get into medical school — a challenge he attributes partly to his ethnicity:

It was very hard to get into medical school at the time I was doing it — probably even harder than it is right now. I think there was something like nine applicants for each place, and virtually every medical school had a Jewish quota — and that wasn't to ensure that they had Jews! I didn't get accepted the first year I applied. Then I spent a year at Columbia, basically taking more courses and reapplying. I got into medical school by sheer luck. I was placed on the waiting list at Washington U., and some poor bastard detached his retina. His bad luck was my good luck.⁶³

Rosen attended Washington University Medical School in St. Louis, Missouri, from 1956 to 1960 but did not have a strong feeling about what branch of medicine he would pursue. He hated the surgery department and did not like internal medicine much better; thinking ophthalmology might be a happy medium, he started an internship at the University of Chicago Hospital. Eager to get his surgery rotation out of the way, he reluctantly reported to the operating room on the first day of internship, where he got the chance to do an appendectomy. Seduced within minutes, Rosen abandoned his previous plans and embarked on a general surgery residency at Highland Hospital in Oakland, California, in 1961.⁶³

RONALD L. KROME, MD: THE LUCKY CHARMER

Ron Krome was born in 1936 in the "Jewish ghetto" in Baltimore. He remembered being instructed to sit quietly in the car while his father, a bar owner and numbers runner, called on gamblers who were placing their bets. Krome had the classic urban, ethnic upbringing — a modest, but close-knit community and stickball in the streets. A good student despite his humble background, he was the first person on his dad's side of the family to go to college, or even graduate from high school.⁶⁴

Krome began his academic career in 1956 at small, conservative, rural Westminster College in Maryland. When he was home on break, his father — always up for a laugh —

would insist on wearing Ron's freshman beanie while he tended bar. Although Ron had expected to do well in English class, his compositions were not getting better than Cs. He didn't seem to be able to find stimulating topics about which to write until he ran across an article about the anti-Communist fervor that was sweeping the country:

I was thumbing through Life magazine ... and saw a big story about the big anti-Communist senator McCarthy, and how he wanted to change the name of the book Red Riding Hood. He [also] was out to get the Boy Scouts because they were too socialistic. It was so stupid. I sat down, wrote, didn't correct it, didn't edit it, and turned it in. I figured, what the hell? I ain't doing well anyway! I got an "A" on it.... I figured out what this lady liked, and the rest of the semester I did much better. I did my term paper on gamma globulin and spelled gamma globulin wrong, something like 30 or 40 times. I was consistent, and I got an "A."⁶⁴

After a year at Westminster, Krome feared his family would be unable to afford the expensive tuition for another three years. He transferred to the University of Maryland, where he developed an increasing interest in medicine and science. His father died shortly before he interviewed for medical school, prompting a faculty interviewer to question how he would pay his tuition. Krome was a quick learner:

I said, "My father was independently wealthy and left me money." I don't know if that contributed to me getting in or not.... All the premeds would talk about what gets you in, what you have to say and that you have to be careful — had to know things like who discovered penicillin. I didn't know that in college, [but] I knew it by the time I went for my interview.... At that time, there was a Hungarian uprising, so one of the questions he asked me was how [it was] connected to Lawrence of Arabia. I don't know why [he asked], but I think Lawrence was out in the movie [theatres]. I said I'm not sure what happened, but it had something to do with the Ottoman Empire. That impressed the shit out of him.... You go through school and pick up little things that you know are going to be of no value....⁶⁴

Krome attended medical school at the University of Maryland from 1957 to 1961. Two of its most influential, dynamic faculty members were the chief of surgery, Scott Buxton, MD, and R. Adams Cowley, MD, a surgeon who would later help to build the university's famous trauma institute. Attracted to the big personalities and prestige of academic surgeons, Krome recalled their powerful presence:

Maryland's emergency room in those days was typical ... run by interns and students. Surgeons were more or less responsible for everything that happened [there].... My first job was as a surgery tech behind the ER — that was how you got started. There were some pediatricians and some internists, but I would guess about 85 percent to 95 percent were surgically trained.⁶⁴

Krome was faced with a challenge unfamiliar to current medical students: the draft. At the time, college and graduate students could receive a deferment if they ranked scholastically in the upper percentage of their class. Although his college grades were good enough to get him into medical school, they slipped below the cutoff during his senior year, making him vulnerable to the draft:

I knew that I was going to get caught the next year. I got a letter from the draft board, [saying] you've got to report, you are 1A, come down. So I went to my dean of students, who said, "They haven't sent a [medical] student to the military since the Civil War." Some time later, I got a letter that said report for your physical. I go back to the dean, and

I said they ain't kidding now. He said, "Don't worry about it, we've never lost a student yet." So I go for my physical, and I'm coming around the last stop — you don't see a doctor until the end — it was my bacteriology professor. So he said, "What are you doing here?" So I told him the story, and he said, "You are going — this ain't no time to kid! You gotta get back to Dean Smith. I'll make you 4F for three months for athlete's feet." So I go back to Dean Smith and say, "Dr. Jones was there, and he tells me you're going to have to get me out of this." He said, "You know, Krome, you just worry too much," and he walked out. So now I'm really getting antsy. The next letter I get says come with three days of clothes for your next physical. I can't not report — that's called draft dodging! So I go up to Fort Meade and get my physical, and when I get to the end, the guy says, "You have a student deferment. It just came through." I could have killed him!⁶⁴

Krome still would be required to serve two years after his internship, and eventually would volunteer for the Public Health Service. By his third year of medical school, he had decided to train in surgery. He drove his old Fiat on a 10-day cross-country tour of residency programs, many of which were using a "pyramid" system. Although a resident might be initially admitted, very few were permitted to complete the program. A physician could put in three grueling years, only to be cut in the fourth. Unwilling to take the gamble, Krome immediately ruled out hospitals with such a system. His priority was getting good clinical training with a modicum of supervision.

In 1961, he began an internship at Detroit General Hospital, a busy, urban center where "house officers ran it, but you had faculty at least making rounds two or three times a week with you."⁶⁴ His salary of \$300 a month was considered excellent pay. (In fact, up until 1960, some surgical residencies provided room and board, but no additional salary.)

NEW PERSPECTIVES

The ERs of the 1950s and many of the people they served were in the same boat: disenfranchised, lacking a voice, and largely ignored by the "powers that be." The concept of the little man working hard — the American way — and getting ahead in life was more pipe dream than reality. The major resources and influence were concentrated in the hands of the "power elite," a small group of politicians, businessmen, and military figures.⁶ The economic boom that had earned enormous profits for industries, including health care, could not erase the country's class disparities.^{1,2,5} Poverty had not been addressed in any systematic way by the federal government, and health insurance for the poor was still a decade away.

Health Insurance: A Political Football

Health insurance for working people, which had emerged as a viable concept in the early 1900s, was promoted by both Winston Churchill and Theodore Roosevelt. A voluntary prepaid health insurance program called the White Cross was instituted in Boston in the 1930s, which provided patients with a primary care doctor and referral to specialists if needed. The program seemed to work well but was disrupted by World War II and never regained traction.¹¹

Those who pushed for health insurance in the United States would have a formidable opponent — the AMA. Although it at first seems paradoxical that the organization would oppose such efforts, one must remember that the AMA initially functioned as a physician

interest group. Patient advocacy was not its primary objective. As the position and wealth of doctors expanded in the early 1900s, the organization aggressively used its growing political influence to protect the incomes and autonomy of its members.⁹ As Stevens noted, “Health insurance was seen not only to threaten the individual practitioner, but also to divide the hard-won unity of the profession.”¹¹

Strong lobbying by the AMA helped exclude compulsory health insurance from Roosevelt’s

1935 Social Security Act. The American College of Surgeons and the American Hospital Association, both organizations that stood to benefit from hospital insurance payments, opposed the AMA and favored voluntary health insurance plans for workers. Health insurance for children, the elderly, the disabled, and the unemployed had also become a more pressing problem. As early as 1936, calls for a national health care plan were heard from socialistic physician groups, and by 1938, the federal government had begun to consider the option more seriously.

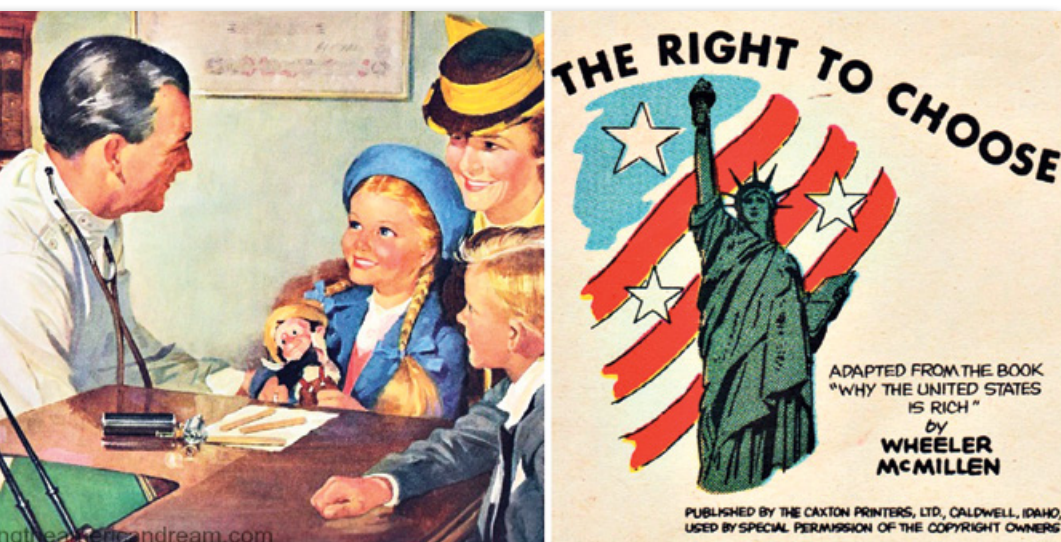


FIGURE 1.9

“The Right to Choose” that ran in *Boys’ Life* magazine in July 1963. The article was adapted from the book *Why the United States is Rich* by Wheeler McMillen.

Perceiving this trend as a bigger threat than employer-based policies, the AMA switched its position to support voluntary insurance plan coverage.^{9,11} Although President Roosevelt initially supported a national plan, his enthusiasm was dampened by the rising political power of conservatives in Congress. President Truman also advocated for universal coverage; however, much like his predecessor, he was defeated by vocal adversaries and new political developments.⁹

As Starr details, national health care reform plans were advanced three times between the early 1940s and 1950, but every attempt failed. When Congress proposed expansion of the Social Security system to include health care coverage in 1943, the AMA once again fought to preserve the status quo. The organization’s most influential members were urban, mostly East Coast, private practice physicians, who would stand to lose both autonomy and income if required to provide care under a national insurance plan. Businesses, especially the pharmaceutical industry, were also opposed to any such plans, as was the national Chambers of Commerce.⁹

Whether rooted in fundamental beliefs or political strategy, “the conflict was intensely ideological.”⁹ The rise of communism and socialism in other countries had become a serious threat to American democracy, and opponents of national health care used this growing fear to their advantage by labeling the proposals “socialized medicine.”

The resources of the AMA and its industrial alliances were vastly greater than those of the patient and community groups that supported national health insurance. In perhaps the first major special interest victory in American politics, the AMA waged a \$2.25-million war against universal coverage just before the Congressional elections of 1950. Widespread newspaper and radio advertisements warned that socialized medicine would damage the American way of life (Figure 1.11).

This political discourse was compounded by another major distraction at the federal level: the Korean War. The increasingly conservative government was singularly focused on stopping communism, and any domestic plan that could be labeled “socialistic” became dead in the water.⁹ The labor movement gained strength after the war, and through collective

bargaining became a strong stimulus for employer-subsidized health insurance (Figure 1.12). In 1940, only 9 percent of US civilians carried insurance for hospitalization; by 1950, that number had risen to 50 percent, and by 1966 to 81 percent.¹¹ The Eisenhower Administration (1953–1961) pushed private health insurance companies to cover all working citizens. Blue Cross and Blue Shield became the country's largest provider, insuring nearly half of Americans by 1955.¹¹

Congress also began to address health care for the elderly and those on public assistance. Although the amount of federal funding for state-run health care benefits increased almost tenfold with the passage of the Kerr-Mills Act in 1960, these programs failed to catch on and were not widely utilized.^{9,11} While the initiative provided those on public assistance with minimal funding for hospital care, it neglected to support outpatient physician visits — a disconnect that drove patients to seek care at the ER for even minor problems.

Municipal Mayhem

Part of the post-World War II industrial boom was an urban-suburban population shift. Starting with William Levitt's infamous "Monopoly piece" housing developments in Long Island, New York, the suburbs became the preferred destination for educated, middle class, white Americans. The suburban population grew 50 percent between 1950 and 1960 — a rapid shift that created an economic crisis for many cities, as their tax bases and local commerce started to vanish.¹ Into this urban void streamed thousands of less educated, poorer, minority, or immigrant citizens who were employed by the big industries — auto manufacturing in Detroit and steel in Pittsburgh. These workers were more susceptible to economic fluctuations. Their jobs were less secure, and they suffered from a lower margin of error.⁵ While some carried health insurance, many of their dependents and the unemployed did not.

As the northern and midwestern industrial cities became essentially segregated from their suburbs by race and income levels, health care disparities grew increasingly evident. Private hospitals treated white, employed patients almost exclusively, whereas municipal hospitals cared for poor white and nearly all minority patients. In 1957, only 3 percent of patients in private New York City hospitals were nonwhite, compared with 38 percent in municipal centers. Although these facilities were not uniformly substandard, they had fewer resources and were disproportionately faced with the difficulties that plagued indigent urban populations — alcohol and drug addiction, violence, and diseases of neglect and abuse.^{2,10,22}

Finding access to basic and preventive health care was an even larger problem. Many general practitioners had fled from inner cities to the suburbs, and the few who remained tended to the more affluent urban population. Municipal medical clinics were overrun and poorly staffed and supplied. By the late 1950s, the ERs of municipal hospitals and urban academic medical centers had become the default care centers of the underclass. The health care paradigm of the urban poor was "if you are sick, wait and see if it gets better. If you get sicker, go to the ER."

By 1960, the path to a national health care plan had been blocked by one too many political obstacles. One can contemplate how things might have played out if national health insurance

When does a "simple cold" become serious?

Whenever fever—even a degree or so above normal—accompanies a so-called "simple cold," it is serious enough to be called to the attention of your doctor.

Many of us are inclined to regard a cold all too lightly—even when it brings on "a touch of fever." We may say, "It will be gone tomorrow," and, relying on our favorite home remedy, attempt to outlive our usual activities.

Doctors take a more serious view of colds. They believe that any cold should be properly treated—and preferably as soon as it develops. While many remedies are used for the relief of colds, most physicians believe that the best treatment is simply this:

Remain at home and rest as much as possible, preferably in bed; eat light, wholesome food; drink plenty of liquids; and be sure to check your temperature.

The latter point is particularly important because a fourth cold often indicates the onset of more serious illnesses—sinusitis, ear infections, bronchitis, and certain communicable diseases including the various forms of pneumonia.

In fact, it has been estimated that colds are the starting point for nine out of ten cases of pneumonia. So, in addition to keeping check on your temperature, it is wise to watch out for chills, pain in the chest or side after coughing or deep breathing, and the appearance of rust-colored sputum. Should any of these symptoms of pneumonia develop, call the doctor at once.

Fortunately, medical science has made enormous strides against pneumonia. A few years ago, the average patient with this disease ran a high fever—perhaps for a week or more—and he often faced a lengthy convalescent period. Today, through prompt use of the antibiotic drugs, a patient's fever can usually be reduced to normal within 24 hours, and he may be virtually well within a short time.

Just a few years ago, one out of every three pneumonia victims died. Today, modern drugs are so effective that only one out of every 25 cases is lost. This record should not lull anyone into a false sense of security—for pneumonia can still strike and rapidly become serious. Prompt treatment is just as vital as ever.

Good health habits help prevent winter ailments such as pneumonia. So, during the cold months ahead, you may find these simple precautions helpful in conserving your resistance against colds, pneumonia, and other respiratory diseases:

- Avoid loss of sleep, excessive fatigue, and over-exposure to extreme cold and dampness.
- Eat a well-balanced daily diet.
- Stay away from people who cough or sneeze carelessly.
- See your doctor for a thorough physical examination if you have frequent colds.

Metropolitan Life Insurance Company
(A NATURAL COMPANY)

Metropolitan Life Insurance Co.
1 Madison Ave., New York 17, N. Y.
Please send me a free copy of your booklet, "Safe," "Respiratory Diseases."

Name _____
Street _____
City _____ State _____

FIGURE 1.12
1950s USA Metropolitan Life Insurance Company magazine advertisement

had been enacted in the United States decades earlier, as it was in Great Britain. While such a plan might have given more people access to primary and preventive care and reduced the number of ER visits, it would have solved only part of the demand for emergency services.

JAMES MILLS JR, MD (1920–1989): THE PROBLEM SOLVER

James Mills Jr, was born in St. Louis in 1920. He had a middle-class upbringing, but was reared during the Depression. His father, a practical thinker and vice president of an insurance company, had his son's job prospects in mind when he encouraged him to pursue engineering. Mills enrolled at the University of Michigan in 1938 but soon became disenchanted by his chosen major and returned home to attend the University of Missouri. Mills was commissioned in the Navy just before the attack on Pearl Harbor; despite serving in the Pacific theater, he was spared from major fighting. In 1944, he enrolled in a postgraduate course at the Naval Academy in Annapolis, where he met and married his wife. He received orders to return to duty in 1945 but received notice that the war was over before he could ship out.

Mills had begun to think about becoming a doctor, and the G.I. Bill made it financially possible for him to go to medical school. He re-enrolled in the University of Missouri to fulfill his science requirements, and in 1946, entered Washington University Medical School in St. Louis. Following his general rotating internship at St. Louis County Hospital, Mills contemplated residency. Thirty-one years old and eager for a real income, in 1953 he moved his family to Alexandria, Virginia, a growing community near his wife's hometown and less than 10 miles from the nation's capital.

It did not take long for Mills to establish a bustling general practice. According to his partner, John McDade, MD, he was "... full of piss and vinegar," but at the same time, "... had an idea toward being buddies with the rest of the world."⁴⁶ Within five years, he was on the executive committee of Alexandria Hospital. Mills "was always a kind man and took a generous viewpoint toward other people," and his service in the community reflected this.⁵³ He was on the board of directors, served as vice president of the Alexandria Community Health Center, and was later the chairman of the Voluntary Services Study for the Hospitals and Clinics Section of the Health and Welfare Council of the District of Columbia.

McDade remembered, "Sometimes it used to get under our skin because he was such a social worker...he was a beautiful man, he was one of the great guys of the world."⁴⁶ Mills was also getting a bit weary with all his activities. His wife noted, "His life was so busy, and there were such demands on it, and he had so little free time...."⁵³

One of the most vexing problems for suburban Alexandria Hospital (*Figure 1.13*) was how to provide emergency care. Despite the steady increase in visits, few staff physicians were willing to come to the ER to treat patients. Like many community hospitals

of the era, Alexandria Hospital conveniently staffed its ER with interns, many of whom managed in this unsupervised setting by telephoning patients' physicians or consultants when questions arose. However, as the medical and surgical specialties emerged and more students began to pursue advanced training, fewer hospitals had the luxury of staffing their ERs with trainees. This change led many to settle for the next best thing — senior medical students.

McDade, also a general practitioner in Alexandria, recalled Georgetown University Medical School students working unsupervised in the ER. Many would flounder, and



FIGURE 1.13
Alexandria Hospital, 1950s

McDade would learn about bad patient outcomes only after it was too late.⁴⁶ In Alexandria, the number of patients was increasing rapidly, and the use of medical students in the ER was eliciting objections from the staff and medical school dean. James Mills formed a committee to address this pressing problem after becoming president-elect of the Alexandria Hospital Medical Staff in 1960. With his eager interest in social problems and exceptional collaborative skills, Mills was a passionate advocate for change. As McDade described it:

So he became the chairman. Then, he really started to think about it in earnest – what could we do to fix this problem? It came to him. He said he was asleep one night, and he just woke up and he said, “I bet I could do that...”⁴⁶

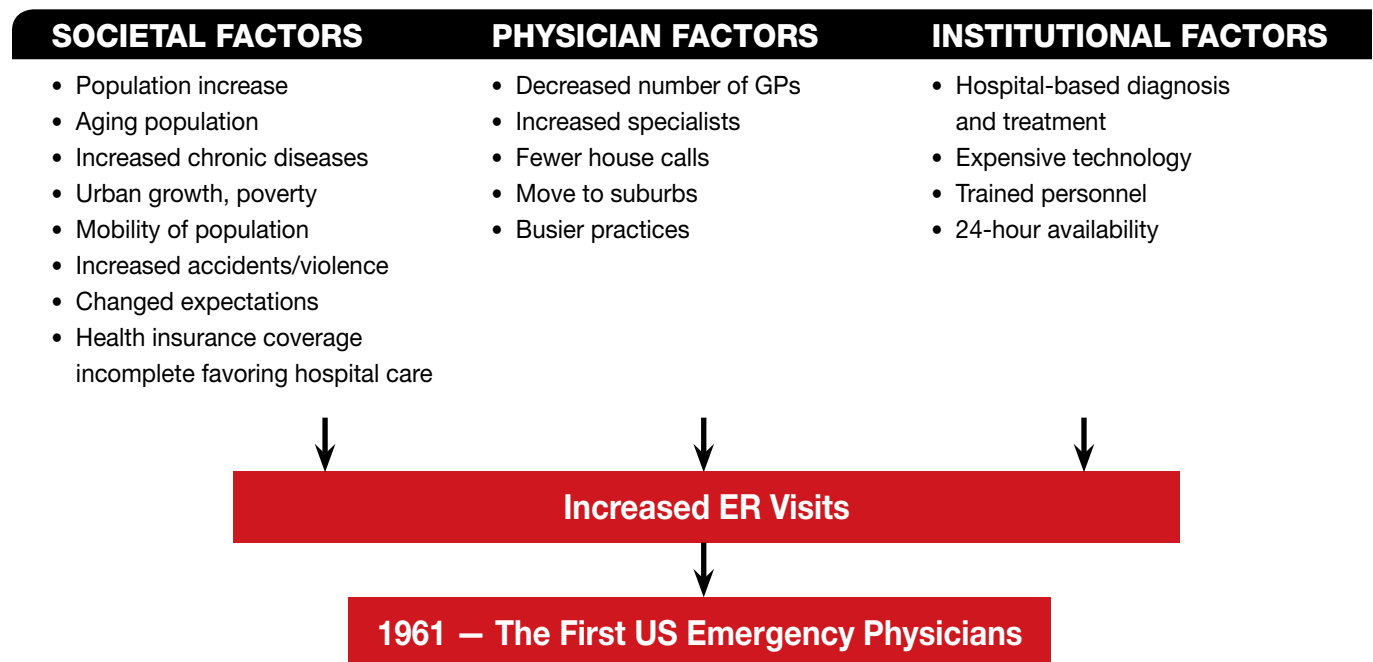
The idea that came to James Mills in his sleep in 1960 would profoundly affect American medical practice for generations to come.

A PROBLEM IN NEED OF A SOLUTION

Although the period from the end of World War II to 1960 is characterized as staid and conservative, the remarkable changes in the way Americans lived, coupled with the rise of hospital and specialty medicine, spawned a new crisis. Unlike their pre-war ancestors, the new generation had come to take this around-the-clock care for granted, believing that any medical problem could be treated on demand.⁶²

The factors that created the crisis in the ER became more pronounced in the late 1950s, and most would continue unabated for at least 20 more years (*Figure 1.14*). Perhaps the biggest reason for the rising patient volumes was the public’s desire to seek emergency care in a hospital setting rather than in a private physician’s office. Emergency rooms in inner cities, which were buckling under the weight of growing indigent populations, escalating drug abuse and violence, and an exodus of doctors, experienced the greatest increase in visits,

FIGURE 1.14
Factors involved in increased utilization of hospital emergency departments. Adapted from Webb ML: *The Emergency Medical Care System in a Metropolitan Area*.



but even in fast-growing, affluent suburbs, the ER became the default venue for care when medical demand outstripped supply.

The American public did not realize how poorly prepared most ERs were for this ever-expanding role. Even if they had, organized public outrage would have been unlikely. As historian and political scientist Howard Zinn, PhD, noted:

*America was relatively calm [in the post-World War era]. Neither the Korean War, nor McCarthyism, nor the continued humiliation of blacks, nor the increasing diversion of the country's wealth to the nuclear arms race aroused any widespread movement of opposition. Amidst the general complacency, based on middle-class prosperity, on lower-class fatalism, on agreement that communism was the great enemy, and on faith in the two-party system, only a few flurries of dissent were visible.*²

The coverage of emergency care by lay periodicals was generally laudatory, peppered with accounts of accident victims being saved by earnest physicians and surgeons.⁶⁵ A 1954 picture story in *Coronet* magazine related 12 hours in the ER through photos and breathless captions such as, "The fight goes on, the effort unstinting. People meet with accidents ... a man may even be a police case. But in Emergency, a life is a life." The final photo is of a middle-aged, white male physician peacefully reclining on a stretcher, with the caption: "Near dawn, the doctor steals a moment of sleep — until the next cry for help."⁶⁶

Despite the public's uniformly rosy view of the medical profession, insiders who recognized the persistent problems faced in the emergency room grew increasingly vocal. In November of 1954, New York surgeon Robert H. Kennedy, MD, was invited to give the Oration on Trauma at the American College of Surgeons' Clinical Congress in Atlantic City, New Jersey. Kennedy addressed the clinical problems and deficiencies in trauma care and posed several questions to the audience:

*In the emergency room in your hospital, who examines an injured patient first? May it be the most junior intern, who has never seen a traumatic case before, or an indifferently trained foreign physician with language difficulty? Have you prepared and posted a directive which will give these junior men an idea of what instances require the immediate notification of a surgical resident? Will the attending notified be at the most junior level or a senior man with experience? Do you know from personal inspection what goes on in your emergency room in the middle of the night or do you stay away due to a subconscious fear of what you might see? There is little doubt in my mind that the weakest link in the chain of hospital care in most hospitals in this country is the emergency room's attention to the injured.*⁵²

Kennedy's use of the term "weakest link" to describe the ER was picked up and promoted in the *New England Journal of Medicine* in 1958 and included in the title of a paper published by Shortliffe in *Hospitals* in 1960.^{40,47} Intended by its authors to be a call for change, the article instead characterized emergency care as hopelessly dysfunctional. Despite their eloquent description of the challenges they faced, neither Kennedy, Shortliffe, nor the other early advocates would play a personal role in finding a solution. For all the hand-wringing about the lack of proper physician staffing, no one could provide a viable method for convincing dedicated American doctors to provide emergency coverage.

Academic medicine, with its large intern and resident workforce and access to a host of specialty physicians, largely was insulated from the problems of the ER. In fact, the key players in academia would be content to ignore emergency care for two more decades.



Bred by social and political conditions of the mid-1900s, borne out of service needs, and nurtured by a few maverick physicians, emergency medicine was once an outcast — a populist favorite shunned by the establishment. The early emergency physicians were different from leaders in other fields — less educated, less academic, more Midwestern. And as is often the case with those who push the boundaries, these nonconformist, pioneering men and women were interesting characters. They were bold, tireless, sometimes bumbling and fractious. But woven together, their stories trace how emergency medicine — at first, one wrong turn away from dissolution — became one of the greatest success stories in American medical history.

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