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Men for the care of the injured: A crisis facing the 70s

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This is the Scudder Oration on Trauma, presented on October 13, 1970, at the fifty-sixth annual Clinical Congress in Chicago.
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IN THIS EIGHTH SCUDDER ORATION on Trauma I propose to probe the problems of the recruitment, education, and organization of men to care for the injured. The subject is in the tradition of Scudder, since he pioneered in both postgraduate education in trauma, and in the delivery of care for the injured. By segregating patients with fractures in the Massachusetts General Hospital over fifty years ago, Scudder developed one of the first true trauma services in this country. Here the injured patient was central and the required physician specialists brought to him. Scudder also worked tirelessly to educate surgeons in trauma. He more than anyone else was responsible for the development of the regional fracture committees of this College, now trauma committees in recognition of the fact that trauma respects no organ system. However, were Scudder alive today, I believe he would agree with me that the voice of his Committee has not proved powerful enough. For, with the exception of those wounded by enemy action, we are failing to provide adequate care for our injured.

Since previous Scudder orators have been leaders in the field, I naturally question why the College sanctioned this break in tradition. The honor may be a reward for service in trauma organizations and to the *Journal of Trauma*. I hope, however, that it represents the belief that improvement in trauma care requires better organization. Treatment of trauma in this country is unique in that existing competence is more poorly applied than in the treatment of any other disease. Thus, a person whose main work in trauma has been involved in trauma organizations, in planning, and in editing might be appropriate to view the problems. No matter why I was selected, I am grateful.

The crisis

Crises are so commonplace in 1970 that a new one may hardly deserve attention. We have the crises of war, the schools, drug addiction, racism, the generation gap, culture shock, and future shock. However, for these problems *crisis* is used in its economic or political sense—a crucial time or state of affairs in which deterioration or liquidation is presaged. I use *crisis* in its pathologic, not economic, sense. A point has been reached in the progress of a disease—the injured patient in America—when important developments and changes are taking place, producing a turning point for better or worse. On the negative side, death and disability from injury continue to show an inexorable growth. Yet, on the positive side, 1970 is a time of crisis because never before has there been so much interest in trauma. Unpopular within the profession for many years, trauma is now attracting many bright young men. Government interest is finally erupting. So we have a crisis: some signs good, some bad. I believe the patient will get well. The manpower potential is there, the tools are available, and interest is quickening.

Proof that trauma is a paramount health problem

This audience knows the magnitude of the trauma problem. *Accidental Death and Disability: The Neglected Disease of Modern Society*,[1] published in 1966 by the National Academy of Sciences-National Research Council, put it in clear perspective. That it continues to grow is worth emphasizing, however. In 1969, 115,000 died in this country from accidents.[2] Over 56,000, or roughly half, were victims of motor vehicular accidents, up 2% from the preceding year. The slaughter on our highways continues unabated.

Although deaths from accidents rank fourth —behind heart disease, cancer and stroke— the number of productive years eliminated by trauma raises it in importance. Almost half of those killed from accidents are below the age of 35, and of the total number of deaths from ages 1–35, accidents account for almost half.[3] Taking people from all age groups, we find that accidents, because the average age of the accident victim is much lower than that of the other three killers, ranks third in the number of ex-

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pected years eliminated—twice the number of strokes.[4]

The gap can be closed between what is known and what is being done

In the treatment of accidental injury the gap between what can be done and what is being done is wider than for any other disease. This may be difficult to prove, but other concerned surgeons have expressed the same belief.[5]

What *can* be done is shown by the record of our armed forces in Vietnam. Due to rapid evacuation by helicopter many more severely injured patients are living long enough to reach the hospital; yet the mortality rate from enemy action in this conflict has been the lowest we have ever known.[6]

That such superb care is not being given in this country can be proved. Waller[7] found that a disproportionate number of deaths from injury are in rural areas, due to lack of good transportation and the ready availability of good hospitals. He showed that the mortality from motor vehicle accidents was higher in rural and mountain counties in California than in urban counties. The National Safety Council reports that 70% of the motor vehicle deaths occurred in rural areas and in communities with populations under 2500.[8] But all is not well in our cities, either. After a survey of the emergency departments in one of the largest cities in this country four years ago, a surgeon distinguished for his contributions to trauma said: "There's not an emergency department in this city where I'd feel comfortable having a severely injured member of my family treated." A repeat survey last summer showed little improvement.

Is the deficiency in Phase I or Phase II? The resuscitation ambulance versus the hospital

If the treatment of the injured in this country is deficient, does the deficiency lie chiefly in emergency care and transportation (Phase I) or in the hospital (Phase II)? In my opinion, both are sick.

In the 1950s and 1960s the Committee on Trauma, American College of Surgeons, had placed its main emphasis on Phase I. In this worthy effort they have been more recently joined by the American Academy of Orthopedic Surgeons. I hope that in the 70s just as much attention will be paid to improvement of trauma care in the hospital. Many organizations are now concentrating on Phase I, stimulated by the National Highway Safety Act of 1966. Although surgeons are vital for supervision in Phase I, their need in the hospital is unique.

To show that improvement is needed in both phases, I cite two recent studies. Frey, Huelke and Gikas[9] reported 159 deaths from automobile accidents in Michigan. Twenty-eight were considered salvageable. All but two occurred in Phase I, and would have required better resuscitation and transportation. Salvage in almost all would have been accomplished by an adequate airway, intravenous fluids, and the insertion of chest tubes.

On the other hand, a study we did in Philadelphia[10] showed that the chief deficiencies in this urban setting lay in hospitals. We analyzed 950 deaths from injuries, and classified 51 as salvageable. Of these, all but two died because of errors made at the hospital. Chief among these were: errors in diagnosis, failure to maintain an adequate blood volume, and failure to provide specialized care early enough. Transportation of the victims was usually rapid, but, since most were taken to the nearest hospital, many were treated in less than ideal facilities.

In both of these studies, however, the need was for men; on the one hand, men for the resuscitation ambulances who could effect an adequate airway, stabilize respiration, give intravenous fluids, and perform cardiopulmonary resuscitation; and, on the other hand, men who would be available to meet the ambulance, continue the resuscitation, make correct diagnoses, and quickly mobilize and direct the specialized care needed. Because of the recognized shortage of physicians for all categories of patient care at the present time, I believe the personnel for Phase I must come chiefly from superbly trained para-medical personnel. Physicians must provide the care for Phase II. How should men for both Phases be recruited and educated?

Recruitment and education of physicians

Physicians must be attracted and trained in our medical schools, hospitals, research laboratories, and by broader methods of communications.

1. *In medical schools*-The climate in our medical schools appears more favorable for attracting men into this field than at any time since I entered medical school 34 years ago. Social problems greatly concern today's medical student. Better care of the injured—given low priority by the profession until now—will challenge his compassion and imagination.

Also, medical schools are undergoing great changes in their curricula, so that innovations in methods of education are much more easily accomplished than at any time since Scudder's day. Since trauma involves all organ systems, its teaching is ideal for a multi-disciplined approach. The trauma service and the trauma conference tend to unify surgery and its specialties rather than to splinter them.

These statements are supported by a recent study reported by Dr. Hugh E. Stephenson, Jr.[11] He surveyed 102 medical schools in the United States and Canada, and compared the results with a similar study he did five years ago. He states: "Correspondence with the deans, departmental heads, and curriculum committee chairmen relative to the teaching of emergency medical care of the acutely ill and injured patient indicates a strikingly increased awareness of the relevance of this material to the medical school curriculum. This is in distinct contrast to the previous survey."

2. *In teaching hospitals*-Once our medical student has become interested in caring for the injured, how should he be educated in the hospital to prepare himself for practice? To me this is the most difficult of all our problems.

About 15 years ago a movement developed in this country to make trauma a recognized specialty, and to form an American Board of Trauma as a subsidiary Board of the American Board of Surgery. The American Association for the Surgery of Trauma considered this proposal and, in my opinion, wisely rejected it. Yet I often wonder if a strong specialty group, carrying their "union cards," might not have had a greater voice in advancing care of the injured patient. I think not, and I certainly hope not. For I agree with Sir Frank Holdsworth who gave last year's Scudder Oration[12] that "training surgeons exclusively in the treatment of trauma is not the answer to this problem. To train a specialist in the treatment of trauma is to train a specialist in all of the specialties. It is, in essence, an attempt to reverse the evolution which itself has led to specialization." I believe that best care of the severely injured patient requires a team.

Yet a glaring deficiency exists in the team approach as currently practiced. Often the patient is divided into systems, and each specialist assumes responsibility for his organ only and not for the patient. When this happens, the patient may get excellent care of his facial deformities, and a perfect reduction of his fractured ankle, but die of a ruptured spleen, or a hemopneumothorax. For an injured patient, the team is only as good as the coordination of its individual units. Is the best care provided by an accident hospital, as advocated by Dr. Jörg Böhler of Austria,[13] or by trauma services in general hospitals? I favor the latter, but experience in the 1970s should help provide the answer.

The late Harrison L. McLaughlin in his Oration on Trauma,[14] and Fraser N. Gurd in his Presidential Address before The American Association for the Surgery of Trauma[15] both advocated plans for training residents in trauma. Dr. McLaughlin decried compartmentalized successive training, as being of value neither to the specialty trainee who does his stint on general surgery, nor to the general surgical trainee who brushes up against the specialties but never participates in a truly active sense. Dr. McLaughlin proposed concurrent training, a scheme to bring together specialty and general surgical trainees in continuity throughout their training, the integrating organization to be the accident or trauma service. Dr. Gurd advocated a combination of successive rotational exposure and Dr. McLaughlin's concept of concurrent interlocking teaching, and cited the successful experience of the Traumatic and Reparative Unit of the Montreal General Hospital. The service was conceived of as one in which the total resources of scholarship available within McGill University would bear on the needs of injured patients; in my opinion, an ideal concept.

Categorization of hospitals for trauma care should not only improve the care of the injured, but should also improve the education of physicians in trauma. The proposal classifies hospitals into four types, Type I being a Comprehensive Emergency Treatment Facility, and Type IV a Resuscitation Facility. I agree with Oscar P. Hampton, Jr.[16] that classification must not depend on the emergency department alone. The emergency department is only as good as the over-all capability of the hospital and its staff.

The rapid growth of intensive care units—surgical, medical, coronary, and respiratory—gives today's resident superb training in the care of critically ill and shocked patients and in the newest methods of restoring the oxygen supply to the cells. Rotation through such units is excellent training for the physician who will care for the injured.

Military hospitals are educating young physicians well in trauma. Specialized trauma

centers such as the burn unit at Fort Sam Houston offer a unique opportunity for training. By rotation through them, residents from civilian institutions, as well as the military, can be trained in research methods, and in specialized trauma care.

3. *In research institutes and Fellowships*-In 1966 the National Institute of General Medical Sciences held a conference to view the problem of injuries. The conclusions have been published, and as an outgrowth the Institute has fashioned its subsequent support of trauma research, and training programs in trauma.[17] The report decried the neglect of research in trauma. Government aid for trauma research at that time was less than one half of one per cent of the total funds applied annually to research on human health and disease.

Considerable progress has been made by the Institute since this conference. It has established shock and trauma research units in seven centers through the mechanics of program—project grants, and has raised its annual financial support for trauma research from one million to three million. These trauma units have interested medical personnel at all levels of training in the care of the injured, and are attracting clinicians and talented investigators to the field. Through utilization of special fellowship programs, promising young academic surgeons are being trained for a research career in trauma. Of equal importance, periods of assignment to these units will qualify residents of various disciplines for work on trauma services of community hospitals.

4. *In communications media; Example of the Journal of Trauma*-Allow me to assess the continuing education of physicians in the field of trauma by reference to *The Journal of Trauma*, sponsored by The American Association for the Surgery of Trauma. I have been associated with it since its inception ten years ago, and succeeded Dr. Rudolf J. Noer as its editor two years ago. Dr. Noer, beginning under less than ideal circumstances, developed the *Journal* into a viable, growing agent. The experience of the *Journal* may be a gauge of the level of interest of the surgeons of this country in trauma.

Although many problems still face the *Journal of Trauma*, chiefly financial ones, its circulation has shown a growth from 2,000 to almost 4,000. Even more encouraging is the steady rise in the manuscripts submitted from 1960 to 1970.

When I speak of men for the injured, I use men in its generic sense. The nurse is a vital part of the emergency team. Often she or he may be the only person on the scene. The nurse's decisions must be rapid and she must be well trained to be effective. Many nurses are attracted to this work, and we must take the initiative in organizing training courses for them. We must not teach nursing care, but rather medical care that nurses can do. That nurses are interested is evidenced by the experience of the Chicago Committee on Trauma over the last four years.[18] Their courses began four years ago and have received increasing enthusiasm. The first, one and one half days in length, was attended by over 200 registered nurses. The third, in September, 1969, was attended by over 1,000 nurses from 43 states and two foreign countries, and lasted three days. Although the material presented at these courses is at the level of the third year of medical school, the nurses have requested intensification of the curriculum.

Emergency medical technicians

Emergency Medical Technician (E.M.T.) is the term now being used to designate paramedical personnel highly trained in the care of injuries and medical emergencies. I am biased against the word technician, for its pejorative use connotes a person without imagination or resourcefulness, which these men must have. Great plans are being made for the role these men will play in medical emergencies in the 70s. The E.M.T. will have the ability to work in the hospital as well as in resuscitation ambulances and in helicopters. Ideally, he should be able to perform endotracheal intubation, insert chest tubes, start intravenous infusions, and perform cardiopulmonary resuscitation. He must be given legal protection for the skillful performance of these procedures.

Some government and medical organizations in the United States have long recognized the need for the better training of ambulance personnel, including this College. The Highway Safety Act of 1966 has provided new impetus and an opportunity for funding. Under provisions of this Act the Highway Safety Bureau published *Highway Safety Program Standard No. 11—Emergency Medical Services* which recommends that all ambulances be equipped with certain lifesaving equipment and manned by at least two persons trained in specified areas of emergency care.

A common basic training course has been made the first step to increase the professionalism of ambulance personnel. Improved training should elevate their status and justify increased pay scales, now extremely low for such highly skilled services. Three levels of training have been proposed: 1. standard level of 60 hours; 2. intermediate level with a training program of three months, and 3. advanced level with one to four years of hospital experience and a college education.

Corpsmen from the military should find a career as an E.M.T. attractive after separation from the service. Between 30,000 and 35,000 medically trained and experienced allied health personnel leave the Armed Forces each year.[19] Many enter the civilian labor market amenable to recruitment for civilian health careers; yet up to now their utilization has been minimal. To increase their flow to civilian health jobs, the Departments of Defense and Health, Education and Welfare have set up a program called MEDIHC—Military Experience Directed into Health Careers. This program attempts to identify, counsel, and then place in a job, school, or both, interested military medical personnel about to return to civilian life: a great pool of potential emergency medical technicians. The program is now operational in 24 states.

The American College of Surgeons through a contract with the Division of Emergency Health Services of the Public Health Service has developed a curriculum and teaching aids for the training of ambulance attendants,[20] a course in consonance with "Training of Ambulance Personnel and Others Responsible for Emergency Care of the Sick and Injured at the Scene and During Transport," a document developed within the Division of Medical Sciences, National Academy of Sciences—National Research Council. A Basic Training Program for Emergency Medical Technicians—Ambulance has also been prepared for the National Highway Safety Bureau.

A text on emergency medical care, prepared by the Committee on Injuries of the American Academy of Orthopaedic Surgeons, in cooperation with the American College of Surgeons, has been selected as the basic reference for the above courses. This text, "Emergency Care and Transportation of the Sick and Injured," consists of 59 chapters and should be available by December of this year.

The National Registry of Emergency Medical Technicians—Ambulance has been established this year under the aegis of the Commission on Emergency Medical Services of the American Medical Association. Its directors are representatives of six national organizations whose members are now providing emergency ambulance services, and four physicians.

Can better training of E.M.T.s save lives? A project initiated by the Nevada Committee on Trauma of the College suggests that it can.[21] The Nevada Committee initiated its program after extensive consultation; it was modeled after the PRIM program in Minnesota. Nevada had been reported as the state with the highest death rate from automobile accidents. In 1966, 14 injured persons died in that state while in transport, 15 died in transport in 1967, but after the program of training began, only four died in 1968 and four in 1969.

The instruction of emergency medical technicians is the responsibility of physicians. Although lay instructors may be necessary under certain circumstances, standards must be set by our profession.

Trauma organizations

1. *Established professional organizations*

The Committee on Trauma has led in this field, and for many years was the only organization speaking for the injured with a powerful voice. In more recent years, the College's Committee has been joined by other organizations.

The American Association for the Surgery of Trauma, organized in 1938, is limited to 300 active members who have made special contributions in the field. The AAST is a unison of general surgeons and surgical specialists, who join various disciplines to attack the common problem of trauma. It has joined with the National Safety Council and the Committee on Trauma of the College in a Joint Action Program emphasizing the prevention of injuries, and sponsors the *Journal of Trauma.*

The Committee on Injuries of The American Academy of Orthopaedic Surgeons has stressed the training of para-medical personnel in the care of emergencies. For the year 1970, many courses are being given under its aegis in all sections of the United States and Canada. It has taken the lead in the preparation of a text on Emergency Medical Care.

The American Medical Association's Council on National Security, through its Committee on Disaster Medical Care, has concentrated its recent efforts on improvement of the physician's response to disasters.

2. *New professional organizations*

The above organizations could be called the establishment in professional organizations for trauma. Of great interest to me are three new groups. Ten years ago one might have expected existing organizations to provide the framework within which to encompass all problems of trauma. The fact that three new organizations have recently been formed may indicate needs that were not being fulfilled. Or possibly their aims could be better served through existing organizations. The 70s should provide the answer.

The American College of Emergency Physicians. The American College of Emergency Physicians, ACEP, was chartered in August 1968. Its members describe a new specialty: the practice of emergency medicine. They state that this specialty has evolved primarily be-

cause an ever increasing number of patients are seeking professional service in hospital emergency departments. Reasons cited are: the growth in population and mobility, the increased incidence of trauma, and a general decline in the number of practicing physicians accepting new patients. The ACEP is growing rapidly. According to its *1970 Quarterly Report*, members number 1060 and represent 46 states. States with the most members are: Michigan 207, California 85, and Pennsylvania 84.

Dr. William T. Haeck of Jacksonville, Florida, the Chairman of the Membership and Credentials Committee, kindly supplied me with the following information:

> "The emergency department physician must be well equipped by training to deal with a wide spectrum of illness or trauma. In a sense he is a full time triage physician. We feel strongly that the trend is toward the ability to sort and treat a large volume of patients who present with the full spectrum of "emergencies" from minor to major; from head to toe. This medical ability plus his ability to organize and run an efficient Emergency Department will, we feel, eventually gain him 'specialty status.'
>
> Our hope is that the American College of Emergency Physicians will be a body that will: 1. Help establish guidelines for the training of the Emergency Physician, 2. Help establish guidelines for efficient management of the Emergency Department, and 3. Eventually serve as the 'Board of Emergency Medicine.' "

The number of fulltime emergency department physicians is growing throughout the country. When we realize that only about 20% of our general hospitals have available interns or residents they can assign for duty in the emergency department, the need for some new plan is obvious. Rotation of the attending staff has usually not proved satisfactory and the failure of this approach has fostered the growth of the fulltime emergency physician.

Dr. Robert H. Kennedy[22] has expressed the fear that the fulltime emergency physician may result in an inferior or second grade physician in the extent of his training. Those interested in trauma need to aim particularly for completely trained emergency service coverage. Quality of care must be the first consideration. At the same time we must protect the young graduate from making any move which may narrow his opportunities and usefulness throughout the rest of his life, since this type of emergency care is considered a permanent, not a temporary profession.

Since hospital emergency departments have become the general practice headquarters for communities at nights and on weekends, all medical problems are funnelled here, emergency and non-emergency. Can one man be trained to handle all of these problems expertly? Is this not again saying that we can train one man in all specialties? Is emergency medicine a true discipline which should have a separate department in our schools of medicine? Although this system is growing and obviously filling a need, is it the ideal way to provide emergency health care? These questions need answers now, and a committee of the American National Red Cross is studying them.

Possibly, the emergency physician will become the general practitioner of the future, the primary physician for the community, but now based in the hospital. If he is to be an effective director of an emergency department he must have the same status as other hospital department directors.

University Association for Emergency Medical Services. During late 1969 six young university emergency department directors met to discuss their common problems.[23] They felt the need for an organization concerned with planning and delivery of emergency medical services, especially in universities. At an organizational meeting in Birmingham, Alabama, in October, 1969, the attendance of 138 individuals representing 96 of 119 medical schools in the United States and Canada showed great interest in such an organization.

The University Association for Emergency Medical Services is composed of university surgeons, anesthesiologists, and internists. The major objective is the improvement of the care of the acutely ill and injured. The organizers feel that these activities are not receiving adequate academic recognition, and that the uni-

versity emergency department director has need of assistance in establishing the academic basis for his activities. The University Association for Emergency Medical Services is attempting to complement rather than to compete with other groups having similar aims.

American Society for Critical Care Medicine. A Conference Group on Critical Care Medicine met in February of this year in Los Angeles under the Chairmanship of Dr. Max H. Weil to try to bring order to the new field of Critical Care Medicine. As a result, the American Society for Critical Care Medicine was formally established. The members include surgeons, internists, and anesthesiologists. At the conference, leaders in the field recognized the formidable organizational problems that have evolved from the segmentation of critical care services. They stress the important role of nursing and paramedical staff and urge a close liaison with engineering, computer technology, and related technical resources. Uniform agreement was expressed on the advantages of a formally-based interdisciplinary approach to the treatment of the critically ill. The formidable problems of training directors for critical care facilities were recognized. Young physicians entering this field from various specialties fear the loss of traditional identification and the potential isolation that might stem therefrom in their continuing relationship with other colleagues.

The birth and flourishing of intensive care units in hospitals throughout this country in the last several years have been good for the injured patient, for no patient needs superb critical care more than he. A special problem for the injured, however, is the lack of availability of such units where the severely injured patient is apt to be—namely in a rural area not close to a hospital with such units. Research and contributions to knowledge from such units will help him as much, or more, than anything else. Yet, is not this area, too, best manned by a team? Is critical care medicine a true discipline of medicine? If there comes into being a board-certified specialist in emergency medicine (staffing the emergency department), and also a board-certified specialist in critical care medicine (staffing the intensive care unit), is not the logical development this: to have specialists for preoperative care, operative care, and postoperative care: specialists classified according to time sequence of a disease, or possibly classified by the area of the hospital involved—a new definition of a "geographical full-time specialist?"

3. *Professional—lay organization: The American Trauma Society*

Lay organizations such as the National Safety Council and the American National Red Cross have been very effective in specific aspects of aid to the injured. A new organization, the American Trauma Society, is unique in its aim to unite lay and professional members to attack the problems of trauma, just as the American Cancer Society and the American Heart Association have been so effective in spotlighting cancer and heart disease.

The American Trauma Society was incorporated June 27, 1968. Its formation was suggested in *Accidental Death and Disability* and its birth was tended chiefly by Dr. Jonathan E. Rhoads. When the approval of the Committee on Trauma of the College and The American Association for the Surgery of Trauma was obtained, organizational meetings were held, and these two groups were later joined by The American Academy of Orthopaedic Surgeons and the American Medical Association, all four of which groups have named representatives to serve as professional members of the first Board of Directors. This organization has been slow to "get off the ground," not from any lack of support by professional organizations, or enthusiasm of its organizers, but because of the difficulty in interesting laymen to serve as lay members of the Board of Directors. Yet the layman has so much to gain from taking an active interest in trauma. Since the layman is usually the first person on the scene of the accident, he gains much from education in trauma. Surely the layman has as much if not more to gain from such an organization as a layman devoted to cancer or heart disease programs.

Up to now I have said little about the *prevention* of accidents. The greatest and quickest results could probably be obtained by prevention. The use of seat belts, championed early by the Committee on Trauma, has proved that many deaths can be prevented by safety measures. I believe that physicians can help most in the prevention of accidents by providing

expert knowledge for lay groups such as the National Safety Council and the American Trauma Society in promoting safety measures through research, education, and legislation.

I hope each of you will support The American Trauma Society and will help to interest laymen in its support. This Society gives us an opportunity to interest the layman in his own health problems—in this instance a problem where knowledge will give him an unusual opportunity to help himself and his fellow man, since he, and not the physician, will almost always be the first on the scene of an accident.

The synthesis

If I have presented my case well you should agree with me that trauma is a subject of great interest to many groups at the present time. However, I have the feeling that cooperation and coordination is lacking. We see big wheels and little wheels, all revolving in different directions and on different axles. We need axles and a common direction to make our wagon go. Responsibility and authority must be clearly defined at the community level, as well as at the national level.

Superb care for the wounded is being provided in Vietnam, so we know that it can be done in the United States. We have mentioned how men and women can be recruited and trained. Centralization of authority could be done by the establishment of a Presidential Commission on Emergency Medical Services, as suggested by the Airlie Conference,[24] or by a group of the National Academy of Sciences. The tools are available. Enough men and women for the job are in our population, but they must be recruited and trained. Enough organizations are interested. Coordination, cooperation, and leadership are needed for the 70s. In this endeavor no group has greater competence than the Fellows of this College.

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