

Coalition on Trauma—Trauma Prevention and Trauma Care: Presidential Address, Trauma Association of Canada

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Injury is the leading cause of death in persons under 40 years of age. The cost to society financially and in nonmonetary terms is enormous. For a successful assault on this major health epidemic, a cooperative effort between those involved in the development of prevention strategies and those involved in the care of the injured patient must develop. For our society to accept some of these prevention strategies, the rights of the community as a whole will have to be allowed to prevail over the rights of the individual. To facilitate this process, a National Advisory Committee on Injury in Canada needs to be formed. Its mandate will be to develop a set of national objectives on injury morbidity and mortality, to establish a national trauma registry, and to implement specific programs—a strategic plan. Only through a coalition of efforts between all groups involved with injury can we hope to lower the prevalence of injury in Canada.

Ninety-one years ago a 68-year-old real estate agent was struck and killed as he stepped off of a street car in New York City, becoming the first recorded casualty of the automobile.¹ Injury has been with mankind forever, but in our modern society it has failed to gain recognition as the epidemic that it truly is, with the automobile accounting for about 50% of trauma mortality. As we enter the last decade of the millennium, death caused by injury remains the leading cause of death for persons under the age of 44 years, accounting for 44% of all deaths in children aged 1–4 years and 63% of all deaths for individuals 15–24 years of age.^{2–4} As a cause of years of potential life lost, trauma mortality contributes more than cancer and heart disease combined. Mortality figures give only a very small part of the total picture. For each individual killed there will be approximately 400 nonfatal injuries serious enough to require medical attention. The costs to society can only be estimated, since both direct and indirect financial figures are difficult to calculate, but there is general acknowledgment that it runs into the billions of dollars annually.⁴ We must not forget that there is also a tremendous cost in emotional suffering and physical impairment that cannot be measured in dollars.

None of this is new to this audience, but it needs to be restated to reinforce that this is the major health care

problem of the 1990s. What I propose to do over the next few minutes is to examine injury as a public health concern, perhaps somewhat differently than the view we usually take as medical practitioners, and to propose a strategy that this organization might undertake to demonstrate leadership in lowering the incidence and prevalence of injury in our society.

Injuries are not accidents. The term “accident” is defined as “an unforeseen occurrence, especially one of injurious nature.” The word “injury” means “a wound . . . usually applied to damage inflicted to the body by some external physical force.” It is important to differentiate injury from accident. Society’s misconception that injuries are accidents has contributed greatly to the lack of concern and low public awareness of injury as a major health care problem.

One can draw a parallel between injury and infectious disease. This was first elucidated by J. E. Gordon in 1949 and has been refined by Haddon and others.^{2,5} Injuries are characterized by point epidemics, there is seasonal variation, they have long-term trends, they are influenced by socioeconomic class and by their location, be it either rural or urban. The “host” in this situation is the individual, and the susceptibility to injury varies according to many factors, including age. For an injury to occur there must be the release of physical energy, either mechanical, chemical, electrical, radiant, or thermal. These various forms of energy have been identified as the “agents” of injury. Continuing with the infectious disease analogy, the “vector” differs according to the particular situation, it can be the car, the electrical wire, the scalding hot water, etc. If we were to identify the various components in this way, the process of strategic

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planning of efforts to diminish injuries would be facilitated because each component could be measured and evaluated in turn. Despite these concepts about injury being 40 years old, society continues to think of injury as an individual event that is accidental. As an extension of this misconception, the idea that it is in some way the individual's fault, or just "bad luck," has resulted in a misdirection of efforts in prevention and an acceptance by society that the total exacted by trauma morbidity and mortality is part of modern life.⁶

Other currents of attitude also contribute to the frustration of efforts to prevent injury. In a society where individual rights are guaranteed under a charter of rights and freedoms, efforts at legislating preventive measures such as seatbelt legislation, check stop campaigns, etc., have been met with many court challenges. It is seen as the individual's right to behave in whatever fashion that person deems appropriate, and risk-taking behavior is generally held in high esteem. The judicial system has been slow to accept that the greater interests of the community must be protected by upholding legislation deemed to be in the interest of public health and by using the courts in a punitive manner to create a disincentive to behavior that is not in that interest, or is a criminal activity. In Canada, where virtually 100% of the population is covered by universal health care coverage, the costs of all injuries are born directly by the taxpayer. For this reason alone, society as a whole should have some recourse to reclaiming these losses, particularly in criminal cases.

With society's preoccupation over individual rights and freedoms, preventive measures have also tended to focus on the individual. The result has been programs directed toward the individual in which there is an attempt to induce a change in behavior. Although a small part of the curriculum, all provinces in Canada in some way promote injury awareness at various levels of the school system. Such programs as HEROES from the University of Alberta and the PARTY program at Sunnybrook Medical Center, to name just two of many, are aimed at identifiable high risk groups in an attempt to reduce injuries. These programs are valiant attempts at inducing responsible behavior but their impact must be weighed against the massive amount of lifestyle advertising provided by the automobile and alcohol industries, two of the more active lifestyle industries. Measuring the effectiveness of prevention programs that are aimed at behavior changes is difficult and inexact. Behavior at any given point in time is a result of many factors, and so it is difficult to prove such prevention programs are working. Concrete evidence of program effectiveness would be a decrease in injury morbidity and mortality, but this is also very difficult to measure because of the time span involved, the difficulty in establishing controls, and many other intangibles.

Within the medical profession, the focus in most of our teaching and our practice is also on the individual,

the patient. Generally speaking, we concern ourselves with the patient's injuries but do not spend a lot of time or effort on finding out how these injuries came about. We may be aware that the patient was not wearing a seatbelt or that alcohol was involved, yet our efforts remain directed toward the specific injuries and in getting the patient well enough to leave hospital. Rarely is an attempt made to induce compliance with current laws on seatbelts or alcohol consumption and driving. This is viewed as the domain of the police officer and of the courts, and any breach of confidentiality on our part in an attempt to change behavior is considered to be unethical practice.

It has been proposed by McGavran⁶ that in the historical development of the health sciences, we have evolved into the public health era. His thesis contends that the focus of medical thought and activity has progressed from a preoccupation with symptoms and individual disease entities to a preoccupation with the individual patient and now to a focus on the community as a whole. This is an oversimplification, but there are signs that our emphasis on the individual is shifting to the community in some situations. Two health concerns of the 1980s are examples of this community approach and how effective it can be.

The first example is that of the AIDS epidemic, where mobilization by, primarily, the Gay Rights Movement, has led to tremendous awareness on the part of the public and from that, political pressure to support many programs involved with all aspects of HIV infection. In Canada this has resulted in an all-party parliamentary committee recommending that approximately \$150 million dollars be directed towards AIDS research. This is an amount nearly equal to the total annual budget of the Medical Research Council of Canada.⁷

The second example is that of the successful campaign by the anti-smoking lobby to eliminate the smoking of tobacco products in most public buildings, the establishment of municipal by-laws to protect nonsmokers, and recently the banning of smoking on commercial aircraft, a ban which is being extended to international flights. Although certain age groups defy the trend, the smoking of tobacco products is declining in Canada, and this will result in lower tobacco-related morbidity and mortality.⁸ I would like to think that we can achieve such public awareness about injury and with such increased awareness see a change in our society's attitudes. Hopefully this will result in the public influencing our political system to improve all aspects of injury prevention and care. One of the biggest challenges will be to have our society insist that the community's rights as a whole must prevail in prevention measures, and for our society to stop thinking of injury as "just an accident."

Perhaps before society's attitudes toward injury change, the medical profession must first alter the way it regards this disease. Our traditional involvement with the injured patient occurs long after the event (especially

in rural settings); with the victim often unconscious, intubated and hypotensive; possibly with chest, abdominal, extremity and spinal injuries in addition to a head injury. This is a dramatic situation and the subsequent management of this multiply-injured patient is challenging and in most instances rewarding. It is what we as trauma specialists love to do and has a powerful influence on how we view injury as a disease. This view tends to focus our attention on events after the crash. The time has come for us to address the problem in a different way. The concept of injury divided into phases—pre-event, event, and post-event—and the various associated factors—host (human), vector (vehicle in auto injury), and the surrounding environment—is better known as Haddon’s Matrix (Fig. 1). The contribution made by Haddon in this area is enormous and must be recognized.^{2,9-11} By dealing with the problem through this matrix it is possible to consider events after the crash in the context of events occurring pre-crash and during the crash. Within this matrix the traditional role of the physician is pre-eminent in the events occurring after the crash—a role that is important and will not change. It is the physician’s role as the patient’s advocate, in the pre-event and event phases of injury that needs to be expanded.

With or without a change in attitude toward injury, there are many strategies that can be employed immediately to decrease injury morbidity and mortality. In the 1940s, De Haven’s¹² research evaluated the effect of decelerative forces on the human body. His subject matter was victims of falls from 50 to 150 feet. This work concluded that the body had a very high threshold to injury from mechanical forces, and that it was the body’s interaction with the surrounding environment that up to this threshold contributed most to the subsequent constellation of injuries. From this and subsequent work by Stapp¹³ and others, the initial efforts at designing the internal environment of the automobile to be more “passenger friendly” began. It is possible to design an automobile interior to withstand the stresses of a crash at 100 km/h. Unfortunately, this has not been seen as a

priority by the purchasing public, and so we have variable safety features in automobiles that are a compromise to style, weight, and appearance. The heavier, more crash-worthy vehicles tend to be in the luxury category and represent a minority of vehicles on the road.⁹ Although attitudes and behavior do need to change with respect to automobile-related injury, with proper engineering, the improved design of vehicles alone could diminish the carnage exacted on our nation’s roads, thereby making a significant impact on the single biggest contributor to injury morbidity and mortality.

In addition to the matrix, Haddon has provided us with basic strategies to reduce losses from injury. While these strategies can be applied across the board to injury—the disease—not all can be applied to each phase nor to each factor⁹ (Table 1). These ten strategies encompass virtually all measures actually or theoretically that could be used to reduce damage to all animate and inanimate structures. In some cases, i.e., strategy 1, it would be impossible to eliminate the creation of the hazard pertaining to the automobile. However, by using strategies 2, 4, 5, 6, 7, and 8 it should be possible to minimize the number of hazardous events. Clearly these strategies are in place and are used extensively in our daily relationship with the car. As new technologies come into existence, the ability to use some of these strategies will be enhanced. It is important to monitor these technologies and to apply political pressure to ensure that they are introduced. For instance, it has taken 20 years for airbags (strategies 5 and 6) to be introduced and, even then, very tentatively.

These basic strategies also encompass the resuscitation, treatment, and rehabilitation phase of injury—postcrash. They recognize that injury is an ongoing event once the energy has been released and that proper therapy and rehabilitation are essential to repair the damage—strategies 9 and 10. In the case of motor vehicle injuries the role of emergency medical systems and the role of the trauma center in transportation, communi-

THE HADDON MATRIX

PHASE	HOST (HUMAN)	VECTOR (VEHICLE)	PHYSICAL
Pre Crash			
Crash			
Post Crash			

FIG. 1. Haddon’s matrix as it applies to vehicular injury.

TABLE 1
Haddon’s ten general strategies for reducing injury from the release of energy

1. To prevent the creation of the hazard
2. To reduce the amount of hazard brought into being
3. To prevent the release of a hazard that already exists
4. To modify the rate or spatial distribution of release of the hazard
5. To separate in time or space the hazard and that which is to be protected
6. To use a material barrier between the hazard and that which is being protected
7. To modify the hazard
8. To increase the resistance to damage of that which is being protected
9. To begin to counter the damage already done by the hazard
10. To stabilize, repair and rehabilitate the object of the damage

Modified from Haddon WH: Advances in epidemiology of injuries as a basis for public policy. *Public Health Rep* 95:411, 1980

cation, and definitive treatment of these injuries cannot be underestimated. This is particularly so for injury victims in rural Canada. In a recent study of 75 consecutive in-hospital trauma deaths (injury severity score ≥ 16) the average time from injury to definitive care for the 50 patients originating in rural areas serviced by the University of Alberta Hospital was 8 hours (author's data). Clearly, the medical profession has an important role to play in solving the problems faced in providing tertiary trauma care in rural areas. The solutions will require rural community and urban trauma center cooperation and coordination. We, as a profession, will have to emerge from the trauma room and evaluate injury in each of its three phases if we are to contribute to the solution to these problems. Taken in the context of the 1990s with the shrinking health care dollar, the profession needs to take a leadership role in making the public aware of injury and of the problems in gaining access to the health care system, so that universal health care coverage becomes universally accessible.

For the medical profession to become a leader in public awareness of injury, we will have to concern ourselves to a greater extent with events occurring before the release of energy—the crash. This implies involvement with injury prevention. The introduction of preventive strategies will require the coordination of activities on many fronts. To be effective, prevention programs must have specific objectives that are by necessity in keeping with local, community, and national objectives. Long-range objectives require long range planning, since many of the strategies can only come to fruition and have a chance to be effective over the long term. Once objectives have been agreed upon, initiatives will have to take place on three major fronts. The first area that major initiatives are required is in the coordination of legislative and enforcement policies aimed at national goals and objectives. As an example, in-so-far as alcohol is present in 50% of motor vehicle collisions where an injury occurs, there is a need for ongoing pressure to ensure that there is effective enforcement of our present laws. This must include the presence of random screening programs, i.e., Checkstop, at peak seasons and throughout the year. The legal system in Canada has a responsibility to society to uphold the law and to create a fair but effective punishment for individuals found to be in contravention of the law. The use of fines and suspended sentences are gradually giving way to stiffer fines, jail terms, and rehabilitation programs. Coordination of these efforts and standardization of penalties across the country should help to lower the prevalence of drinking and driving. The recent introduction of mandatory jail sentences for convictions on driving while intoxicated in the Province of Prince Edward Island has resulted in a dramatic decrease in such occurrences. This has been an encouraging development and an example of our judiciary taking the lead. More effort on our part in inducing changes in attitudes toward this particular problem will, I think, continue to

erode our society's tolerance toward drinking and driving and ultimately lead to its diminishment.

At the present time our legal limit of alcohol in the blood is 0.08% or, stated another way, a blood alcohol concentration (BAC) of 0.08 grams of pure alcohol per 100 mL of the individual's blood. It is time for this legal limit to be lowered. Alcohol is metabolized by the liver at, on average, the rate of one drink per hour (although this is somewhat variable). Equivalent drinks are one can of beer (350 mL), 40 mL of 80-proof spirits, and 120 mL of wine. To achieve a BAC > 0.08 most people must consume more than three drinks in 1 hour. However, despite this being the legal limit, most people's skills begin to deteriorate at a BAC of 0.05. This rate of deterioration rises exponentially as the BAC rises.¹⁴ It is time for the legal limit to be lowered to 0.05 and for the collective rights of the community to prevail over individual rights, to allow for more use of breath testing, and for the drawing of blood samples for alcohol determinations in unconscious or uncooperative individuals.

I have mentioned drinking and driving as an example of where and how major efforts need to be made on the legislative and enforcement front of prevention programs. Many other areas also need our attention, including restraint systems, teenage drivers, drivers over the age of 65 years, speed limits, bicycles, motorcycles, etc.

I have already alluded to the design features of motor vehicles and the impact of that local environment, i.e., the passenger compartment, has on the nature of injuries in motor vehicle collisions. The second major front that a national injury prevention program will have to address is that of engineering and technological changes that could be used to provide better protection from the sources or energy that cause injury. Again, the motor vehicle is a useful example of where such technologies can be introduced. The recent introduction of airbags, antilock brakes, and the continual use of running lights are technologies to be enthusiastically welcomed. The pace at which such technologies are introduced after their development needs to be quickened. The potential use of alternate materials to metal, i.e., plastics, is an area that will need to be monitored over the coming years, since it hopefully will be easier to design safer yet lighter vehicles. Mechanical forces should not be the only source of energy to be considered. Fire poses special problems, especially in the airline industry. Newer flame resistant materials might prevent loss of life in crashes that are not of such magnitude that most victims perish because of mechanical forces. There is a need for a strong liaison between the engineering and vehicle design industry and the public health and medical professions.

The automobile currently is sold on the basis of its appearance, handling, and to a certain extent, fuel economy. With the oil crisis in the early 1970s, engine fuel efficiency became a major concern because of the cost of fuel. Today it is a major concern mostly for environmental reasons. Government and industry have provided us

with a fuel efficiency rating so that different makes and models can be compared. Most people find this helpful and it does help to raise awareness about gasoline consumption. I see no reason why a similar type of index cannot be applied to automobile safety. Such an index would take into account certain standard factors such as weight, side body and roll-bar strength, braking distance, etc., so that the buyer would be able to compare vehicles in his or her price range. It would also serve to increase awareness about vehicle safety and associated design features and, perhaps, diminish the selling of cars based on their sex appeal.

The third and last area that needs to be considered and for which specific prevention programs must be designed has to do with education and the inducement of behavioral change in our society. This should attempt to do two things. The first is in the area of general public health awareness and philosophy. That is, to make the individual recognize that despite basic rights and freedoms, there are certain consequences of one's actions which may lead to major costs to be incurred by society and that the individual must be responsible for these costs. This does not mean that the enjoyment of life must be curtailed, but rather that one has to recognize the implications of one's actions and that perhaps society must be asked to provide for only certain key essential services. The rest could be provided by competitive insurance schemes. Such policies already exist in the life insurance industry with regard to cigarette smoking and other risk-taking behaviors. The second and more specific target of education and behavioral change must be the children of school age who possibly can be influenced by proper educational programs. The two main programs currently active in Canada, i.e., the PARTY and HER-OES programs, are aimed at youths between the ages of 12 and 18. While the effectiveness of these programs has yet to be objectively measured, some have suggested that it would be more appropriate for such programs to target elementary and junior high school students. These types of programs will also serve to increase the general level of public awareness about injury, hopefully making it easier to generate political pressure for public policy changes in future years.

With the competition for health care funding becoming increasingly stiff, it is a fact of life in a publicly financed health care system, where all levels of government are running significant deficits, that the health care dollar is not going to be as available as it once was. Health care administrators are looking for new budgetary solutions rather than the standard practice of funding according to patient volume. There is political appeal for funding prevention programs and thus potentially diverting funds away from traditional forms of health care into what is euphemistically called "health promotion." Many current prevention programs have laudable intentions with their objectives being clearly stated. Many have just plain political appeal, along the "motherhood and apple pie"

analogy. It would be wrong to have our Government agencies turn to such programs for political expediency without having in place a thorough and careful method of evaluation.

As with therapeutic interventions, there are a number of outcomes of prevention programs which can be measured, with variable accuracy. For any prevention program there is a hierarchy of outcome measures, which can be displayed in pyramid fashion (Fig. 2). At the top of the pyramid are injury fatalities, which represent the most concrete outcome measure (it is also the easiest to measure). At the bottom of the pyramid are outcomes related to the gaining of new knowledge, changes in attitudes, beliefs, or intentions. Between these two extremes lie associated measures of behavioral change, changes in public policy or a practice that relates to injuries and their preventions, and direct observation of changes in behavior or the physical environment. Outcome measures that evaluate injury occurrences are somewhat more concrete. Such measures include all injuries treated by a medical system, those injuries treated in the hospital emergency room, those injury cases that are admitted to the hospital, and, finally, fatalities. It is important to recognize that many of our most politically appealing programs are directed at education and inducement of behavioral change, and yet these are the hardest variables to measure. It is difficult for these programs to demonstrate effect at the top of the pyramid, i.e., in injury fatality and serious injury morbidity.¹⁵ We must insist on program evaluation to maintain accountability and to prevent the squandering of a scarce and precious resource—the health care dollar.

Traditionally, the Trauma Association of Canada has concerned itself with the events that occur after the

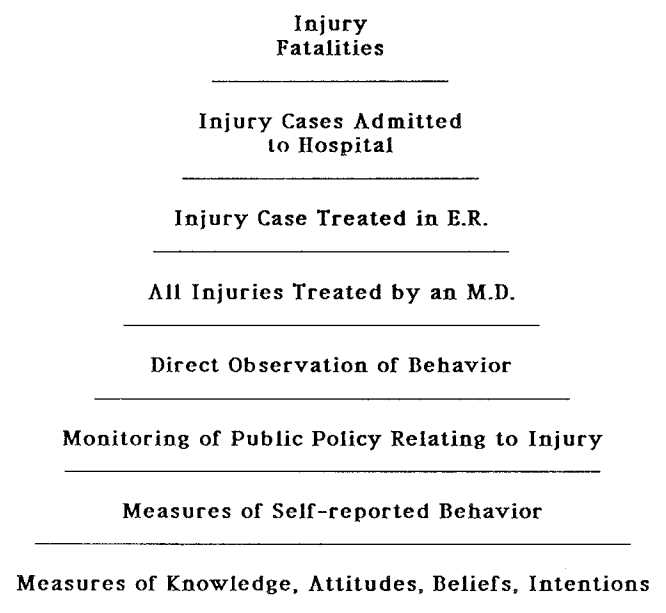


FIG. 2. The hierarchy of injury outcome measures. (Adapted from National Committee for Injury Prevention and Control: Program design and evaluation. *Am J Prev Med* (Suppl) 5:70, 1989.)

injury has occurred. Over the past 8 years we have developed into a multidisciplinary professional group of individuals who are concerned with the management of trauma, and we have focused most of our efforts in basic science research to studying the pathophysiology of injury and most of our efforts in our clinical research to studying events occurring during the resuscitation, treatment, and rehabilitation phases of injury. These are laudable activities, and we need to continue with them and to strengthen our contribution to the basic understanding of injury and to the development of trauma care systems in our country. I feel, however, that our Association can no longer remain concerned only with the management of injuries following the event. To maintain our position and to provide leadership in the care of injured patients we must assume the lead role in designing a strategic plan for the prevention and care of injuries in Canada. Our biggest challenge will be to bring together all of the interested parties under one organization. To accomplish this I am calling for the establishment of a National Advisory Committee on Injury in Canada. I envision this umbrella organization as one that will report directly to the Federal Minister responsible for health, and one that will liaise with the provincial trauma committees and with the many interest groups that exist nationally. The first step for the National Advisory Committee on Injury in Canada will be to develop an inventory of just what is happening in the area of injury prevention and in the area of trauma care and systems development. The formation of this "Coalition on Trauma" is integral to the whole process of developing a national strategic plan to reduce injury morbidity and mortality. Every group working in these two areas must be encouraged to join what must become a concerted national effort toward solving this major health problem. The Trauma Association of Canada, being a multidisciplinary group with truly national representation, has a very important role to play in bringing these groups together and in the formation of the National Advisory Committee on Injury in Canada.

Once the National Advisory Committee is established, its mandate should be as follows: First and foremost is the development of a set of national objectives on injury awareness, injury morbidity, and injury mortality. These objectives must be carefully considered and must be achievable. The initial set of objectives should be aimed at the year 2000. By necessity, these objectives will vary in local regions across the country; however, by having a set of national objectives it will be possible to measure program effectiveness and it will facilitate the use of political pressure to steer government toward these stated goals.

The second mandate of this advisory committee will be to oversee the development of a national trauma registry. As it currently stands, we already have a number of efforts aimed at developing trauma registries. Nationally there is our own effort, which has been carefully

shepherded along over the past few years by Dr. Judith Vestrup (and her committee). A second national effort has been launched by the pediatric group, forming the Childhood Injury Research Program (CHIRP), which is now underway and operating in major pediatric centres across the country. There are also many provincial registries that are either well established, as in the case of Manitoba, or getting underway—most of the remaining provinces. It should be possible for the data collection to occur in cooperation rather than in competition and for a comprehensive data set to be developed over the ensuing years. Once again, modest and achievable goals for the year 2000 should be stated and worked toward with respect to trauma registry.

Once a clear set of national objectives has been established and with a data collection system in place, specific programs in prevention and specific programs in the care of injured patients can be started and carefully evaluated—a national strategic plan. The prevention programs should be directed toward the three major fronts that I alluded to earlier—legislation and enforcement, engineering and technology, and education and behavioral change. Particularly with the legislative and enforcement programs and with the education and behavior program, small initiatives in small jurisdictions can be implemented before a national program is started or legislative change is introduced. The benefit of doing all of this in a coordinated fashion under a national umbrella group is that many small initiatives can be launched and studied simultaneously. Prevention programs targeting engineering and technology pose a different set of problems. Most, if not all, automobile design occurs outside of Canada, and will be difficult to influence except through legislation. Local application of newer designs and advanced engineering and technology can certainly be applied to our roadways, and thus studied carefully before national introduction. These various initiatives need to be taken and it will be far more efficient and effective if they can be launched, coordinated, and evaluated by a national body with effective power through the Federal Minister of Health.

With respect to the care of trauma patients and the development of emergency medical systems, a national plan must evolve out of local solutions that have been implemented and evaluated. We have a sparse population spread out over a vast area. There are concentrations of population, particularly around Toronto and Hamilton that are equivalent to major urban centres in the United States and Europe. Most of the EMS and trauma systems development has occurred in major American and European centres and in Canada, out of our major cities. However, we cannot apply the urban American model rigidly to our situation. The solutions for densely populated Southern Ontario will be much different than for Yellowknife, NWT. The solution in trauma care for rural Canada is not to build a 10–20 bed hospital in every town, as some provincial governments are determined to

do. We need to focus much of our trauma system development on the rural problem, particularly in view of the fact that 70% of highway mortality occurs in rural collisions. Time and distance to definitive care are difficult hurdles to overcome, and new ideas are needed. We have always focused our efforts on getting the patient to the trauma centre as quickly as possible. Perhaps we need to rethink this. As exemplified by cases in which air ambulance is used to bring trauma patients to the University of Alberta Hospital, the average distance travelled is 600 kilometers. Perhaps it is time to try taking the trauma resuscitation room to the patient—using a flying trauma team, one that could intervene to resuscitate and surgically treat hypovolemic shock at the rural hospital before transport. This would lower the time to definitive care. New ideas will be needed to find solutions to many of these problems. Again, nationally coordinated efforts in trying new methods in trauma care must be thoroughly evaluated before applying them generally. A national body to oversee these initiatives can prevent duplication of effort in designing a national trauma system.

To summarize, injury in Canada is the modern epidemic of our society. Little impact on morbidity and mortality rates has been made over the past 60 years.⁴ It is time for us to develop a national strategic plan, to bring together those who deal with injury in the prevent and event phases with those who are primarily involved with injury after the event, to develop a coalition on trauma. To be successful this coalition must create a national awareness about injury, it must change the way society views the problem. To facilitate this process, a National Advisory Committee on Trauma should be es-

tablished. I propose that this Association, The Trauma Association of Canada, take a leadership role in the development of a national strategic plan for dealing with injury in Canada.

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