The Road Traffic Injury Epidemic in the Developing World

A Role for Orthopaedic and Trauma Surgeons

The Unseen Epidemic

Beginning in the 1970s, road safety improvements in North America, Europe, Japan, Australia, and New Zealand resulted in significant reductions in the rates of motor vehicle fatalities. Control of drunk driving, the mandatory use of child-restraint devices and seat belts, and improvements in passive protection, such as airbags, have further reduced the number of deaths and the severity of injury. The situation is quite different, though, in the developing world where a growing number of accidents on the roads have caused the problem to reach epidemic proportions. In the highly motorized countries, the occupants of cars are the primary victims of traffic accidents. In the developing, newly motorizing countries, the majority of deaths and injuries are sustained by vulnerable road users such as pedestrians, bicyclists, motorcycle and scooter riders, and passengers on public transportation. They travel together on the same roads with buses, trucks, and cars, in a chaotic traffic stream. Mismatched collisions between the unprotected humans and the heavy vehicles cause frequent death and serious injury, even at lower speeds. Unlike the developed countries where cars are the predominant mode of private transportation, in the newly motorizing countries, more affordable motorcycles and scooters are being purchased and are joining the unregulated traffic stream in large numbers. The resulting explosive 16-18% vehicle growth rate in many Asian countries will lead to doubling of the fleet in five years and a trebling in eight years, causing even more severe problems. Not separating the various road users, sparse traffic safety laws, inadequate police enforcement, absence pre-hospital emergency care, and limited resources for acute hospital and rehabilitative care are additive factors explaining the frequency of accidents and their devastating consequences.

The Size and Significance of the Problem

Annually, 800,000 people die and 10-15 million are injured or permanently disabled from accidents on the world’s roads. Under-reporting of injuries is common in the developing world and these estimates may represent only half the true number. Seventy five percent of the fatalities and injuries occur in the developing world and the problem is growing. A five year study, published in 1996, entitled "The Global Burden of Diseases and Injury" by researchers from the Harvard School of Public Health and WHO examined the relative significance in terms of death and disability of the major health conditions and projected changes between 1990 and 2020. A startling finding of this report was the prediction that road traffic accidents would move from ninth place to third place on the list as a cause of worldwide death and disability. In this position, it would be exceeded only by heart disease and unipolar major depression. By comparison, War will rank eighth and HIV tenth. In its 1998 annual report, The International Federation of Red Cross and Red Crescent Societies (IFRC) recognized road traffic accidents as a major global health problem, equal in magnitude and seriousness to wars and natural disasters. They recommend that this global epidemic requires urgent attention.

The Economic Impact

The World Bank estimates that the annual cost of traffic accidents in the developing countries is 100 billion US dollars. As the combination of all forms of foreign loans and aid totals 60 billion US dollars, it is clear that road traffic accidents are seriously undermining economic and social development in these countries. The trauma victims are often young males who are the workers and wage earners in their families. When they are killed or disabled, there is a profound effect on their entire family. In some countries, unfavorable customs and laws do not provide for the widows of those killed and the accident leads also to the break-up of the family. To lessen the human suffering and decrease the negative economic influence of road traffic accidents, in 1999 the World Bank Group and IFRC formed the Global Road Safety Partnership (GRSP). Under the framework of the World Bank - Business Partners for Development - this collaborative initiative brings together business, government, and civilian societies to conduct focused projects and safety campaigns.
A Role for Orthopaedic and Trauma Surgeons

Severe musculoskeletal injuries are common in vulnerable road users such as pedestrians and cyclists. Sequelae of these injuries are often the principal determinant of disability and economic losses for the survivors of road traffic accidents. As primary care givers for these devastating injuries, orthopaedic and trauma surgeons can have a pivotal role in the control of the global road safety problem. Because its membership represents 103 countries, and improving education and patient care in the developing countries have always been part of its mission, SICOT has established a Trauma Committee to work on the problem of road traffic injury reduction. The GRSP has agreed that the SICOT Trauma Committee should serve as their principal interface with the world orthopaedic community. The committee will also play a lead role with this problem on behalf of the Bone and Joint Decade 2000-2010. The Committee will develop initiatives in both prevention and treatment. Improvement of surveillance systems to allow collection of accurate, standardized information on accidents, fatalities, and injuries is a priority. The number of education programs, which transfer useable knowledge on prevention and treatment from the developed to the developing countries, must be increased. Surgeons must also be recruited to volunteer through the International Center for Orthopaedic Education in programs such as Orthopaedics Overseas and World Orthopaedic Concern. Efforts must be made to procure medical supplies and education material for emerging nations. Descriptions of successful road safety programs in developing countries must be collected and shared through the GRSP to encourage best practices. In addition, the world orthopaedic community must support their colleagues in developing countries in their efforts to advocate the priority of road safety to their governments. As witnesses to the carnage, they can attest to the unnecessary pain and suffering endured. Their moral authority and prominence as influential members of society will allow them to be powerful advocates for change.

A nucleus of orthopaedic and trauma surgeons, from a variety of countries, who have previously worked on the problem of road safety has been assembled to form the SICOT Trauma committee. Because of the global and expanding nature of the road safety problem, the Committee must be expanded. Although this Committee is operating under the auspices of SICOT, membership in this organization is not initially necessary for participation. The goal is the development of a network of activists, with representatives in all countries, who will work together to control the epidemic.

If you are experienced in working with your government on road traffic injury control or would like to become involved, your help is needed on the Bone and Joint Decade and SICOT Trauma Committee- World Bank Global Road Safety Partnership Collaboration
Please contact me to express your interest in serving.

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A World Health Organization Collaborating Centre for Evidence-Based Health Care in Musculoskeletal Disorders

We are extremely proud to announce that the Department of Orthopaedics at Lund University has been designated as a World Health Organization Collaborating Centre for Evidence-Based Health Care in Musculoskeletal Disorders.

Prof Lars Lidgren, Chairman of the Bone & Joint Decade will preside as Director of the WHO Collaborating Centre, along with Prof Kristina Åkesson, Bone & Joint Decade ISC member.

This boost for musculoskeletal science follows on from the WHO’s recognition of the Bone and Joint Decade and the vast burden of musculoskeletal disease as the leading global cause of morbidity and disability, and giving rise to enormous health care expenditure and loss of work productivity. In 2003, in conjunction with the BJD, the WHO had published The Burden of Musculoskeletal Disease at the Start of the New Millennium (http://whqlibdoc.who.int/trs/WHO_TRS_919.pdf) which is part of the ongoing WHO Global Burden of Disease 2000 study.

Now, as a WHO Collaborating Centre, the Department of Orthopaedics in Lund together with the international network will focus on identifying barriers and facilitators to the successful implementation of musculoskeletal health strategies; identifying the costs associated with musculoskeletal disorders and developing models for cost effectiveness; and continuing ongoing activities relating to aetiology, prevention and treatment of musculoskeletal disorders.

WHO Collaborating Centres are institutions such as research institutes or parts of universities, which are designated by the WHO Director-General to carry out activities which support the WHO’s various global health programmes. The WHO believes that research in the field of health is best advanced by assisting, coordinating and making use of the activities of existing institutions, rather than founding new research bodies.

To read about the Collaborating Centre for Evidence-Based Health Care in Musculoskeletal Disorders in Lund, please go to http://www.who.int/whocc/Detail.aspx?cc_ref=SWE-60&cc_city=lund&cc_code=swe&
Ortopedia

Las consecuencias de las enfermedades de las articulaciones, los huesos y los músculos, son ideales tanto para el cuidado de la salud individual y la sociedad. Para el individuo afectado la calidad de vida en gran parte en forma de dolor, rigidez, problemas de movilidad y discapacidad, pérdida de la independencia, la disminución de la interacción social y el bienestar. Los trastornos musculoesqueléticos son los trastornos que causan la mayoría de las discapacidades en la población adulta en Suecia. Un estudio sueco de los costos sociales muestra que las enfermedades de los trastornos musculoesqueléticos representan la mayor proporción (23%).

La gran mayoría de consumo de tratamientos ocupado por las fracturas (especialmente la osteoporosis), la enfermedad de las articulaciones (osteoartritis y artritis reumatoide), trastornos de la columna vertebral, daños y tumores. Este panorama enfermedad se refleja en las actividades del Departamento de Ortopedia en Lund. Enfermedades y trastornos esqueléticos abarca un amplio grupo de trastornos diferentes con diferentes necesidades de salud de atención primaria donde aún es en gran medida en la investigación y el tratamiento.

OrthopaedicClinic ha sido una entidad independiente durante más de 80 años y representante materia académica ha estado presente desde la década de 1940. Estamos especialmente contentos de tener a su departamento de formación propia y un laboratorio privado de formación quirúrgica, junto con la nueva habilidad de centro en el hospital para proporcionar formación práctica. Una parte esencial de la educación en el Departamento de Ortopedia en Lund es que cada candidato vinculado a un médico durante el servicio militar. Nosotros tratamos de poner un gran énfasis en los aspectos prácticos, como ledundersökning, perforación, fractura de yeso ejercicio. Espero que su formación con nosotros para proporcionar una puerta de entrada a un interés más profundo en el campo de las enfermedades musculoesqueléticas y de que muchos de ustedes se volverá con la ortopedia como su futura carrera.

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Residents’ perception of their role in teaching undergraduate students in the clinical setting

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SUMMARY Fifty-one residents from four major clinical specialties were interviewed using a questionnaire to assess how they perceived their teaching responsibilities toward undergraduate medical students. The residents’ teacher characteristics, teaching effectiveness and abilities in certain aspects of teaching were examined. The residents perceived themselves as good teachers with adequate teacher characteristics. However, they rated themselves better as clinicians than as teachers. They scored themselves highly on attitude towards medical students (interpersonal skills) and technical skills. Their perception of teaching was significantly influenced by their clinical knowledge and their clinical ability. Communication was the best predictor of overall perceived teaching effectiveness. The residents agreed, however, that their teaching skills could be improved.