Introduction

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"Which disease tops the list of mortality causes among children, adolescents and young adults in all the developed countries and in an increasing number of developing countries? A disease responsible for considerable morbidity and much long-term or permanent disability, which in addition to causing a great deal of human suffering costs the community vast sums of money, and yet is scarcely taught in medical and health professional schools, is little researched and the subject of only a limited number of preventive programmes, which if they do exist are often inappropriate and inadequate. There is only one answer: accident injuries".¹

This document is intended to provoke a national commitment to injury prevention and control as the single highest health priority for our young people in the UK in 1998.

For our citizens between the ages of 1 and 19 years, injury represents the greatest risk for sudden death, the commonest reason for hospital attendance, and a potent source of short and long term morbidity. Injuries are strongly concentrated among those already most socially deprived. The pain and suffering to the young people and their families concealed by these bald facts are barely imaginable, while the economic consequences from their loss, incapacity, and treatment are immense.²

We are not alone in this—many developed countries have even worse records—by the year 2020, the World Health Organisation predicts that injury will become the greatest single reason for loss of healthy human life years on earth.³ In 1996, the 3rd International Conference on Injury Prevention and Control attracted 1200 delegates and endorsed the Melbourne Declaration⁴—a call to all nations to recognise this emerging global threat.

In the UK, we have targeted accident mortality in our national health and road transport strategies from 1991/2⁵⁻¹² and expect to reinforce this with commitments to reductions in injury morbidity in *Our Healthier Nation*¹³ (England) and similar national strategies in the other UK countries over the next year.^{9, 11}

These bones need flesh. We have hardly begun to understand how pervasive risk factors, such as age, sex, and social deprivation, exert their profound effects on injury mortality; the health outcomes and economic consequences of much injury prevention are undocumented; there is a primitive evidence foundation on which to base our efforts at injury prevention,¹⁴ and the few effective interventions that are available are not widely implemented.¹⁵

The document is aimed at policy makers and others who might influence them. The policy areas which bear on the injury problem are many—yet no-one has injury prevention and control for young people as their primary responsibility. This is an issue which must receive a higher strategic priority among research funders, among legislators, among public sector strategists, and among those industries and businesses where safety and risk are important factors or products.

A single thread that might weave together these different interest groups is public health. As concluded by the US National Committee for Injury Prevention and Control:

"No health problem responsible for so much death and disease could be defined as anything other than a public health problem. One of the primary functions of public health agencies is the collection and analysis of data about health problems. Such data are essential to understand patterns of injury, identify risk factors and risk groups and in the design of preventive programmes. Public health agencies also offer practical experience of management of other community child health problems and they recognise that health problems have multiple causes which require multi-disciplinary solutions".¹⁶

This baton has not been grasped fully by public health professionals, nor has the UK public health movement a sufficient influence in the road transport, environment, planning, education, legal, insurance, police, and other relevant agencies with the executive powers to reduce injury. Health is the key—injury is quite categorically an assault on health—the products of inadequate injury prevention come through the doctor's door. Public health professionals are the lookouts at the door who should search "upstream" and act to stem the flow.

Over the last 20 years, Australasia and the USA have made major strategic investments in injury prevention and control. Several universities in Australia and New Zealand have programmes of cross disciplinary injury research, and a strategic plan for increasing the coherence and strength of research is being developed. In the USA, the National Centers for Disease Control in Atlanta created a new centre for injury control in 1990 with a remit and funding—now obviously fruitful—to stimulate academic and service programme developments across the whole country.

Why did this happen? Because the public health significance of the problem was recognised after persuasive briefings and lobbying. This document is unashamedly modelled on the key briefing document: *Injury in America*,¹⁷

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Table 1 Injury mortality: England and Wales (E&W) compared with Scotland and Northern Ireland (NI) 1995; values are rate/100 000 (number)

Age (years)	Unintentional (E800-949)			Intentional (E950-978)			Intention unknown (E980-989)		
	E&W	Scotland	NI	E&W	Scotland	NI	E&W	Scotland	NI
0-4	5.3 (181)	5.0 (16)	4.7 (6)	0.5 (17)	0.3 (1)	0	0.6 (21)	0.9 (3)	0
5-9	2.9 (97)	4.9 (16)	8.3 (11)	0.5 (17)	0	0.8 (1)	0.2 (7)	0	0
10-14	4.9 (157)	4.0 (13)	8.4 (11)	0.4 (12)	1.5 (5)	0.8 (1)	0.5 (15)	0.3 (1)	0.8 (1)
15-19	15.7 (474)	19.2 (60)	19.3 (24)	[S] 3.1 (94) [H] 0.7 (21)	9.3 (29) 4.5 (14)	11.3 (14) 8.8 (11)	3.3 (101)	1.9 (6)	1.6 (2)

[S] = suicide; [H] = homicide.

Source: Mortality Statistics Cause DH2. No 22 tables 1 and 3; Annual Report of the Registrar General for Scotland; General Register Office. Belfast: Mid-year population estimates 1995 + abstract of causes of death at different age periods.

published by the National Academy of Sciences in 1985.

We do not intend to stay 13 years behind. In many respects, we are not behind, but in front. Our occupational injury and road safety engineering records are second to none. Our roads and cars are some of the safest in the world—for passengers and drivers. Some progress is being made on our poor record for child pedestrian injury, but cycling remains a seriously risky activity. The careful scientific and legislative approach which has underpinned these successes must be extended to a wider public health agenda covering all types of injury (for example including those occurring in domestic and outdoor leisure settings); an agenda which recognises safety as one of the attributes of all healthy citizens.

What kind of scientist is interested in injury prevention? There is no animal model for the problem, there are no biochemical tests or cellular changes to illuminate the “pathology”, this phenomenon is not even within an organism—it is about people who fail to adapt to a sharp, hot, poisonous, corrosive, heavy, fast, threatening, and increasingly complex manmade environment—and those who produce this environment with little thought about the people who use it. This is the antithesis of molecular genetic explanations of man’s diseases. This is the real research challenge—a scientifically robust understanding of how to live, not only healthy, but safe modern lives.

We have chosen to focus on young people in this document because they are at high risk in many of their spontaneous activities, have missed many of the benefits from advances in occupational and road safety, and contribute the lion’s share of disability adjusted life years lost from injury. We have chosen to focus largely on unintentional injury because, in contrast to the USA, this is the primary issue for young people in the UK. In 1995, only 16% (237) of the 1460 injury deaths among 0-19 year olds in the UK were assigned to intentional causes. This proportion increases with age and varies between the home countries. In Northern Ireland and Scotland, 68 of the 160 injury deaths in 1995 in the 15-19 year age group were intentional—at least three times the England and Wales rates and equally distributed between suicide and homicide (see table 1).

We recognise that, in many cases, the distinction of injury intentionality is impossible and even inappropriate. We are clear that future work must extend the concept of UK

injury prevention and control to encompass violence and self harm, and to address other vulnerable groups, especially older people.

In section 1 Ian Roberts, Carolyn Di Guiseppi, and Heather Ward set the scene for *Action on Injury* by examining the scale of the problem, epidemiological trends, and costs. This detailed analysis concentrates on the more numerous data from England and Wales. Injury rates are similar, or slightly higher in Scotland and Northern Ireland, but the conclusions are generally applicable. Two sections on prevention follow: Elizabeth Towner and Heather Ward in section 2 provide an overview of approaches to injury prevention and examine specific interventions and methods which are effective. They emphasise that knowing what works does not necessarily translate into widespread action. Section 3 by Elizabeth Towner, Yvonne Carter, and Michael Hayes looks at how implementation of injury prevention could be improved through strategic development at local and national levels. The broader European dimension is then presented by Jo Sibert and David Stone in section 4. They examine a number of European initiatives to see how such an approach can enhance child safety. David Yates’ contribution in section 5 looks at tertiary prevention and the many improvements in post-impact care. Stephen Jarvis and Jo Sibert pull together the strands from these five sections and suggest new ways forward for the prevention and control of injuries in the UK.

The conclusion?—removing the threat of injury to young people’s life and health in the UK represents one of our greatest scientific and public health challenges. It is time to take *Action on Injury* on their behalf.

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- 3 Murray CJL, Lopez AD, eds. *The global burden of disease*. Geneva: WHO, 1996.
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