

# A CALL TO ACTION

## KEY MESSAGES FROM THE WHO REPORT

### Preventing road traffic injury: a public health perspective for Europe



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## A CALL TO ACTION

Road traffic injuries in the WHO European Region represent a major, costly and largely avoidable public health problem. Cost-effective preventive strategies exist and need to be applied through multisectoral approaches. This requires:

- strong political commitment and leadership;
- making road safety part of the core business of the health sector;
- integrating injury prevention with sustainable transport;
- more broadly adopting the latest road safety thinking in Europe;
- understanding that speed is the core problem;
- improving the implementation mechanisms that promote road safety, so that new partnerships can be forged; and
- more widely adopting evidence-based interventions.

World Health Day 2004 aims to raise public awareness and to enhance commitment among policy-makers to take effective action to reduce road death and injury. In Europe, this action is framed by specific targets.

*This document introduces the key messages of the WHO report Preventing road traffic injury: a public health perspective for Europe, which has been prepared as a companion to the World report on road traffic injury prevention.*

### THE EUROPEAN TARGETS

- The WHO health for all policy in Europe sets international targets for reducing road deaths and injuries, calling for reducing mortality and disability from road crashes by at least 30% by 2020.
- The European Union has adopted the goal of reducing road fatalities by 50% by 2010. This target represents an ambition to reduce the number of deaths more quickly than continuation of past trends would imply.
- The European Conference of Ministers of Transport has adopted a target of reducing road deaths by 50% by 2012, to serve as a benchmark for its 43 Member States.

## THE HIGH COST OF MOTORIZED MOBILITY TO SOCIETY AND PUBLIC HEALTH

- Every year about 127 000 people are killed and 2.4 million injured in road crashes in the European Region of WHO.
- Low- and middle-income countries in the eastern and southern part of the Region are most severely affected.
- About one third of road crash victims are aged 15–29 years.
- In the European Union, road crashes comprise 97% of all transport crash deaths and more than 93% of all transport crash costs and are the leading cause of death and hospital admission for people younger than 50 years.
- The risk of death among motorcyclists in the European Union is 20 times higher than for car users per kilometre travelled. The fatality risk for cyclists and pedestrians is 7–9 times higher than that for car users.
- The socioeconomic cost – much of which is borne by the health sector – is estimated to be about 2% of a country's gross domestic product. For European Union countries alone, this means about €180 billion – twice the Union's annual budget.
- In addition to other adverse transport-related health effects such as air pollution, global warming, noise and increasingly sedentary lifestyles, an unacceptably high price is currently being paid for motorized mobility in human and economic terms.

## MAKING SAFETY AN INTEGRAL PART OF THE RESPONSIBLE BEHAVIOUR OF THE HEALTH SECTOR

The health sector should:

- ensure that all employee duty travel is carried out safely;
- promote public transport, cycling and walking when possible; and
- require that its vehicles be safe, be operated under safe conditions, travel within the existing speed limits, use the best safety equipment and be operated without consuming alcohol and recreational drugs.

This can turn the health sector into an influential actor in creating demand for safe transport products and services and in stimulating partners within and outside the health sector to act accordingly.

- **leading research and innovation**, including by improving the evidence base for practices in trauma care and rehabilitation and developing guidelines for implementing them and by elucidating risk factors still not fully understood; and
- **mainstreaming road safety into the policies of other sectors and into the public health agenda**, by further developing and promoting the use of integrated assessment and modelling tools, establishing links with other relevant public health processes and promoting the development of road safety thresholds to be met to achieve acceptable levels of safety.

## THE HEALTH SECTOR AS A CHAMPION OF ROAD SAFETY

WHO calls for the health sector to play a stronger and more proactive role, in addition to maintaining its leading role in injury surveillance and in the post-crash phase of road crashes. The health sector should carry this out by:

- **becoming the leading champion for road safety**, by advocating for safe road transport systems that reject preventable deaths and serious injuries, supporting the implementation of effective measures and supporting the efforts of the transport sector to keep speeds within safe levels; in many countries, such as Australia, New Zealand, Sweden and the United Kingdom, health professionals have acted as passionate and evidence-based advocates to help bring about key road safety measures, such as compulsory seat belt use and measures to reduce drink-driving;
- **providing evidence-based information** such as injury information systems based on hospital data and facilitating the link and consistency between different data sources, identifying appropriate indicators to monitor various risk factors and estimating the social costs of road traffic injuries;
- **ensuring that drivers are fit to drive**, since this role of the health sector is the starting-point for opportunities to prevent deaths and to mitigate the effects of injuries;
- **delivering post-crash care** through a chain of help starting with possible intervention by bystanders right up to hospital trauma care and rehabilitation;
- **becoming active in promoting the demand for greater safety**;

## NEW ROAD SAFETY THINKING IN EUROPE BUILDING SAFETY INTO THE TRANSPORT SYSTEM

Early road safety policies emphasized publicity and education, often used in isolation, to try and persuade users to behave safely. Such approaches did not significantly improve road safety. This led several countries to adopt effective strategies in the 1970s and 1980s addressing infrastructure, vehicles and users throughout the system and targeting preventing crashes, reducing injury severity in crashes and ensuring post-crash care.

In the 1990s, this systems approach was refined further into one that also placed human limitation – both behavioural and physical – and speed control as central design parameters of the road transport system. Since people make intentional or unintentional errors in traffic, crashes cannot be totally avoided. Controlling speed, however, leads to fewer deaths and serious injuries in the event of a crash. Speed at the time of collision is the key determinant of the kinetic energy the human body sustains in a crash.

“In order to achieve a safe road transport system, there must be a change in our views concerning responsibility, to the extent that system designers are given clearly defined responsibility for designing the road system on the basis of actual human capabilities, thereby preventing the occurrence of those cases of death and serious injury that are possible to predict and prevent.”

Committee of Inquiry into Road Traffic Responsibility, Sweden

Building in system safety is common in other modes of transport and in most sectors of the economy, in which mechanisms are introduced to prevent possible operator or user failure from occurring or from causing unacceptable harm.

## PREVENTING ROAD INJURY WITHIN SUSTAINABLE TRANSPORT AND PUBLIC HEALTH POLICIES

Integrating road injury prevention into sustainable transport and urban planning provides road safety while reducing congestion and the emission of noise and air pollutants and providing opportunities for improving health through physical activity such as safer walking and cycling. One example of integrating safety into transport and health policies that could bring great benefits is safety impact assessment.

### SAFETY IMPACT ASSESSMENT

The likely effects of transport or land-use planning decisions on the occurrence of crashes and the resulting injury and damage on the entire road network affected need to be considered at an early stage to avoid adverse and unintended effects.

Area-wide safety impact assessment should be an essential component of environmental impact assessment, strategic environmental assessment and health impact assessment of plans, policies and projects related to transport and land use.

## SPEED - THE CORE ISSUE

Speed is the single most important determinant of road safety. Speed affects the risk of a crash occurring and its severity when it occurs.

### SPEED: THE LEADING KILLER

- An average increase in speed of 1 km/h is associated with a 3% higher risk of a crash involving an injury.
- In severe crashes, an average increase in speed of 1 km/h leads to a 5% higher risk of serious or fatal injury.
- Travelling 5 km/h faster above a road speed of 60 km/h results in an increase in the relative risk of being involved in a casualty crash that is comparable to having a blood alcohol concentration of 0.05 g/dl.
- For car occupants in a crash, the likelihood of death at an impact speed of 80 km/h is 20 times that of an impact speed of 32 km/h.
- The probability of a pedestrian being killed rises by a factor of 8 as the impact speed of the car increases from 30 to 50 km/h.
- Pedestrians have a 90% chance of surviving car crashes at 30 km/h or less but less than a 50% chance of surviving a crash at 45 km/h or above.

Excessive and inappropriate speed is a major cause of about one third of the fatal and serious crashes in the European Union. Reducing the average speed by 3 km/h across the European Union would save an estimated 5000 to 6000 lives each year and would avoid 120 000 to 140 000 crashes, saving €20 billion in crash costs alone.

Maintaining speeds below levels that cause death or serious injury also provides benefits in reducing air pollution, noise and the barrier effect created by the fear of vulnerable road users to walk and cycle and the resulting health risks related to sedentary lifestyle.

### MANAGING SPEED IN URBAN AREAS

- About two thirds of the road crashes leading to injury occur in urban areas.
- Most pedestrian deaths and injuries occur in crashes in urban areas, and many of these people are vulnerable road users such as children and elderly people.
- Urban speed limits, road infrastructure and vehicle design to protect occupants and other people in case of a crash should take account of human limitations and injury thresholds.
- Professionals widely agree that speed should not exceed 50 km/h in urban areas and 30 km/h in residential areas and in other areas with great potential for conflict between vulnerable road users and motorized vehicles.
- Area-wide speed and traffic management in residential areas in the United Kingdom was highly effective; benefits exceeded costs by a factor of 9.7.

## A TOOLKIT FOR ROAD SAFETY

### IMPLEMENTATION MECHANISMS AND TOOLS

Achieving road safety necessitates complex interaction among various actors that may have very different and diverging interests, objectives and roles. This requires further improving the implementation mechanisms and tools that make roads safer.

Governments should reduce the gap between what is known to be effective and what is actually practised, utilizing a wide range of tools to improve road safety. These include:

- demonstrating strong political commitment and leadership;
- developing long-term strategic visions, setting quantitative targets and monitoring progress;
- using new delivery mechanisms (see the example from Sweden);
- promoting strong multisectoral institutional and political integration for road safety; and
- identifying and pursuing synergy with other goals related to sustainable development and health.

Examples include national government activity in Sweden and local government measures in Baden, Austria.

## USE OF NEW IMPLEMENTATION TOOLS IN SWEDEN

The Swedish National Road Administration is a government body that has supported the development of the demand for safer products and services by:

- implementing Vision Zero – a long-term vision for road safety, using targets and plans for reducing casualties and safety management based on results;
- helping to develop and support objective consumer information programmes such as the European New Car Assessment Programme, which rates new cars based on crash test performance;
- adopting a travel policy requiring a high level of safety, limited weight and limited fuel consumption on all cars owned or rented;
- supporting the development of a system for ranking the safety of heavy-duty vehicles;
- stipulating that the award of contracts is conditional on the fitting of alcohol interlock devices in all vehicles used by its contractors; and
- providing advice to local governments on how to be more oriented towards safety in their dealings and contractual arrangements with suppliers of transport services and vehicles.

## IMPLEMENTING AN INTEGRATED TRANSPORT AND SAFETY PLAN IN BADEN, AUSTRIA

An integrated transport and safety plan was implemented in Baden in 1988 requiring:

- constructing an urban throughpass
- enlarging an existing pedestrian area
- improving the network of cycling facilities
- constructing roundabouts
- implementing 30 km/h zones
- setting up city bus lines
- applying area-wide traffic calming
- implementing parking management and car parks
- strictly enforcing traffic rules
- treating crash black spots.

About 75% of the road network is part of a 30 km/h zone or a residential street with an even lower limit. Crash analysis showed that road traffic injuries and deaths declined by about 60% between 1986 and 1999. Today, Baden is one of the safest towns in Austria.

## KEY ROAD SAFETY STRATEGIES

The following effective measures need to be implemented swiftly.

### MANAGING EXPOSURE TO CRASH AND INJURY RISK

- Studies of safer routes for vulnerable road users in Denmark show that cyclist casualties declined by 35% after tracks or lanes were constructed alongside urban roads.

### MINIMIZING EXPOSURE TO HIGH-RISK ROAD TRAFFIC SCENARIOS

- Graduated licensing systems for novice drivers in Austria, Canada, New Zealand and the United States were associated with between 9% and 43% fewer crashes.

### PLANNING AND DESIGNING ROADS FOR SAFETY

- The sustainable safety policy in the Netherlands is re-engineering the road network with human limitations in mind. In the late 1990s, two thirds of urban roads were classified as being suitable for 30 km/h zones. As much as 50% of this conversion has already taken place.

### PROVIDING VISIBLE, CRASHWORTHY, SMART VEHICLES

- Legislative adoption of four cost-effective well-established tests to make car fronts safer for pedestrians in the event of a crash could prevent up to 2000 deaths per year in the European Union alone.

### SETTING ROAD SAFETY RULES AND SECURING COMPLIANCE

- Implementing speed cameras to enforce speed limits in the United Kingdom led to 35% fewer fatal and serious injuries in road crashes at camera sites and 56% fewer fatal and serious casualties among pedestrians. Random breath testing in various countries at special checkpoints has reduced alcohol-related crashes overall by about 20%.

### DELIVERING CARE AFTER CRASHES

- The quality of post-crash care is vital to the potential of road crash victims to survive. A chain of help for the victim needs to be implemented from the crash scene to access to emergency health care services and to efficient hospital and rehabilitation care.

European countries are increasingly adopting these policy measures, but implementation is insufficiently broad and too slow to meet European targets.

The *World report on road traffic injury prevention* discusses these effective measures in depth.

## SUPPORT FROM INTERNATIONAL ORGANIZATIONS

Intervention at the local, regional and national levels is best placed to ensure effective and rapid responses to local conditions. International organizations, however, play a key role in several areas.

The European Union, WHO, the Organisation for Economic Co-operation and Development, the European Conference of Ministers of Transport and the United Nations Economic Commission for Europe are involved in:

- collecting data and setting international targets for reducing road casualties;
- identifying and promoting best practices;
- exchanging information on road safety;
- supporting research; and
- supporting capacity-building and multidisciplinary networking among professionals.

International donors and international financial institutions, such as the World Bank, the European Bank for Reconstruction and Development, the European Investment Bank and donors and development agencies active in the European Region can provide core support by implementing capacity-building programmes. Road safety can be assisted by making project funding for developing transport infrastructure and land-use planning conditional on improving road safety.

For more detail, see the following publications.

Racioppi F et al. *Preventing road traffic injury: a public health perspective for Europe*. Copenhagen, WHO Regional Office for Europe, 2004 (<http://www.euro.who.int/eprise/main/WHO/Progs/whd4>).

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