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Road safety in Europe as a public health priority

Report[1]
Committee on Social Affairs, Health and Sustainable Development
Rapporteur: Ms Naira KARAPETYAN, Armenia, Group of the European People's Party

Summary

Every year, approximately 1.25 million people die on the world's roads, and another 20 to 50 million people suffer non-fatal injuries, with many incurring a disability as a result. Road accidents continue to be a major public health issue in Europe, being the leading cause of death in children and young adults aged 5 to 29 years, with considerable consequences for victims, their families and society as a whole.

International and European efforts to improve road safety must be increased to achieve the United Nations Sustainable Development Goals and to halve the number of global road deaths and injuries by 2020.

States should thus make a comprehensive assessment of the current road safety situation and designate lead agencies to ensure effective long-term policies. Measures including legislative and policy changes, awareness-raising campaigns and road safety education in schools are necessary to address the key behavioural risk factors.

Health-related issues also need addressing, such as the effects of alcohol, drugs, diseases and the use of medicines, driving tests, medical checks, first aid and rescue systems. Governments must ensure adequate financing for road safety programmes in order to provide safe, affordable and sustainable transport systems for all.

1. Reference to committee: Doc. 13317, Reference 4006 of 22 November 2013.

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A. Draft resolution[2]

1. Europe has seen significant progress in the last decades as regards improved road safety, and some European countries have the lowest accident rates in the world. The Parliamentary Assembly nevertheless draws attention to the severe public health impact of road accidents, resulting in high numbers of people dying or having to live with disabilities. The situation could worsen in the coming years.

2. The Assembly recalls the principles laid down in the Global Status Report on Road Safety 2015 of the World Health Organization (WHO) and the United Nation's Global Plan for the Decade of Action for Road Safety, which provide the framework for policy action. The Assembly also recalls the recently adopted Sustainable Development Goals (SGG) on the halving of the number of global deaths and injuries from road crashes by 2020, and the provision of access to safe, affordable and sustainable transport systems for all.

3. The Assembly urges member States to develop effective long-term policies for road safety and to better co-ordinate their practices, taking into account the variety of legislation and policies across Europe.

4. More specifically, the Assembly recommends that member States step up co-ordination and action in order to:

4.1. implement legislative and policy measures at international, national, and local level, including the implementation of good practices (for example, "zero-death" policies and action plans for road safety) and securing commitment from major decision-makers to ensure effective enforcement;

4.2. make a comprehensive assessment of the current road safety situation in their countries, to allow decision-makers to take efficient measures and to set targets for road safety to be achieved by 2020;

4.3. designate lead agencies to put in place comprehensive road safety data programmes to support the implementation of national road safety strategies, plans and targets, and to monitor their implementation, supporting pilot projects and the application of ISO 39001 standards in road safety management systems;

4.4. encourage the creation of multi-sector partnerships, including governments and their agencies, private sector companies, industry, academia and non-profit organisations, to make technical and scientific knowledge and information available rapidly to all stakeholders, including by open data-sharing systems;

4.5. provide adequate financing for programmes promoting road safety and invest a mandatory percentage of 10% of road infrastructure expenditure on safety;

4.6. address the key behavioural risk factors, as essential elements of any action plan to increase the safety of roads, including through awareness-raising campaigns for drivers, cyclists and pedestrians, and include road safety education knowledge, skills and attitudes in school curricula from an early age;

4.7. develop and implement legislation and policy measures on issues such as the influence of alcohol, drugs, diseases and the use of medicines on driver performance, including periodic driving tests and medical checks to enable the evaluation of the continuing capacity to drive, with co-ordination between health-care departments and transport authorities;

4.8. introduce urban planning designed to protect vulnerable road users, notably pedestrians and cyclists, including by promoting public transport, walking and cycling;

4.9. make compulsory the use of helmets on motorcycles and of seat belts and child restraints in cars, put in place other safety measures (such as special pavements and speed bumps), forbid the use of mobile phones while driving, enforce credible speed limits (for example maximum 50 km/h in urban areas, with lower limits in residential areas and in the vicinity of schools and sport facilities) adapted to the environment and driving conditions, give priority to pedestrians and promote the use of active and passive safety equipment and technological improvements on all roads and in all vehicles;

4.10. further develop first aid and rescue systems on the roads, emergency transportation, quality post-crash care, treatment in hospitals and rehabilitation;

4.11. put into place and promote adequate training for new drivers.

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2. Draft resolution adopted unanimously by the committee on 2 June 2016.

B. Explanatory memorandum by Ms Naira Karapetyan, rapporteur

1. Introduction

1. Every year, approximately 1.25 million people die on the world's roads. Road traffic injuries are the eighth leading cause of death globally and current trends suggest that they will become the fifth leading cause of death by 2030, resulting in an estimated 2.4 million fatalities each year. However, the human cost of road traffic injuries goes beyond the deaths, as another 20 to 50 million people suffer non-fatal injuries, with many incurring a disability as a result.[3]

2. Road traffic injuries have considerable consequences for victims, their families and society as a whole. In addition to the pain and suffering experienced by the families, the health-care needs of people injured in road crashes put a huge strain on health systems, both in terms of money and demand, as they strive to provide quality services (emergency trauma or other) while faced with other competing priorities.[4] In the medium to long term, road traffic injuries put a heavy financial burden on affected families due to medical costs and the total/partial loss of income within the household. For economically disadvantaged families, this means the risk of plunging into poverty. Taken together with the cost of reduced/lost productivity for society at large, road traffic injuries cost billions of euros every year.

3. Europe is far from immune to the problem, and despite being home to some of the world's best-performing road safety countries, road traffic injuries continue to be a major public health issue on the continent. According to the World Health Organization (WHO), road traffic injuries cause the premature death of some 92 500 people annually in the European Region[5] with two thirds of deaths (66%) occurring in low- and middle-income countries.[6] Road accidents are the leading cause of death in children and young adults aged 5 to 29 years. Almost half of those dying are vulnerable road users, namely pedestrians, cyclists and motorcyclists. In addition to these deaths, about 2.4 million people are estimated to be so seriously injured as to require hospital admission each year.[7] Moreover, for every death on Europe's roads there are an estimated 4 permanently disabling injuries such as damage to the brain or spinal cord, 8 serious injuries and 50 minor injuries.[8]

4. These statistics are all the more striking against the backdrop of compelling evidence showing that a considerable proportion of road traffic injuries can actually be prevented. To this end, both the United Nations and the European Commission have recently initiated long-term programmes.[9] Road safety was also included in the Sustainable Development Goals adopted in September 2015: Goal 3 ("Ensure healthy lives and promote well-being for all at all ages") includes, amongst other things, road safety: "By 2020, halve the number of global deaths and injuries from road traffic accidents."[10] This report aims to contribute, at the Council of Europe level, to the ongoing international and European efforts with a view to increasing road safety.

2. Road safety: identifying the problem

5. Road safety refers to methods and measures for reducing the risk of a person using the road network being killed (fatalities)[11] or seriously injured (casualties). The road network users include not only drivers, but also pedestrians, cyclists, motorcyclists, their passengers and passengers of on-road public transport, mainly buses and trams.

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3. Global Status Report on Road Safety 2013, supporting a decade of action, WHO, 2013.
4. Within the WHO Europe Region, for every person dying from road traffic injuries, 23 people are admitted to hospital and 112 people attend an emergency room, ibid.
5. The WHO European Region includes all Council of Europe member States except Liechtenstein, as well as Belarus, Israel, Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan.
6. European Facts and Global Status Report on Road Safety 2013, WHO.
7. European Status Report on Road Safety, towards safer roads and healthier transport choices, WHO, 2009.
8. http://ec.europa.eu/transport/road_safety/specialist/statistics/index_en.htm.
9. In March 2010, the United Nations General Assembly proclaimed the Decade of Action for Road Safety 2011-2020. The Decade was launched in May 2011 in over 110 countries, with the aim of saving millions of lives by improving the safety of roads and vehicles, enhancing the behaviour of road users and improving emergency services. Similarly, in 2010, the European Commission adopted an ambitious Road Safety Programme aimed at cutting road deaths in Europe in half between 2011 and 2020. The programme sets out a mix of initiatives, at the European and national levels, focusing on improving vehicle safety, the safety of infrastructure and road users' behaviour.
10. Goal 11 "Make cities and human settlements inclusive, safe, resilient, and sustainable" also includes road safety: "By 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety …"

6. For policy makers, it is essential to have accurate information with a view to evaluating the problem at hand and developing appropriate policies to address it. Data collection plays an important role in this context. Though the total number of accidents, fatalities and casualties are important indicators for evaluating road safety, policy makers should also consider other parameters while collecting data, including the total number of vehicles. In fact, despite numerically very few deaths, the fatality rate may be very high when compared with the total number of vehicles. Another important indicator would be vehicle use: "fatalities per billion vehicle-kilometres travelled" indicates fatalities according to the traffic volume while "fatalities per billion passenger kilometre" (pkm) also takes vehicle occupancy into account. Only a limited number of countries collect these data even though they remain the most accurate means of measuring road safety trends.

7. Moreover, fatality and casualty rates may be rather different according to where and when the travelling is taking place, the means used to travel and the driver. These factors have to be taken into consideration when collecting data with a view to accurately identifying factors affecting road safety.[12] Concerning the means for example, statistics indicate that fatalities are less frequent on public transport than in a private car. Furthermore, while most casualties occur on urban streets, most fatalities seem to occur on rural roads. In 2013, the share of fatalities by area type in the European Union was 8% for motorways, 38% inside an urban area and 56% on rural roads,[13] thus making the EU motorways the safest in relation to distance travelled.

8. With regard to travelling times, statistics indicate that accident rates may vary between the months of the year, the days of the week and the times of the day. The highest rates for accidents are August, July, and October. Weekends have the highest accident rates, and most accidents occur between 4 and 7 p.m. Moreover, the risk of an accident being fatal increases as the day turns into night. In 2012, 1 in every 125 casualties between 4 a.m. and 6 p.m. was fatal. The risk of fatality increased to 1 in 55 between 10 p.m. and 4 a.m.[14] This means there are hours with more accidents because of the traffic, and that accidents occurring during late hours pose a special risk,[15] most likely due to alcohol use and fatigue, amongst other things.

9. Gender and age are also factors in accident rates and fatality statistics. In addition to having a higher number of collisions, men incur their first collision earlier in their driving career and are more likely than women to be found at fault for the incident. Female drivers are less prone to risky driving behaviour, in particular speeding, and have more positive attitudes towards traffic regulations and safety. The fatality rate for male drivers is around 70% against only 35% for female drivers.[16]

10. Moreover, in 2013 almost 15% of people killed in road accidents in the European Union countries were aged between 18 and 24. Two thirds of the young people killed in road accidents were drivers, and two thirds of these young people were driving cars (while others were moped and motorcycle drivers).[17]As for the elderly, the fatalities in the age group 65+ is more than 30%, indicating that the chance of surviving a road crash is significantly reduced for elderly road users.[18] Taking the distances travelled into account, the fatality rate for car drivers is more than five times higher for those aged 75 years and over, than for the average for all ages, whereas their injury rate is two times higher.[19]

3. Strategies to increase road safety

11. WHO reports that many countries of the European Region use strategies for improving road safety and have thus consistently lowered mortality from road traffic injuries. In fact, countries that have invested in road safety for many decades have demonstrated now that effective strategies can make a difference and save thousands of lives. However, progress is uneven and the burden of road traffic injuries unequal across the European region. In particular, mortality rates for road traffic injuries differ widely between countries, with rates being twice as high in low- and middle-income countries as in high-income countries (15.1 deaths per 100 000 population compared to 6.3 per 100 000).[20] Such inequality can also be observed within the European Union

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11. Death should occur within 30 days of the accident.
12. In-depth road accident investigations also play an important role in identifying priority areas and developing accident countermeasures.
13. Annual accident report, European agency, European Road safety Observatory, 2015.
14. *Ibid*.
15. United Kingdom, House of Commons, "Reported Road Accident Statistics", October 2013.
16. According to a recent study conducted in Spain, the safest driver co-pilot combination is a female driver with a male co-pilot, with six times less risk of accidents than a male driver with a male co-pilot. The same study concludes that a driver/co-pilot duo has a 35% less risk of having an accident than a single driver. Centro Zaragoza y Fundacion linea directa: "The co-pilot and the influence on preventing road accidents. A gender perspective", Spain, November 2015.
17. European Road Safety Observatory, Traffic Safety Basic Facts, 2015.
18. Summary of Road Safety Performance in 2012 and 2013, IRTA.
19. European Commission, older drivers.

where the Nordic countries (Denmark, Finland, Iceland, Norway and Sweden) have far lower death rates than the Baltic countries (Estonia, Latvia and Lithuania) and those of eastern Europe. It is estimated that the number of road accident fatalities in the European Union fell by 45% between 2004 and 2013.

3.1. Road safety laws, effective implementation and awareness raising

12. Improving the behaviour of road users through the introduction of road safety laws has proved to be an effective mechanism for reducing the number of fatalities and injuries on the road.[21] However, as the WHO Global Status Report on Road Safety suggests, legislation aimed at addressing the key behavioural factors – dangerous speed, driving under the influence of alcohol and drugs, failure to use motorcycle helmets, seat belts and child restraints and the use of mobile phones whilst driving – has a positive impact only if sustained by enforcement and proper implementation.[22]

13. Moreover, such laws need to be well publicised and adapted to different contexts in order to maximise their efficiency. This requires adequate resources supported by strong social marketing campaigns to win public understanding and support. It is important to bear in mind that the ability of publicity campaigns to change road user behaviour has proven effective only when combined with law enforcement.[23]As an example, the percentage of people wearing seat belts in Ivanovo (Russia), rose from 48% in 2011 to 74% in 2012, after a police crackdown and a social media campaign.[24]

14. Studies seem to agree on some determining features that should be taken into account when designing an effective campaign. Analysing which risk behaviours are more prevailing in a given context and among a given audience must be part of the plan. In fact, the effectiveness of the campaign relies on a pre-analysis of the context which will determine the tone and the content of the message, and the audience to which it should be addressed. The duration of the campaign is also important and it should not exceed one month in order to be effective. Campaign messages have to be adapted to the audience's specific culture and language.[25]

15. In addition to awareness-raising campaigns, long-term strategies should be considered with a view to providing children, already from an early age, with a combination of knowledge, skills and attitudes that can determine their future behaviour on the road. Road Safety Education (RSE) should be promoted and be an integral part of school education.

3.2. Driver distraction

16. The current estimate for the impact of road user distraction on accidents in the European Union is that it is a contributory factor in around 10% to 30% of road accidents.[26] Driver distraction is defined as "where the driver allocates resources to a non-safety critical activity while the resources allocated to activities critical for safe driving do not match the demands of these activities".[27] There are at least four criteria that are related to the likelihood of a distraction-related crash: the frequency with which the event occurs (exposure), the volition as the degree of control the driver has over the initiation of the scenario, the relationship of the scenario to the attention demand of the driving task, and the overall level of distraction.

17. The more distracting the scenario, the greater the likelihood that the scenario will result in a crash. There are many distracted-driving scenarios: exterior incidents; looking at scenery; passenger interactions; adjusting entertainment systems; listening to music; cellular phone use; use of route-guidance systems; eating or drinking; adjusting vehicle controls; objects moving in the vehicle, and smoking. All these factors may result in physical, visual, auditor or cognitive distraction.

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20. See footnote 6 above.
21. Global Status Report on Road Safety, 2015, WHO.
22. WHO reports that the legislation is sub-optimally enforced in more than half of the countries of the European Region.
23. Improving the effectiveness of road safety campaigns: Current and new practices. Hoekstra, Fred Wegman/World Report on Road Traffic Injury Prevention, WHO, 2004.
24. "Driving to an early grave", *The Economist*, 25 January 2014.
25. Traffic Injury Research Foundation, "Road Safety Campaigns, what the evidence tells us", 2015.
26. European Commission, Study on good practices for reducing road safety risks caused by road user distractions, Final report, October 2015.
27. Engström et al., "A conceptual framework and taxonomy for understanding and categorizing driver inattention", Brussels, Belgium, European Commission, 2013.

18. In the United States, texting while driving causes nearly 25% of all car accidents. A driver who is texting is 23 times more likely to crash: this is equivalent to driving blind for five seconds.[28] Hands-free cell phones produce a similar decrease in performance compared with hand-held phones.[2930] It is the increased cognitive workload involved in holding a conversation, not the use of hands that causes the increased risk.[31] The golden rule "Engine on, phone off" should be applied, to avoid being a hazard for other road users.[32]

19. The importance of a good human-machine interface is a key consideration for future road safety measures. Many new technologies will have a great impact on levels of distraction (increased or reduced) of motor vehicle drivers. The most promising technologies are voice recognition, biometry, head-up displays, artificial intelligence, collision-warning systems and vehicle automation.

3.3. Speed, illness, fatigue, medication, alcohol and drugs

20. There is a well-known direct relation between speed and deaths on the road. A change in the average speed of 1 km/h will result in a change in accident numbers ranging between 2% for a 120 km/h road and 4% for a 50 km/h road,[33] with a 4% to 5% increase of deaths.[34] It is especially dangerous for pedestrians, cyclists and motorcyclists. Speed in urban areas should be limited to 50 km/h. However, in certain areas (for example in the vicinity of schools), it should be limited to 30 km/h. To adapt driving speed to the prevailing conditions and to accommodate human error through the speed limits is a primary way of controlling the crash risk. Driver education and technology are very helpful to set and seek compliance with speed limits in order to reduce speed-related crashes and injuries. Speed limits should be credible with a view to encouraging drivers to respect them. Credible speed limits should take into account the road, the driver, the vehicle, the interactions with road users, the weather, the traffic conditions, etc.[35] Fines alone cannot solve the problem, and for a real and long-term impact, such measures must be accompanied by strong awareness-raising campaigns.

21. Certain diseases and conditions are dangerous for driving, for example epilepsy, visual problems, sleep apnea and other sleeping disorders. It is important that health workers advise patients suffering from these conditions of the risks of driving. In addition, communication must be in place between the health-care system, including the occupational medicine departments,[36] and the transport authorities allowing permission to drive, which should not be based only on certification every few years.

22. Fatigue can be due to lack of sleep or bad quality sleep. This leads to the deterioration of driving performance, and it is a major factor in a large proportion of road crashes (approximately 10% to 20%).[37] Professional drivers are the main target for campaigns here because they are exposed to prolonged driving that can increase driver fatigue, especially when drivers do not take sufficient breaks. There should be legislation imposing strict working and rest hours and vehicles should be equipped with devices that detect a fatigue-related decrease in driver performance. Campaigns and education about necessary rest are also important.

23. Many medicines, including psychoactive drugs and also others widely used such as anti-allergic drugs or pain killers, have an influence on driving performance. It should be mandatory to advertise their possible side effects on driving on medicines' leaflets or even on their outside packaging.

24. Alcohol remains the number one substance endangering lives on European roads. About 25% of all road fatalities in Europe are alcohol-related.[38] Even with levels below 0.5 g/l., tracking performance, reaction times and visual detection all already begin to deteriorate. However, people are usually inclined to think that

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28. Virginia Technologic Transportation Institute, cell phones and driver distractions, United States, 2009.
29. "A meta-analysis of driving performance and crash risk associated with the use of cellular telephones while driving", Jeff K. Caird, Chip T. Scialfa, Department of Psychology, University of Calgary, Canada.
30. *Journal of Safety Research*, "Is a hands-free phone safer than a handheld phone?", Volume 40, Issue 2, pp. 157-164, Yoko Ishigami et al., 2009.
31. National Highway Traffic Safety Administration, Driver electronic device use in 2012, Report DOT HS 811 884, Washington, Pickrell T. M, 2014.
32. European Transport Safety Council, PRAISE, Minimising In-Vehicle Distraction, 2010.
33. Swedish Road and Transport Research Institute-VTI, Road Safety in Sweden and the Effect of Speed on Safety, Göran Nilsson, 2005.
34. WHO, Road safety – Speed, 2004.
35. Safe and credible speed limits; A strategic exploration, Van Schagen et al., Netherlands, 2004.
36. For example, the occupational doctor can consider that the professional driver is not fit to drive.
37. European Commission, Road safety, Fatigue and crash risk, 2015.
38. European Commission, Road safety, Alcohol, 2015.

they are still able to drive safely. Legislation should identify clear alcohol limits, 0.5 mgr/dl in general, but for new drivers it should be limited to 0.2 mgr/dl or less; but this must be accompanied by more rigorous and random alcohol/drug testing, and also the use of alcohol-ignition interlocks.

25. The use of drugs and medicines behind the wheel, also combined with alcohol, has become a major challenge for policy makers, because less is known about how the use of psychoactive drugs other than alcohol may affect driving performance.[39] That is why drug tests should be implemented to detect drivers under the influence of drugs.

3.4. Safer road infrastructure and vehicles

26. Even the best trained and most aware driver is still at the mercy of the state of the road, considering that the hard infrastructure, such as road covers, dividers, placement and maintenance of traffic-directing utilities are essential in the reduction of accidents. Additionally, technological improvements in motor vehicles have an important role in the prevention and minimisation of consequences in case of accidents, to ensure that in the event of a crash, the impact energies remain below the threshold likely to produce either death or serious injury.

27. Pedestrian zones and barriers that separate cars from bikes and oncoming traffic are essential. Safer highway designs, better signs and the use of protective barriers, such as high containment concrete step barriers at the centre and sides of roads may be helpful in reducing the number of deaths on the hard shoulder of the motorway. Switching to electronic toll systems can reduce 30% of motorway crashes that occur in the vicinity of toll collection booths.[40] Speed bumps, pedestrian countdown lights and slow zones around schools mean fewer deaths each year.

28. Today's cars are safer than ever. In fact, research estimates that only 2% of accidents are caused by equipment failure. Active and passive safety equipment available in today's cars, such as electronic stability control (ESC) and seat-belt reminders (for driver seats), automated emergency braking (AEB), intelligent speed assistance (ISA), alcohol-ignition interlocks, crash-avoidance technology, cruise control, lane-departure warning systems, pedestrian detection systems, flat tire detention, etc. are preventing many accidents and fatalities.

29. Moreover, the use of in-vehicle monitoring technology is increasing rapidly in Europe, and perhaps will eventually be standard technology in all vehicles.[41] This has great potential to significantly improve driving standards and reduce crash and casualty rates. Future vehicles should be less likely to overwhelm or distract with dashboards full of extraneous information, and should be ready to take over if a driver loses control. Variable speed limits based on automatic measurements of traffic density have both delivered improvements in traffic flow and reduced collision rates.

3.5. Quality post-crash care for victims

30. With a view to increasing survival rates from road traffic injuries, it is essential to have appropriate emergency rescue (including securing the crash site, through first aid provided by members of the public[42] and quick transportation to hospital), treatment and longer-term rehabilitation for crash victims, to develop rapid pre-hospital care systems, including safe extraction of victims, the implementation of a single nationwide (and/or Europe-wide) telephone number for emergencies, with co-ordinated response, and to encourage research and development into improving post-crash response. It is also fundamental to have good hospital trauma-care systems, implementing existing good practices, and to evaluate the quality of care through quality assurance programmes. It is equally important to provide early rehabilitation and support to injured patients and those bereaved by road traffic crashes, to minimise both physical and psychological trauma to the victims.

39. European Monitoring Centre for Drugs and Drug Addiction, Drug use, impaired driving and traffic accidents, 2014.
40. Issues in science and technology, Bringing U.S. Roads into the 21st Century, Stephen Ezell, 2010.
41. The Royal Society for the Prevention of Accidents, Road safety and in-vehicle monitoring (black box) technology, 2013.
42. In Germany, successfully completing a first aid course on how to help accident victims at a crash site is a mandatory requirement to obtain a driving licence, giving the country one of the highest percentages of members of the public trained in administering first aid.

4. Linking road safety with other public health aims

31. Road transport has health affects other than those related to road crashes, such as respiratory illness, ill health due to physical inactivity and the consequences of climate change. According to WHO, sedentary lifestyles increase mortality, double the risk of cardiovascular diseases, diabetes and obesity and increase the risks of colon cancer, high blood pressure, osteoporosis, lipid disorders, depression and anxiety. Physical inactivity is now identified as the fourth risk factor for global mortality. Physically active people have a 20% to 30% lower risk of premature death. WHO recommends a level of 150 minutes per week of moderate-intensity activity, and this can include everyday activities such as walking or cycling to work or for errands.

32. Consequently, it is essential to introduce policies promoting the use of alternative forms of transportation, which include physical activity such as walking, cycling and public transport services. These should go hand in hand with policies that make it safer for people to walk and ride bicycles, for example through the introduction of urban design measures that favour and protect vulnerable cyclists and pedestrians, including blind spot mirrors which have been made compulsory in the European Union. Certain obligations should equally be effectively imposed on pedestrians and cyclists. The commitment of local authorities in charge of implementing the legislation is crucial in order to increase road safety for vulnerable users.

33. The combined burden of disease attributable to both road injury and air pollution from vehicles indicates that deaths linked to the use of motorised road transport exceed those from diseases such as HIV, tuberculosis, diabetes or malaria.[43] This data strongly suggests that switching to a “greener” and more sustainable urban mobility scheme should be a high priority when developing road safety strategies, not only from an environmental, but also from a public health perspective. Moreover, initiatives such as carpooling should be formalised and supported by governments, since they help reduce carbon emissions and traffic congestion. Analysis of vehicle emission tests must be in place. The effects of heavy metal accumulation from motorways on surrounding agricultural fields, including the environmental impact, must be assessed with the goal of promoting “clean” transport technologies.

5. Conclusions

34. With a view to identifying strengths and weaknesses regarding road safety and planning national strategies accordingly, it is important to improve the quality of data collection at local and national levels, as well as at European and international level. For this purpose, the European Union had put in place a comprehensive data programme which should be shared with all stakeholders. Policy makers should take into account not only the total number of accidents, fatalities and casualties, but also other parameters, including the total number of vehicles and vehicle use, as well as indicators such as where and when the travelling is taking place, the means used to travel and the driver’s age. In this context, one of the main goals of any policy related to road safety should be to promote public transport, not only for safety reasons, but also because of its efficiency and sustainability. Moreover, a system of “driving licences on probation” should be introduced for young drivers[44] whereas people over a certain age should be subjected to periodic driving tests and medical checks with a view to evaluating their continuing capacity to drive.

35. Strategies to increase safety should include comprehensive laws that address major behavioural risk factors (dangerous speed, driving under the influence of alcohol and drugs, failure to use motorcycle helmets, seat belts and child restraints whilst driving) paired with effective implementation. With a view to preventing risk-taking behaviours, road safety education should be incorporated into the school curriculum from an early age, with the involvement of all stakeholders. Moreover, well-designed awareness-raising campaigns should be organised, as they have proved to deliver successful outcomes, decreasing the number of injuries and fatalities on the road.

36. Consideration should also be given to emerging behavioural risk factors such as use of drugs and inappropriate use of cellular telephones, including texting while driving and other distracted behaviours.[45] In fact, distracted driving is a serious and growing threat to road safety. With more and more people using mobile phones while driving, and the rapid introduction of new in-vehicle communication systems, this problem is likely to escalate globally in the coming years.

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43. World Bank and Institute for Health Metrics and Evaluation of the Washington University.
44. This system exists for example in Germany and prohibits youngsters from driving while under the influence of any alcohol at all.
45. Drug use, impaired driving and traffic accidents, European Monitoring Centre for Drugs and Drug Addiction, 2014.

37. Designing safer road infrastructure (for example by installing pavements and crossings on roads used by pedestrians, speed bumps, pedestrian countdown lights and enforcing slow zones around schools, separating fast traffic from cyclists and pedestrians.), improving the safety features of vehicles (for example by introducing mandatory anti-locking brake systems and seat belt reminders and installing airbags) and post-crash care for victims, are equally important interventions for increasing road safety. Moreover, policies aimed at fostering the use of non-motorised modes of travel such as cycling and walking should be encouraged.

38. National governments should encourage the creation of multi-sector partnerships and the designation of lead agencies with the capacity to put in place comprehensive road safety data programmes to develop and lead the delivery of national road safety strategies, plans and targets, and to monitor their implementation and effectiveness. The goal of a better transport system should be to have accessible, affordable, safe and quick transport in a sustainable way. The needs of all road users should be taken into account in urban planning and design.

39. The impact of road traffic accidents on society as a whole should be appropriately evaluated with a view to encouraging decision-makers to adequately finance policies on road safety (according to the United Nations, 10% of the road infrastructure budget should be invested in safety) and establishing minimum standards. National, local and regional governments in all countries must support pilot projects and the application of ISO 39001 norms in road safety management systems.

40. Road safety is a shared responsibility between different ministries, stakeholders and authorities, from local to international institutions. Every road safety policy must have a comprehensive approach, considering the importance of the necessary co-ordination between all the actors involved including public authorities, private companies and users.