



Dangerous Roads: Russia's Safety Challenge

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Key Messages¹

- **In 2008, there were nearly 30,000 road traffic deaths and about 271,000 non-fatal road traffic injuries in Russia. Road traffic deaths in Russia are five times higher than in countries with the best road safety records in the world.**
- **One-third of car crashes in Russia are caused by speeding vehicles and close to 40% of all road fatalities are among pedestrians.**
- **Although Russia has made significant progress since 2006, a stronger, multisectoral response is needed to reduce the still high number of road fatalities.**

Dangerous Russian Roads: Causes and Costs

As in many countries of the Europe and Central Asia Region (ECA), vehicle ownership in Russia has grown faster in the last decade than the decline in the rate of fatalities per vehicle. At the same time, road safety policies and interventions have not kept pace with the boom in motorization. In 2008, the motor vehicle fleet in the country exceeded 41 million cars, up 24% from 2004, and the number of drivers licensed increased by 40% during this period.

In 2008, Russia saw nearly 30,000 road traffic deaths and about 271,000 non-fatal road traffic injuries. While these figures represent a drop of 13% from 2004, Russia's road traffic mortality rate is still five times higher than what is seen in several European Union (EU) countries, about twice

more than in the United States, higher than in other Eastern European countries such as Poland and Hungary, and higher than the average for Commonwealth of Independent States (CIS) countries (Box 1).

Box 1: Comparing Russia's Road Fatalities with Other Countries, 2008

Country	Mortality rate due to road traffic injuries, per 100,000 people
Russian Federation	21.1
Commonwealth of Independent States (CIS) average	15.0 (2007)
Poland	14.3
United States	12.3
European Union average	11.0 (2007)
Hungary	9.9
New Zealand	8.6
Australia	6.8
Germany	5.4
Great Britain	4.3
Sweden	4.3
The Netherlands	4.1

Source: ITF/OECD (2010), ITF/WHO-EURO/World Bank/OECD (2009), WHO (2009).

About 72% of all car crashes in Russia occur in urban areas. Data for 2008 show that the majority of traffic deaths are among car occupants (52%), followed by pedestrians (36%), motorcycle drivers and passengers (5%), truck and bus drivers and passengers (4%), and cyclists and others (4%). The high percentage of pedestrian deaths in Russia contrasts sharply with other European countries (in France and Germany, for example, pedestrian deaths account for only 12% of total road fatalities) and shows that Russia's transport system is limited in its ability to cope with the increased road traffic and vulnerable road users.

More than 50% of all road traffic deaths are among people aged 15-44, the most economically productive age group. Children and the elderly are also particularly vulnerable, especially as pedestrians.

¹ This Knowledge Brief is derived from the report, "Confronting 'Death on Wheels': Making Roads Safe in Europe and Central Asia," World Bank, 2009, and incorporates the findings of a preliminary 2009 report "Road Safety Performance. National Peer Review: Russian Federation" coordinated by the International Transport Forum, with participation of the World Health Organization and the World Bank.

ECA Knowledge Brief

One-third of car crashes in Russia are caused by speeding vehicles. The possibility of a pedestrian being killed rises eightfold as the speed of impact with a car increases from 30 kilometers per hour (km/h) to 50 km/h. Head-on collisions due to driving into oncoming lanes are a major cause of road crashes - in the first half of 2010, close to 250 people died in the Moscow, Nizhni Novgorod, Krasnodar and Perm regions due to head-on collisions. Drunk driving, which accounts for 10% of all road crashes in Russia, along with poor road conditions and bad traffic management, also contribute to road traffic injuries and deaths. The use of cell phones and texting devices while driving is another growing risk factor.

The economic costs of motor vehicle crashes are severe. They include *direct costs* associated with emergency treatment, long-term care, insurance administration, and legal actions, and *indirect costs* associated with productivity losses in the workplace and in households. Property damage and travel delays are some of the other costs.

Estimates by the Russian Ministry of Internal Affairs in 2005 indicated that the cost of road crashes in Russia absorbed 2.5% of the Gross Domestic Product (GDP), or about US\$26 billion annually. Road traffic victims are seven times more likely to need hospitalization compared with victims of other types of trauma, and they account for 75% of all types of injuries and 60% of severe trauma cases. The provision of medical services for traffic injuries and other traumas in 2003 absorbed approximately 0.27% of Russia's GDP or about US\$1.2 billion.

Russia Responds to the Road Safety Challenge

The Russian Government has been implementing the Federal Targeted Program for Ensuring Road Traffic Safety 2006-2012. About US\$2 billion was earmarked to fund this Program over 2006-2012, with 43% of the allocation coming directly from the Federal budget and the rest from the general budgets of sectoral ministries and regional governments. The Program aims at reducing road fatalities in the country by 33% compared with 2004 levels. A multisectoral Government Commission for Road Safety led by the Ministry of Internal Affairs is coordinating this effort.

The main components of the Program include establishing a comprehensive legislation framework and strengthening enforcement-related laws and regulations. New legal blood and breath alcohol content limits (0.3 g/l and 0.15 g/l, respectively) were introduced in 2007 and the penalty for failure to submit to medical examination (in alcohol-related driving offenses) was increased from disqualification from driving for 18 months to two years. Other offenses that are now penalized with prison terms include causing death as a

result of drunk driving. Fines have been increased ten-fold for driving without seat belts. A law has been enacted to make the offense of crossing into an oncoming lane punishable with license revocation. Anti-alcohol campaigns are being conducted under the Program. Other positive developments include improvements in the safety of cars and the introduction of new road signs on speed limits, pedestrian zones, speed humps, and parking restrictions.

More recently, draft legislation proposals were developed to reduce speed limits on city roads from 60 km/h to 50 km/h, and to 30 km/h around office areas and 20 km/h in residential areas and schools. Traffic calming measures, intelligent transport systems, and tougher requirements for drivers to give way to pedestrians, have also been initiated. A 3D social advertising video urging drivers to exercise care on roads was filmed for release in movie theaters in mid-June 2010 when a massive social awareness campaign named *The Last Oncoming Lane* was launched. Emergency medical services are being re-organized under the leadership of the Federal Ministry of Health and Social Development and the technical guidance of the Djanelidze Research Institute of Emergency Medicine in St Petersburg. To this end, all federal roads have been rated and actions are being taken on the most dangerous highways such as the ones from Moscow to south Russia (M4 Don Highway), from Moscow to Kiev (M3 Ukraine Highway), and from Moscow to Saint Petersburg (M10 Scandinavia Highway).

Some Issues Remain to be Resolved

In spite of scaled up efforts by the Government and the significant improvement in road safety performance achieved since 2006, road conditions in Russia are still very dangerous vis-à-vis other developed countries. As President Medvedev emphasized in a national speech on August 6, 2009, poor road infrastructure, bad organization of road traffic, and insufficient regional and local efforts hinder further improvements. Exacerbating the situation are the absence of effective education programs for drivers, particularly young drivers, the weak performance of the traffic police, and the unsatisfactory condition of emergency medical services in some regions.

“The national economy lost US\$175 billion from traffic accidents over the past five years. That is comparable with overall health care expenditures of the same period.”

**– Dmitry Medvedev
President of the Russian Federation
August 6, 2009**

Countries that have successfully reduced road traffic injuries and fatalities - such as, Australia, Great Britain, the Netherlands, New Zealand, Sweden, and the United States - have adopted a *safe systems approach which is anchored in the long-term vision of eliminating road deaths*. Under this approach, improved road safety results depend on three inter-related elements: institutional management functions, interventions and results.²

Russia has in place most of the elements of the *safe systems approach* but additional efforts are required to strengthen institutions and governance capacity for road safety, including the lead agency capacity to better coordinate and manage an effective multisectoral response.

Strengthening Institutional Management

Sustained support from the highest levels of government is needed to:

- Strengthen the results focus of the lead agency and coordinate arrangements among sectoral institutions and different levels of government.
- Promote active engagement by business, professional and non-government entities.
- Implement policy reviews and institutional reforms to improve legislation and enforcement practices, accountability and capacity of organizations, and the testing and licensing of drivers and vehicle safety standards.
- Secure sustainable and adequate funding for lead agency and key stakeholders and strengthen their management and operational capacity to achieve safety targets.
- Enhance nationwide road traffic injury surveillance systems to collect data, better understand the nature and characteristics of the problem, and evaluate the results of interventions.

Effective Interventions with a Results Focus

Integrating road safety in all phases of planning, design, and operation of road infrastructure: Analyses of road networks' safety performance conducted at the planning stage of new road construction, complemented by road safety audits and safety impact assessments, help improve project design. Also, reviews of high road traffic crash concentration sections help target investments towards places with the highest crash reduction potential.

Intersection controls, crash barriers, signs, markings, traffic-calming measures around schools, and road maintenance are effective interventions.

Vehicle design and safety equipment: Daytime running lights for cars and motorcycles, and other safety technologies such as electronic stability control systems, seat belts and airbags, contribute towards reducing road traffic crashes and fatalities.

Enforcement of legal measures to improve road user behavior: These include issuing graduated driving permits for teenagers, requiring six months of driving with learners' permits, curfews prohibiting driving between midnight and 5:00 a.m., and passenger restrictions on the first year of driving after getting a license. Mandatory seat belt use helps reduce road traffic deaths and serious injuries once a crash has occurred; requirements on the use of motorcycle and bicycle helmets protect against fatal head injuries.

Setting and enforcing speed limits reduces road traffic injuries by up to 34%, particularly among pedestrians, cyclists, and motorcyclists. The introduction of speed cameras has led to a 14% reduction in fatal crashes and a 6% reduction in nonfatal crashes in developed countries.³ Road traffic injuries are also reduced by setting and enforcing legal blood alcohol limits and minimum drinking-age laws, using checkpoints to randomly stop drivers to detect alcohol, and running mass media campaigns to reduce drinking and driving.⁴ Other measures, such as license revocation and suspension, markedly reduce fatalities from alcohol-related crashes. Measures to outlaw the use of cell phones and texting devices by young drivers are starting to show positive results in countries such as the United States.

Emergency medical care systems: Effective post-crash medical care and treatment can prevent deaths and limit the severity of injuries. France's Service d'Aide Médicale d'Urgence (Emergency Medical Assistance Service, SAMU), and the effective service arrangement established in some Russian regions such as the Chuvash Republic and Voronezh are good practices in this area.

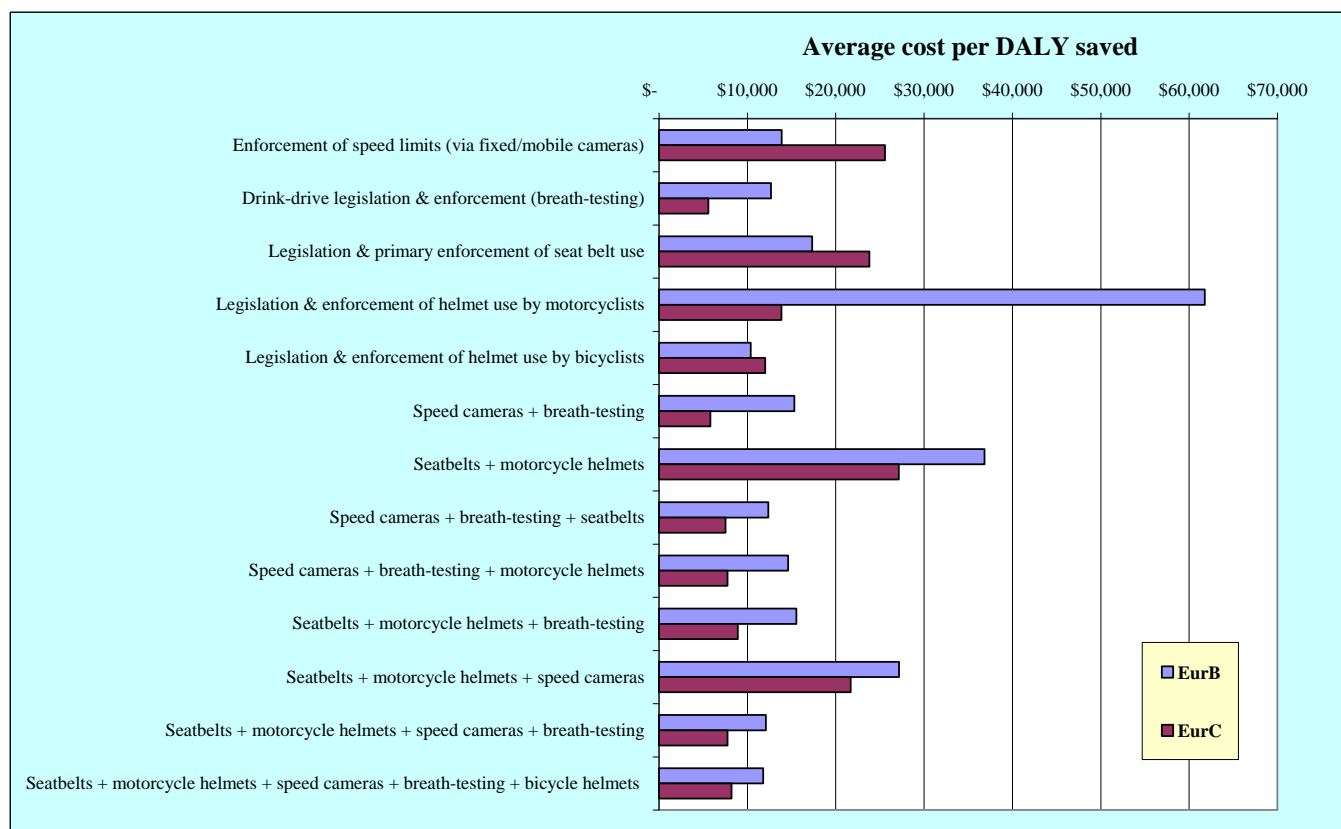
Cost and effectiveness of road safety interventions: As shown in Figure 1, a strategy that simultaneously implements multiple road safety interventions produces the most health gains for a given investment.

² Bliss, T and J. Breen J. 2009. *Implementing the Recommendations of the World Report on Road Traffic Injury Prevention. Country guidelines for the Conduct of Road Safety Management Capacity Reviews and the Specification of Lead Agency Reforms, Investment Strategies and Safe System Projects*. World Bank Global Road Safety Facility, Washington D.C.

³ Elvik, E., and T. Vaa, eds. 2004. *The Handbook of Road Safety Measures*. Amsterdam: Elsevier.

⁴ Peden, M., R. Scurfield, D. Sleet, D. Mohan, A. Hyder, E. Jarawan, and C. Mathers, eds. 2004. *World Report on Road Traffic Injury Prevention*. Geneva: World Health Organization.

Figure 1: Cost-Effectiveness of Road Traffic Injury Prevention Strategies in Europe and Central Asia
(international dollars per disability adjusted life year (DALY) saved, 2005)



Note 1: Countries in the WHO European region with low child and low adult mortality (EurB): Albania, Armenia, Azerbaijan, Bosnia and Herzegovina, Bulgaria, Georgia, Kyrgyzstan, Poland, Romania, Slovakia, Tajikistan, FYR Macedonia, Turkey, Turkmenistan, and Uzbekistan. Countries in the WHO European region with low child and high adult mortality (EurC): Belarus, Estonia, Hungary, Kazakhstan, Latvia, Lithuania, Moldova, the Russian Federation, and Ukraine.

Note 2: “International dollar” is a hypothetical unit of currency that has the same purchasing power that the U.S. dollar had in the United States at a given point in time. The year of 1990 or 2000 is often used as a benchmark year for comparisons that run through time. Figures expressed in international dollars cannot be converted to another country’s currency using current market exchange rates. Instead they must be converted using the country’s purchasing power parity (PPP) exchange rate used in the study.

Source: Chisholm and Naci, 2008.

Conclusion

Building on the ‘Moscow Declaration’, which was ratified by all participating countries at the First Global Ministerial Conference on Road Safety held in 2009, the UN General Assembly approved on March 2, 2010, a resolution declaring 2011-2020 as the “Decade of Action for Road Safety” with the goal of stabilizing and ultimately reducing the forecast level of global road fatalities by 2020.

Accumulated local and worldwide experience can be used to strengthen ongoing road safety efforts in the Russian

Federation. These efforts have the potential to help society as a whole and to provide a good practice example to other former Soviet Union countries. Programs funded by the Russian Government to develop the road infrastructure offer a window of opportunity to scale up and improve road safety in Russia over the medium term.

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