



Be-Safe Achievements

Project dissemination

The global statistics of road accidents shows that accidents involving cyclists, mopeds, motorcycles occupy a significant share in the structure of road accidents. In addition, these road accidents vary in considerable severity of consequences.

In the Republic of Belarus, in the result of such road accidents victims significantly contribute to the total number of dead and injured on the roads. The problem is most topical in spring and summer when drivers of bicycles, mopeds, motorcycles begin to take part in traffic after winter. Analysis of road accidents involving these categories of road users has shown that young people of 16-18 years old who are school students represent the largest share of road victims.

In order to prevent road accidents involving cyclists, mopeds, motorcycles, on May 6 the Head of the Directorate of the State Automobile Inspectorate of the Internal Affairs Directorate of the Gomel Regional Executive Committee, the Police Colonel I. Makushenko and the Head of the Department of "Traffic Management" of BelSUT S. Azemsha had a meeting with high school students of the State Educational Institution "Senior High School of Business and Law No.51".

During the meeting, I. Makushenko gave the statistics of accidents, considered typical scenarios of road accidents involving motorcyclists, told about main traffic rules for this category of road users. In addition, he pointed out that the road accident problem was international and to have a significant decrease in the number and severity of road accidents we need an international cooperation. I. Makushenko gave a successful example of such cooperation in the framework of the project "be-safe".



Fig.1 - The chief of traffic police I. Makushenko and project coordinator BelSUT S. Azemsha meeting to disseminate information about project activities.

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S. Azemsha continued the topic of the meeting, explaining to the auditory the complexity and importance of the processes occurring in traffic. He also showed a presentation of the activities of the Department of "Traffic Management" within the framework of the project "be-safe".

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Road Safety Statistics

Main Road Safety Indicators in big cities of Belarus

In this article are considered trends of changes of road safety indicators in Belarus' major cities for the years

2002 - 2015

The main quantitative indicator of the Concept of traffic safety in the Republic of Belarus, adopted in 2006, was to reduce the number of people killed in road accidents in 2015 with 500 people.

Development and implementation of actions has allowed to reach the set value after 5 years, and by 2015 the number of accidents with victims (killed or injured) in Belarus was reduced by 50% in comparison with 2006, the number of deaths by 1062 people (-62 %) (Fig. 1).

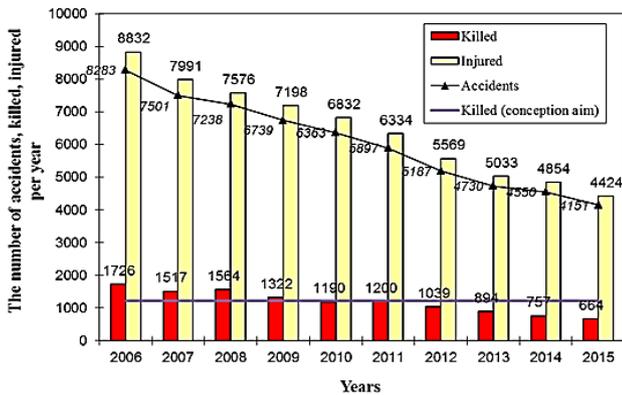


Fig. 1 - Changes in the main indicators of road accidents in the Republic of Belarus for 10-year period.

Over the past 15 years, about one-third of all traffic accidents with victims in Belarus recorded in the 6 largest cities (Fig. 2).

The capital of Belarus is Minsk (population 1 960 000 pers.). This city is one of the largest cities and is the center of the homonymous province (region). The remaining regional centers are classified as major cities: Homel (the population of 512 000 people), Vitebsk (372 000 people), Mahileu (371 000 people), Hrodna (356 000 pers.), Brest (330 000 pers.).

Summary in the regional centers of Belarus are now home to 40% of the population (in 2002 - 35%), including in Minsk - 20%.

The proportion of killed in road accidents in Minsk and in the major cities is approximately three times lower than the proportion of the population living in them (Tab. 1). The main reasons - lower speed in populated areas, a higher level of

traffic management, and the best conditions for the provision of medical assistance to victims of road traffic in major cities.

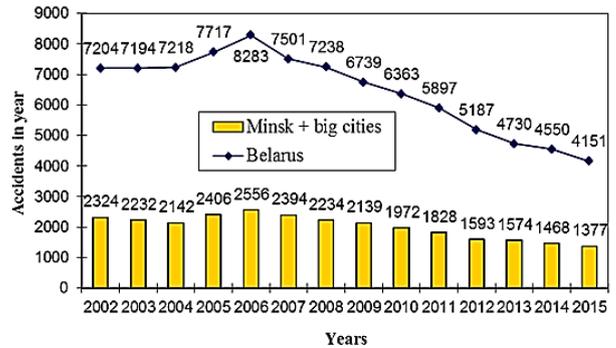


Fig. 2 - Changes in the number of accidents with victims for 2002 – 2015 in Belarus in general, and in cities with population of more than 300 000 inh.

For the period after 2006 the number of accidents with victims decreased in Minsk on 698 (50%), in the group of large cities - to 481 (41%, Fig. 3). This decline took place in Minsk with greater intensity, and in 2015 the first time it was lower than in the group of major cities.

Tab. 1 - Specific accident rates in Minsk and major cities.

Index	Year	Minsk			Group of major cities		
		2002	2006	2015	2002	2006	2015
Share in the population of Belarus, %		18	19	20	17	19	20
Share in the number of accidents with victims, %		16	15	17	14	15	17
Share in the number of people killed in road accidents, %		7	6	6	6	5	8
Share in the number of injured in road accidents %		18	16	17	18	16	15

The number of fatalities in road accidents in 2015 compared to 2006 in Minsk was reduced by 65 people (61%), in the group of major cities – by 36 (40%, Fig. 4). Since 2013 the number of fatalities in road accidents in Minsk less than the total number in the group of major cities.

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Results of International Road safety research

Injuries to older users of buses in the UK

Introduction

The current estimated population for the UK is 64.1 million people with an expected rise to 73.3 million by 2037 (ONS 2012). It is projected that there will be a rise of 31 % in the number of people of state pension age in the UK from 12.3 million (mid-2012) to 16.1 million (mid-2037), taking into account future rises in the state pension age. This increase in ageing populations will have an impact on various services available to older people in society. Modern societies have a duty of care to help older people live in their homes and communities for as long as they want. The physical environment, and the services upon which older people rely, must be 'age-friendly', so as to remove barriers to their participation in their communities.

In practice, part of this means addressing older people's anxieties regarding incidence of crime, recognising the unique characteristics and needs of people growing older in rural communities, tackling the problems caused by isolation and loneliness and addressing older peoples transport needs. This last point is particularly important as it involves providing a transport system that is safe and secure as well as affordable. In the majority of cases, the public transport of choice is the public bus since this is by far the most common form of public transport provision in terms of numbers and frequency of routes.

In the main, public transport is relatively safe - according to Mabrook (1994), injuries sustained by passengers travelling on public buses are relatively uncommon; public service vehicle passenger casualty rates, per billion passenger kilometre travelled are much lower than for cars, motor-cycles, pedal-cycles and pedestrians. Nevertheless, during the period 2008 to 2012, over 20,000 UK bus and coach users were injured whilst using this form of transport. The problem is not confined to the UK - a study in Israel (Halpern et al. 2005) estimated that as many as 2700 bus-users per year might be injured whilst using the bus representing an 'alarmingly high level of morbidity'. However, measuring injury outcomes does not tell the whole story since those not necessarily injured but 'shaken' or 'thrown off balance' whilst using the bus can easily be dissuaded from further bus use. This is principally because of fear of falling or future injury. Ultimately, these events can lead to social exclusivity and ultimately isolation through eventual lack of personal mobility.

Previous studies have looked at characteristics and incidence of accidents in which injuries have occurred to public bus users. An early study is reported by Jovanis et al. (1991) in the USA which looked at 1800 accidents between 1982 and 1984 to identify factors contributing to accidents involving mass transit buses. They observed that on a passenger-mile basis, bus travel has relatively low risk but that as many as 63% of bus transit

accidents involve no collision.

Related studies were conducted in Denmark by Nue Moller et al. (1982) through examining records of 183 injured bus passengers who sustained between them some 212 injuries. 85 of the 183 passengers were injured whilst the bus was in motion and 58 of these passengers were standing on the bus at the time of the incident with acceleration/deceleration of the bus therefore being a major factor in these accidents. A subsequent Danish study by Albrektsen and Thomsen (1983) looked at 221 bus accidents and incidents in Copenhagen and found that 60% of their sample were females aged over 60 years with most of the passengers (n = 138) sustaining injury whilst the bus was in motion between stops. The vast majority of these (83%) were found to be standing up at the time of the collision.

Similarly, Kirk et al. (2003) found that in approximately 65% of cases, there was no actual impact involved and that the injury had occurred to a seated (*44%) or standing (*30%) passenger whilst the bus was in motion. Their study also found that older females were particularly over-represented and that the likelihood of serious or fatal injury to both males and females increases as age increases. The cause of incidents included slippery and uneven floors, high steps and lack of visual cues.

More recently, Halpern et al. (2005) made similar findings in Israel to those of Kirk et al. (2003) in that 56 % of injuries were sustained by passengers who were either standing or moving in the bus and that the major mechanism of injury was sudden deceleration or acceleration of the bus. Similarly it was found that in 62% of cases non-collision incidents on buses accounted for the highest incidence of injuries for the older users (Barnes and Morris 2014).

Mabrook (1994) noted that whilst travelling by bus is one of the safest ways to travel, little is written about injuries and injury causation and that some attention could be paid to the design of hand rails or seats which appeared to be the root-cause of many injuries. A report examining the injuries of young and older public transport users in Victoria, Australia identified some 3152 public transport incidents in a 4-year period of which 33% were bus related. For those 60+ years (n = 767) the main mechanism of injury on buses was recorded as slip/trip/fall (boarding and alighting) for 64 % of cases (Fildes et al. 2012).

A recent literature review of older public transport users highlights the limited research undertaken in this area and suggests the incidence of injuries on public transport is underestimated (Kendrick et al. 2015). No study to date has made an in-depth appraisal of injury outcomes to users of buses in order to establish the likely injury mechanisms in order to ascertain which design counter-measures might be feasible in the prevention of such injuries.

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International Best Practices

Integrated Speed Management Strategies in Local Communities in South East Europe

Introduction

Speed management consists a major road safety concern and therefore, speed related issues are included in four out of the seven strategic objectives of the current Road Safety Programme (2011-2020) of the European Union (i.e. improved safety measures for vehicles, boost smart technology, better enforcement, a new focus on motorcyclists) (European Commission, 2010).

Within the project "ROSEE - Road Safety in South East European Regions" of the South-East Europe Transnational Cooperation Programme, the problem of speeding was examined as one of the primary risk factors throughout South East Europe. Efforts to tackle this problem took various forms such as the enhancement of road safety professionals' knowledge on speed management, informational and awareness raising activities and the development of a transnational speed management strategy based on the two-year multi-component speed management strategies developed for a specific region in each partner country of ROSEE (Štaba and Možina, 2014).

However, before developing a speed management strategy, certain requirements need to be addressed as described in the following sections.

Speed Management Strategy in South East Europe

Based on the particularities of the South East Europe as identified within the ROSEE project, the following sections outline and discuss the necessary elements of the speed management strategy in South East Europe in a comprehensive way, with emphasis on the strategy objectives, actions, implementation and monitoring.

Strategy Objectives

The basic aim of a speed management strategy is to reduce the number and severity of road crashes. Taking into account also the principles of the Safe System approach (SWOV, 2006; SNRA, 2006) the strategy should involve a range of measures, introduced in the following action areas:

- Engineering treatments of road infrastructure in order to provide a road environment that supports and encourages road users to drive at safe speeds;
- Education on road safety and informational and awareness raising campaigns to establish a culture which rejects excessive speeding;
- Enforcement to identify and control intentionally and repeatedly speed offenders.

The following sections outline and discuss the proposed measures referring to each of the above action areas.

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In memory of Professor Vladimir Alexandrovich Grabaurov



We are sad to report that Professor Vladimir Alexandrovich Grabaurov passed away on 5 July 2016.

He was an excellent teacher and a true friend to many of us.

We are deeply saddened by this loss and he will be missed by us all.

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