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Seniors

Thematic File Road Safety No. 1

(2nd edition, 2018)

Federal Public Service
Mobility and Transport

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Executive summary

We are continuously aging and the baby boomer generation, who are getting older, are healthier now than any other generation of seniors. The number of those aged 60 and up, is going to double between 2017 and 2050 (United Nations, 2017). Seniors currently play a more active role in our society than ever before and long-lasting and safe mobility of seniors is a basic need.

Seniors and road safety

The rising number of seniors in the population also shows up in the accident statistics. In 1992 it was 1 in 7 people (17%) of 65 and older who were killed in traffic incidents, it is now more than 1 in 4 (25%). In absolute figures the number of fatal accidents amongst the seniors is not particularly high. However seniors make up a large part amongst the pedestrian and cyclist victims. More than half of the senior fatalities was either a pedestrian or cyclist. Middle-aged people (35-64) account for 1 in 4 of these incidents. The number of fatalities among senior drivers (37%) is relatively smaller than with younger casualties (47%).

Accident risk

Because seniors are less mobile than younger people, it is important to calculate the risk per kilometre travelled. For people 75 years and older the risk of being fatally injured is bigger for all modes of transport than all other age groups. Particularly high risk groups are older cyclists and pedestrians.

For vehicle drivers we can differentiate between two types of risks: injuries to self (or death) due to accident or being involved in an accident where someone else is injured (a passenger or other party). Older drivers are at an especially increased risk of dying or being seriously injured due to an accident. Older drivers (75+) equal younger unexperienced drivers (18-24) in risk. The risk of being slightly injured themselves or being involved in an accident where someone else is seriously injured is however much smaller than for young drivers, but higher than middle-aged drivers. Seniors are more of a danger to themselves than others in traffic.

The increased risk of older road users can particularly be ascribed to 3 factors:

- Vulnerability: bones break more easily in older people, wounds take longer to heal and can also lead to complications in conjunction with possible existing illnesses. In an accident where a younger person is only lightly wounded, an older person can be more heavily injured or even die due to complications. In Belgium it is estimated that at least half of the increased risk of seniors in serious accidents accounts for this.
- Drive too little: older drivers travel less kilometres than younger people. This leads to a higher risk per travelled kilometre (regardless of age) – particularly because of the type of road that the person usually uses (few highways) but also because of the lack of routine.
- Driving ability: on average seniors are at greater risk of causing accidents because of age-related limitations.

Age-related changed

Older road users are less likely to exhibit risky behaviour. As drivers they drive more slowly, keep a bigger following distance and are less likely to execute dangerous manoeuvres (such as risky overtaking). A number of functions required to drive a vehicle can however decrease with increasing age: sight, in particular peripheral sight and night vision; agility; speed of observation and evaluation of a situation, making decisions and execution of these. Possible deterioration does not happen to everybody at the same level at the same age and does not always lead to decreased driving capabilities. Often these limitations can be compensated for by choosing the place and time where one drives and by a careful driving style. Apart from the "normal" age related symptoms other chronic afflictions such as heart and arterial problems, dementia, depression or arthritis symptoms become also more frequent at higher age get and can affect driving ability. While limitations related to one illness can be compensated for, the risk of accidents increase clearly with multiple medical complaints (and intake for medicine thereof).

Accidentology

Older road users especially have problems with complex traffic situations. Their reactions are often delayed and with limitations in their field of vision (decreased peripheral sight / peripheral attention and more trouble

following this with head movements) they find it more difficult to keep an overview of the situation. Furthermore it becomes more difficult to judge distance and speed of other road users. For this reason cross sections can be a challenge for older road users. Accidents at road crossings (for pedestrians) and at a left turn off left occur more often than middle-aged road users.

Measures

With regard to infrastructure

- Seniors have more benefit from an overview of the layout of intersections than younger road users. Important aspects include:
- Good visibility at hand and potential to anticipate
- Joining roads at an angle of 90° so that looks over the shoulder to see oncoming traffic can be avoided
- Conflict free traffic light control for left-turn off traffic
- Provide centre islands between broad crossover intersections where pedestrians can safely stand and wait
- Clear traffic signs, installed well in advance (right-of-way rules, signposts, roadways)
- Traffic signs and road markings with a high contrast
- Lowered speed.

Vehicle features

More attention needs to be given to adaptations of cars and physical limitations of the elderly and the use of automatic gears, power steering and panoramic mirrors should be encouraged with seniors.

New technology such as collision warning/avoidance (alerts the driver to potential collision and supports braking capacity), dead corner detection, time-gap-assistant (system which indicates that there is sufficient time to execute a manoeuvre before the oncoming traffic) support driving on a technical level. Navigation software can provide seniors with prior information but need to be more adapted toward older drivers.

Driving improvement

Seniors must be made more aware of (amongst other):

- Possible limitations and the affiliated increase in risk for all types road users
- How to long-term and safely keep their mobility – training, exercises to maintain physical and mental fitness, use of public transport
- How they can use new vehicle technology to increase safety.

Control and regulation

A multi-stage evaluation procedure, for example, beginning with a self-check, via advice from the (first line) doctor to a thorough check-up of patients where the doctor questions their driving competence is better able to anticipate actual risks and nodes with older drivers than a compulsory age-bound screening.

Rather than on the basis of a certain age, driving ability evaluations should take place with disorders where it is known to increase the risk of the driver. Here the doctor is the best person to have insight into potential problems. The examination, apart from the assessment on driving ability, must focus on conservation of mobility measures by administering restricted licences (e.g. only during the day or within a limited radius around the residence), prescribing medication (for the necessary group) with less side-effects and advice for possible vehicle adaptations.

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