



The licensing and safety of older drivers in Britain

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ARTICLE INFO

Article history:

Received 27 March 2012

Received in revised form 20 June 2012

Accepted 27 June 2012

Keywords:

Driver licence forecast
Car driver fatality forecast
Safety older drivers
Risk to other road users
Fragility of older persons

ABSTRACT

Driving licence holding in Britain is increasing for older people, particularly older women. Licence holding by men aged 40–69 has saturated at about 90%, and for women aged 30–59 at about 78%. Drivers begin to surrender licences after age 70. By age 90, 38% of women and 25% of men who held a licence at age 70 have surrendered their licences.

The paper shows the numbers of car drivers of different ages killed and injured in accidents since 1975 and the fatality and casualty rates per driver and per mile driven. The safety of older drivers is improving faster than that of younger age groups. The number of car driver fatalities aged 70 and over was highest between 1990 and 2004, and has subsequently reduced by almost 40%. For drivers aged 80 and over, the peak was in 2004 and the number has subsequently reduced by almost 50%.

The paper uses demographic projections, forecast licence holding and the trends in fatality rates to project the numbers of fatalities for drivers of different ages in Britain. This shows that fatalities among older drivers aged are likely to continue to reduce.

Fatality rates for older road users are increased by the fragility of older persons. This disguises the fact that the accident involvement rate for older drivers does not increase with age until after age 75 or 80.

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1. Introduction

The increase in the population of older people is well known, and is occurring in Britain in a way similar to virtually every other country. Britain currently has an older population than USA, with 16.6% of the population aged 65 and over and 2.3% aged 85 and over, compared with 13.0 and 2.0% respectively in USA.

Not only has the older population been increasing, but the percentage of older people, particularly older women, who hold driving licences has also been increasing. Older people are more vulnerable to accidental injury because physical fragility increases with age (Evans, 2000). In the 1980s and 1990s researchers predicted a large increase in the number of older drivers killed in traffic accidents (TRB, 1988; Burkhardt and McGavock, 1999).

In practice, in both USA and Britain, since these predictions were made the number of elderly driver fatalities has peaked and is now falling, because the rate of casualties per driver for older car drivers is reducing faster than their number is increasing (see Section 3). At the same time, research is showing that although the oldest drivers have a high fatality rate per mile driven, their rate for slight injuries per mile driven, which is a proxy for accident involvement, increases much less. Most of the increase in the fatality rate for older drivers is a result of their fragility increasing with age, rather

than their accident involvement increasing. Also, because drivers reduce the mileage they drive as they age, their accident involvement rate per year does not increase with age below 75 or 80 years, and rather little for ages beyond 80 years. In addition, older car drivers are shown to represent a small danger to other road users, in that they kill a small percentage of all the pedestrians killed by cars. This is leading to the view that while older drivers are at risk themselves, because of their fragility, they are no greater threat to other road users than are younger drivers (Hakamies-Blomqvist, 2004).

There has been extensive research on older drivers since the TRB report on transportation in an ageing society (TRB, 1988). A recent synthesis of research has been provided by Eby et al. (2008). This contains sections on medical conditions and medications, screening and assessment, education and rehabilitation, vehicles and advanced technology, roadway design and transitioning to non-driving. An overview of the situation in Britain is provided by Box and Mitchell (2010).

Eustace and Wei (2010) examine motor vehicle fatal crashes in detail to assess the contribution of age and gender to driving errors that cause fatal motor vehicle crashes, using data from FARS (NHTSA, annual) for the three-year period 2001–2003. This shows that the proportion of crashes for which the driver was held to be responsible rises steadily after age 50, reaching 80% by age 85 and over.

Data on the proportion of drivers at fault by age are not generally available in Britain, so the type of analysis made by Eustace and Wei

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(2010) is not possible using national statistics. This paper addresses the issue of whether the increase in older drivers in Britain will lead to an increase in older car driver casualties and whether older drivers pose a larger danger for other road users than do younger drivers. To do this, it predicts trends in licence holding and car driver casualties in Britain to 2030.

It shows the growth of car driving licences among older drivers in Britain, with evidence on the rate at which older drivers surrender licences as they age. It uses this information to predict the number of older drivers up to year 2030. It then demonstrates how safety has been improving for car drivers of various ages and predicts the number of fatal casualties to 2030. The number of older driver fatalities is likely to continue to fall. To put the numbers in context, older driver fatalities will continue to be substantially exceeded by fatalities among young drivers.

2. Car driving licence holding

2.1. Trends in licence holding by men and women

Data on car driving licence holding in Britain come from the National Travel Survey, a household survey that has been conducted regularly since 1972 and annually since 2002 (Department for Transport, annual (a)). At present about 20,000 individuals are surveyed and complete a one-week travel diary.

From these surveys it is possible to follow cohorts of respondents (but not individuals) and deduce when people obtain licences and also how many surrender licences as they age. Published tabulations provide data on licence holding by age groups 17–20, 21–29, 30–39, 40–49, 50–59, 60–69 and 70 and over. The Department for Transport has supplied the author with special tabulations giving licence holding for five-year age groups from 50–55 to 85 and over, but only for years since 1995–1997.

Fig. 1a and b shows the percentages of men and women who held car driving licences since 1965 (age group 40–49 omitted for clarity). It can be seen that for men aged up to 70, licence holding has stabilised at around 90%. For older age groups, licence holding is lower but increasing. For women aged up to 60, licence holding has stabilised at just below 80%. Again, holding is lower but increasing for older age groups.

For both men and women aged 17–20, licence holding peaked in 1992–1993, fell back rapidly until 2004 and is now increasing again, though it appears to be stabilizing at levels lower than the peak in 1992–1993. This has now reduced the licence holding of men and women aged 20–29. It is beginning to reduce it for men aged 30–39, for whom licence holding has fallen from 90% in 1992–1993 to 85%.

The large increase in licence holding by both men and women aged 70 and over since 1975 is clear.

2.2. Licence renewal procedure

Having passed a test of driving competence, which includes a theory section and a practical test on public roads, a driver is issued with a car driving licence valid to age 70. The driver is responsible for reporting to the Driver and Vehicle Licensing Agency (DVLA) if they experience a medical condition or injury that would prevent them from holding a driving licence.

At age 70, on completing a self-declaration of not suffering from a medical condition that would prevent the driver from holding a licence, the car driver is issued at no cost with a renewed licence, valid for three years. This process is continued every three years until the driver chooses not to renew their licence.

The health declaration consists of answering about two dozen questions by ticking boxes. Each question asks whether the driver suffers from a specific condition that would either represent a bar to

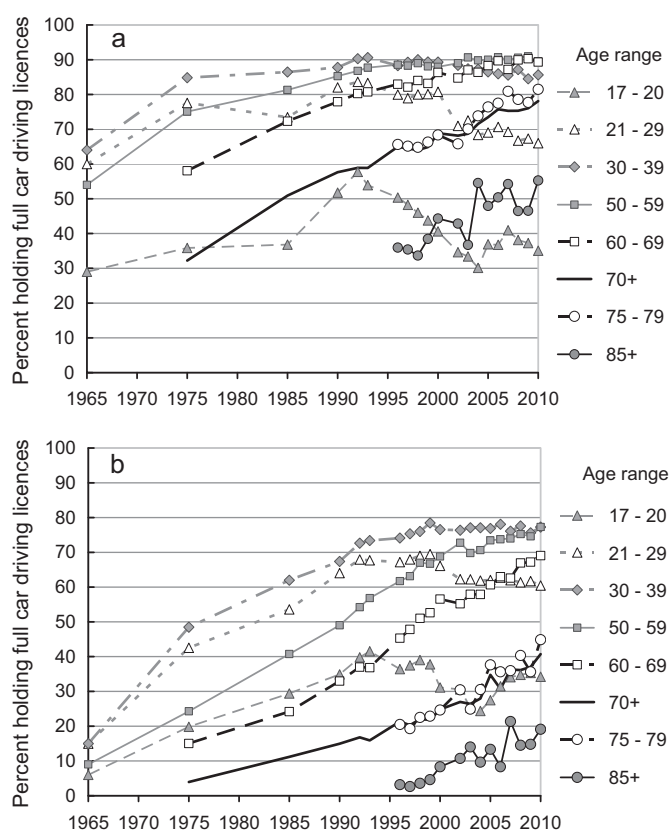


Fig. 1. (a) Percentage of men holding car driving licences – Great Britain National Travel Survey (Department for Transport, annual (a)). (b) Percentage of women holding car driving licences – Great Britain. National Travel Survey (Department for Transport, annual (a)).

holding a licence or alert DVLA to the need for a medical examination. Sweden uses a very similar system for licence renewal, while Austria, Belgium and France simply issue a licence for life. Studies show that countries with relaxed procedures for the renewal of licences by older car drivers tend to have road systems that are safer for older drivers. Hakamies-Blomqvist has shown this by comparing Sweden and Finland (Hakamies-Blomqvist et al., 1996). Langford et al. (2004) has found similar results comparing the Australian states of Victoria and New South Wales, and Mitchell (2008) has compared a number of countries in the European Union.

2.3. Licence surrender in older age

By following cohorts it is possible to estimate how many drivers surrender or fail to renew their licences as they age. Tables 1a and 1b show the percentage licence holding by for five-year age groups of men and women in 1985, 1990, 1996, 2000, 2005 and 2010 and the changes in licence holding over various periods before various stated ages. These changes are for particular age cohorts. Thus in Table 1a, the change in licence holding over 10 years in 2005 for 70–74 year olds is 84% (60–64 year olds in 1996) minus 79% (70–74 year olds in 2005). For 2010, the corresponding figures are 85% in 2000 and 86% in 2010. Because the surveys follow cohorts but not individuals, there is considerable random variation between years.

The data for five-year age groups of older drivers were obtained as special tabulations and are only available for 1996 onwards (data for 1990 is from the 1989/1991 NTS, for 1996 from the 1995/1997 NTS). From these data it is possible to estimate how licence holding changes as people age over 5, 10, 15 and 20-year periods. For ageing periods that go back before 1996, the initial licence holding has

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