

Introduction

The statistics on personal injury road accidents which are published on this website¹ are based on information collected by the police in a system known as STATS19², named after the number of the first questionnaire issued when the system was introduced in 1949. STATS19 covers road accidents involving injury occurring on the public highway (including footways) in which at least one road vehicle or a vehicle in collision with a pedestrian is involved which becomes known to the police within 30 days of its occurrence. The vehicle need not be moving and accidents involving stationary vehicles and pedestrians or users are included. Excluded from STATS19 are confirmed suicides; death from natural causes; injuries to pedestrians with no vehicle involvement (e.g. a fall on the pavement); and accidents in which no one is injured but a vehicle is damaged.

The STATS19 system collects some 50 data items for each accident, including the time and location of the accident, the types of vehicles involved and what they were doing at the time of the accident and some information on the drivers and casualties involved. The scope and detail of STATS19 allows the identification of different accident circumstances, enabling road safety policies to be aimed at where appropriate interventions may be able to reduce the number of accidents and their resulting casualties.

Levels of reporting in STATS19

The high standards that are achieved in the complex devolved STATS19 reporting system reflect the efforts of local authorities and police forces to report to the standard national requirement. However while very few, if any, fatal accidents do not become known to the police, research³ conducted on behalf of the Department in 1996 showed that a significant proportion of non-fatal injury accidents are not reported to the police. This is partly because in certain kinds of personal injury road accidents there is no legal duty⁴ to report the accident.

Further studies have been undertaken which also provide estimates of this shortfall and the most recent work on reporting levels has been drawn together in a report commissioned by the Department⁵ and published in June 2006.

While it is important to get a good estimate of the level of reporting, this under reporting does not necessarily mean that STATS19 does not give a reasonable estimate of accident trends. However if there were a systematic change in the levels of reporting, this would cause a problem in monitoring trends.

Hospital admissions data

To look into this possibility, numbers reported in STATS19 can be compared with other sources of data, at either a local or national level. For example, information on casualties admitted to hospital as in-patients in England is contained on the Hospital Episodes Statistics (HES) database held by the NHS⁶. The external causes of injury for all admissions are recorded allowing those patients injured in road accidents to be identified.

The STATS19 definition of a "serious injury" includes any injury resulting from a road accident that occurs on the public highway for which a person is detained in hospital as an "in-patient" as well as a list of other injuries. Therefore any road accident casualty admitted as an in-patient to a hospital should be recorded as "seriously injured" on STATS19. However, the police are not necessarily told that a casualty has been admitted to hospital, nor is there a duty on the hospital to reveal this personal information about an individual if it is requested. As a result there may be some miscoding of injury severity by the police.

It is possible to compare trends between the two series. The results show that trends in the number of road accident casualties admitted to hospital as recorded in HES have shown an

increase in recent years while the number of seriously injured casualties recorded in STATS19 has fallen. Such differences may reflect one or a combination of the following:

- Reduced reporting of accidents by the public to the police (as mentioned earlier there is not a duty to report all personal injury road accidents to the police)
- A genuine decline in the number of less severe, non hospitalised casualties which are still classed as "serious" in STATS19 - many such cases will be handled in A&E, and therefore are not recorded in the HES statistics
- Changes in the police recording of injury severity – they may be recording more serious accidents as slight
- An increase in the proportion of road casualties going to a hospital
- Changes in hospitals' practices or in how they record their data, particularly better reporting to the comparatively new HES system over time

An article on the use of hospital "in patient" data on road accidents and comparisons of this data with STATS19 was published in Road Casualties Great Britain: 2006 ⁷ building on an earlier study published by the Department in June 2006 ⁸. In particular, this investigated the last point and found that there have been a number of administrative changes to hospital admissions practices and improvements in the recording of the causes of admissions. For example, the practice for patients requiring short periods of observation has increasingly been to use assessment or short-stay admission wards. Also, the introduction of 'Payment by Results' may have had the effect of a further improvement in the recording of admissions in HES. These and other changes may have had the effect of an apparent increase in the number of road accidents that may not reflect the actual number of accidents.

For these reasons, HES data have to be used with care for trend analysis and any conclusions drawn from a simple comparison of aggregate STATS19 and HES annual and trend data would be misleading. The HES website also acknowledges that fluctuations in the data can lead to false assumptions about trends ⁹.

Matching police and hospital data

Analysis of the HES data tells us some of the reasons for the differences between the two trends but does not give us the full picture. In order to get a better understanding of the differences work to match STATS19 and HES data at individual record level was carried out by the Office for National Statistics. Matching work was completed in June 2008 and an article published in Road Casualties Great Britain: 2007 ¹⁰ in September 2008 summarises the methodology and initial results.

The initial results of this work suggest that around half of road accident casualties admitted to hospital are known to the police, broadly in line with previous studies. These results also show that this proportion has remained relatively constant for the period studied (1999-2004), which provides no evidence to suggest that there has been a systematic change in the levels of reporting of serious accidents to the police.

The matched data also provides information on the proportion of casualties admitted to hospital that are miscoded as slightly injured in STATS19. This proportion increased slightly over the years covered (from 37 per cent in 1999 to 42 per cent in 2004) which could reflect changes in the police recording of severity or changes in hospital admission practices – or a combination of both factors.

Further research

Although we have now completed initial work to match the STATS19 and HES data, we are continuing research in this area. For example, there remains more work to be done to look at the characteristics of matched and unmatched accidents. Additionally, questions on road accidents have recently been added to the National Travel Survey ¹¹ which, for future years,

will provide us with a non administrative source of information on trends in the number of road accidents. Results from the first year of collection were published in August 2008.

This work should allow us to continue to get a better idea of the strengths and weaknesses of STATS19 and HES and may also give a clearer picture as to whether the level of reporting in STATS19 has changed over time. While there is still further research to be done on levels of reporting in STATS19, it remains the best and most complete source of identifying road casualties, together with the full details of the circumstance of the accident. In particular, STATS19 is the best source of information for analysis of trends.

¹ A broad range of results from STATS19 can be found in the Department's publication Road Casualties Great Britain (RCGB) found at:

<http://www.dft.gov.uk/pgr/statistics/datatablespublications/accidents/>

² The form used by the police to collect the information and the definitions used in STATS19 can be found at:

<http://www.dft.gov.uk/pgr/statistics/datatablespublications/accidents/casualtiesqbar/stats20instructionsforthecom5094>

³ National hospital study of road accident casualties, Transport Research Laboratory (TRL) report 272, Simpson). A summary of the reports was published in an article in Road Accidents Great Britain: 1996 – The Casualty Report.

⁴ Legal requirement on the public to report an accident can be found at

www.collisionreporting.gov.uk/Law/default.asp

⁵ Under-reporting of road casualties: Phase 1. Road Safety Research Report No. 69, published 23 June 2006

<http://www.dft.gov.uk/pgr/roadsafety/research/rsrr/theme5/underreportingofroadcasual.pdf>

⁶ HESonline – Hospital Episode Statistics

<http://www.hesonline.nhs.uk/>

⁷ Road Casualties Great Britain: 2006 Annual Report

<http://www.dft.gov.uk/pgr/statistics/datatablespublications/accidents/casualtiesqbar/roadcasualtiesgreatbritain2006>

⁸ Road accidents casualties: a comparison of STATS19 data with Hospital Episode Statistics , published 23 June 2006

<http://www.dft.gov.uk/pgr/roadsafety/research/rsrr/theme5/roadaccidentcasualtiescomp.pdf>

⁹ HESonline – Why are there fluctuations?

<http://www.hesonline.nhs.uk/Ease/servlet/ContentServer?siteID=1937&categoryID=484>

¹⁰ Road Casualties Great Britain: 2007 Annual Report

<http://www.dft.gov.uk/pgr/statistics/datatablespublications/accidents/casualtiesqbar/roadcasualtiesgreatbritain20071>

¹¹ Personal travel (National Travel Survey)

<http://www.dft.gov.uk/pgr/statistics/datatablespublications/personal/>

<http://www.dft.gov.uk/pgr/roadsafety/research/rsrr/theme5/>