

Statistics Commission

Briefing Note

Road Accident Statistics Published in June 2006

Main points:

The issue: There is known undercounting of road accidents in police statistics which are used to monitor a Public Sector Agreement (PSA) target and inform policies on traffic safety. There is an apparent divergence of trends between police and hospital statistics that may indicate that accident rates are not falling by as much as the police statistics suggest.

What is being done about the data quality? Government departments are investigating the extent of undercounting and have publicly acknowledged that there is undercounting.

What is being done about the PSA target etc? The Department for Transport (DfT) is currently relying on the trend in police statistics as a measure for the PSA target.

The details:

The known undercounting of road accidents and the reasons for it

The undercounting has been known about for several years – The Transport Research Laboratory carried out research in 1996ⁱ and further studies have been carried out this year.

The guidelines for the forms completed by the police (known as STATS19) require that any accident involving vehicles, including cycles, which leads to death or personal injury should be covered in the police returns. But not all accidents involving injury are reported to the police, partly because there is no legal requirement to report some kinds of accidents. For example, provided drivers' details are exchanged at the scene of a collision, there is no legal requirement to report the collision to the policeⁱⁱ. There is also no requirement to report a single vehicle accident. Therefore, not surprisingly, not all road casualties are recorded by the police in the 'STATS19' system. Some of these will be recorded in Hospital Episode Statistics (HES), an administrative hospital database on casualties admitted to hospital.

The second area of undercounting is misclassification: police tend to under-estimate the severity of road accident casualties. Again, we know this from comparisons with hospital statistics - although it should be noted that there are different definitions of severity in the STATS19 and HES datasets.

Quality review (February 2006) initiates research to investigate further

The DfT carried out a quality review of road accident statistics in early 2006ⁱⁱⁱ. This review recommends research to compare police with hospital data, in order to understand the nature of the under-recording.

The review recommends to keep the police "STATS19" data as statistics used in targets but to give "greater prominence" in official publications to the implications of under-reporting for assessing the accident and casualty toll (recommendation 21, page 13). Note that this greater prominence does not apply to assessing its reliability in monitoring against the PSA target.

The review also recommends establishing a joint initiative with the Department of Health to look at developing a national database of road accident casualties treated in or admitted to hospital, and matching STATS19 road accident records with hospital records (recommendation 22, page 13).

Acknowledging the undercounting

The quality review was completed in February 2006. It was published on 28 June 2006.

The Office for National Statistics (ONS) is aware of the issues. The National Statistician's letter authorising publication of the quality review specifically highlights "concern... [about] the situation with under-reporting of serious injury data" and welcomes the further work that DfT is undertaking to "establish whether there is any bias" (ie. the work recommended by the review).

DfT has acknowledged that not all casualties are included in the police data and this is reported in a preface note to the Transport Statistics published 29 June^{iv} although it refers to the older research carried out in 1996 to quantify the level of underreporting. [Though DfT note that the detailed STATS19 data are crucial to engineers and researchers in the road safety field, and are not simply collected to monitor progress to a PSA target.]

The National Audit Office (NAO) has also acknowledged the problems with reliability. In a validation report on PSA data systems^v published in March 2006, it cites the known under recording of DfT road accidents statistics, explaining that this is due to under-reporting and misclassification of injuries and furthermore that recent evidence shows a divergence between trends in deaths and serious injuries that suggests that the level of under recording may have changed. It notes that the DfT is investigating this. (NAO, page 9)

Research published in June 2006

Research was published simultaneously by the DfT and the British Medical Journal (BMJ) in June 2006.

The DfT has completed and published the first part of the research in two publications – a comparison of police (known as STATS19) and hospital episode statistics (HES)^{vi}, and a scoping study that looks at the underreporting, the usefulness of other health data sources, and an analysis of available data^{vii}.

In the same week, the BMJ published a comparison of hospital and police data^{viii} using the same data as the DfT's comparison. The authors drew the same conclusion that the fall in seriously injured shown by the police's "killed and seriously injured" (KSI) statistics is substantially larger than that shown in the HES data. This research appears to have been carried out independently of DfT research - the authors have not referred to any concurrent work by DfT and the dates of acceptance and their references are earlier than the DfT work.

Implications to PSA target not declared

What may be of particular public concern is that these statistics are used to monitor progress and success against the ambitious PSA targets on road accidents (to reduce numbers killed and seriously injured in road accidents by 40% by 2010 from a base of the 1994-98 average, and by 50% for children). These statistics also form the basis for comparisons with other European countries. On the KSI figures DfT is well on the way to achieving this target - but only because of a large reduction in the seriously injured numbers (numbers killed are also down). On the basis of the HES data, the DfT would not be on track to achieve the target.

The DfT stated in its comparison report that "although a high proportion of casualties are not reported in STATS19, there has not been evidence that the levels of reporting were subject to systematic change. Therefore, it was appropriate to use STATS19 to monitor targets, while at the same time undertaking further work to examine whether reporting levels might be changing.

However, the research has not confirmed the trend and the DfT recommends further work to understand why. In addition, its report suggests finding a more reliable indicator to inform policy.

What DfT has not yet commented on publicly are the implications of the latest research for measurement of the PSA target for reducing road accidents. Although the importance of reliability for PSA targets is stressed in the quality review, nothing has been said about the divergence in trends of hospital and police data and the implications for PSA targets. In the annual departmental report^{ix} published in May 2006, DfT acknowledged the deficiencies of the police measure, but has not commented further following the publication of the latest research.

This has been picked up by the press though. The Daily Express^x reported on 29 June that "The Department [for Transport] denied its traffic policies were not working. "Any bold conclusions drawn from these figures would be misleading," it said. "There is no doubt road safety has improved, regardless of under-reporting. Deaths continue to go down."

Secretariat
July 2006
[Revised: 29 September 2006]

References

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- ix *Department for Transport Annual Report 2006*. DfT, published 17 May 2006. http://www.dft.gov.uk/stellent/groups/dft_about/documents/page/dft_about_611668.hcsp

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