Institute of Transport Economics
Norwegian Centre for Transport Research

English summary:

The extended fatality statistics (DUS) in Denmark - Evaluation of the pilot project 2010-2012

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DUS is a relatively low-cost measure that was well planned and professionally executed from the beginning. The project has produced useful knowledge for road safety work. The value of the project may increase over time as one gets more and more data.

Background and objective of the evaluation

«Den udvidede dødsulykkesstatistik» (DUS) (The extended fatality statistics) was established in Denmark in 2009 as a three-year pilot project (2010-2012) through a DK 16 mill. grant from the Danish Ministry of Transport. The project has been continued through 2013-2014, but on a lower budget (DK 5 mill.).

The Danish Road Directorate (VD) has commissioned The Institute of Transport Economics (TØI) to evaluate the pilot project. The objective of the evaluation is to assess the use of resources relative to the increased knowledge about fatal accidents. The evaluation has sought to answer the following questions:

1. What knowledge has been produced, and is knowledge shared with relevant actors?
2. What new knowledge about fatal accidents has DUS supplied, and what is the practical value of DUS compared to the standard accident statistics and reports from the Accident Investigation Board (HVU)?
3. What can be learned from the three first years, what works well, and what can be improved as regards routines, cooperation, analyses and reporting?
4. How and by whom has the data been used internally and externally?

The evaluation makes use of three different methodological approaches:

1. *Document analyses* of internal procedures and forms, as well as public documents such as annual reports, thematic reports and articles.
2. *Database analysis* of the DUS database and analysis of 18 randomly selected (classified) DUS accident reports.
3. *Interviews* with 12 key actors. These range from VD personnel more or less directly involved with DUS, to persons from other professional communities and stakeholder organisations.

Objective and organisation of DUS

The objective of DUS is to increase knowledge about why accidents happen and lead to fatalities, and to improve targeting of road safety work.

DUS carries out inspections and extended analyses of all fatal road accidents in Denmark, documented in individual accident reports. The data are included in an accident database, and, on the basis of this, annual reports and thematic analysis are produced.

DUS is managed by a project group in the Road Directorate, which is responsible for procedures, cooperation, communication and the production of public reports. The analyses themselves are done by road safety personnel at the Directorate's regional offices in cooperation with police and in some cases road safety personnel from the municipalities.

From an early phase in the project, DUS developed a wide range of detailed descriptions of procedures, forms and templates. Therefore, its work has been relatively efficient and homogeneous when it comes to routines and reporting.

In the period 2010-2012, 595 fatal accidents have been analysed and documented in reports of about 10 pages, and the information included in the DUS database.

As a consequence of the descriptions of procedures and report templates, the different DUS reports appear relatively homogeneous. The reports contribute considerable supplementary information about the accidents, and this information is easily accessible and available for further analysis in the DUS database.

The DUS material already contributes useful data to different projects, but its usefulness will increase over time with the accumulation of more data.

Production and dissemination

The results of the analyses are described in three annual reports, one regional report, four thematic analyses, fire articles and 16 presentations. DUS has its own homepage, but the information found here is limited, and the homepage could be improved.

Seen in relation to its limited resources, the work with DUS has resulted in an extensive volume of production, publications and dissemination. A critique, however, is that the publishing of annual reports has taken too long.

Due to the extensive dissemination activities, there is reason to believe that DUS and its main results are known among relevant actors in Denmark, and this was confirmed in interviews.

The reports are deemed to provide useful new information about fatal accidents. When it comes to the first reports especially, we note the absence of exposure rates and references to scientific findings. For a new system like DUS, however, some concessions must be made for potential for improvement. Compared to the establishing the Norwegian accident analysis groups (UAG) some years ago, DUS was markedly better prepared when launched.

In the interviews, the problem most frequently raised was the quality of data, and whether collection of data was sufficiently competent and homogeneous. It has been a problem that not all of data has been registered for every accident. The Road Directorate, however, considers this an ongoing process of improvement. The problem with registering data is partly a question of resources and organisation.

New knowledge and practical value

DUS provides information on accident and injury factors for all fatal accidents. This fills a lacuna that is not covered in standard accident statistics or reports from HVU. Compared to standard accident statistics, DUS e.g. supplies complimentary

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information about factors, and unlike HVU, provides information on all accidents, which means that information can be treated statistically.

Internal and external use of information

Among other things, the Road Directorate uses DUS materials for developing reports and analyses, for educating personnel and improving understanding, for quality assurance of existing data, as a basis for proposing and selecting safety measures, and for responding to questions from the media, ministries, parliament and sectorial organisations. DUS is also seen to create an increased awareness about the most serious accidents.

Key external users of DUS are the Police, the Ministry of Transport, The Ministry of Justice, media, the Council for Safe Traffic, The Traffic Safety Commission, The Danish Transport and Logistics Association (DTL) and the Danish Transport Authority. These users emphasise that they make use of exactly the data that cannot be found in standard accident statistics.

The Norwegian experience suggests that the accident data becomes more relevant to research communities over time, as more data accumulates. It would therefore be an advantage if external Danish research communities had better access to the data.

Conclusions

DUS is a low-cost measure, which has been introduced without major organisational change. The project was well-planned and competently executed, and has not met with significant cooperation problems. Problems that have been encountered are related to different priorities and levels of commitment from the various cooperating partners, and to limited resources.

The project is well known among relevant actors in Denmark, and there is a general agreement that the information uncovered is reliable and useful. Among advantages specially emphasised is improved knowledge on accident and injury causation factors, increased focus on behavioural factors, and more reliable information on accident speeds. In addition, the project has provided quality assurance of data in general, and some specific detailed knowledge, which can be applied directly in safety work.

The quality of the reports studied is high when it comes to the actual numbers provided, but do not as a rule see the statistics in relation to exposure, scientific findings or experiences from other countries.

So far, results from DUS have had greatest effect on a political level; i.e. as basis for priorities and policies (such as The Traffic Safety Commission's action plan) rather than for specific measures. This is the result of a deliberate policy, as the Road Directorate does not wish to introduce measures on the basis of a limited statistical material, or propose measures that will not be introduced.

A general criticism against extended statistics is that it is too expensive, and does not deliver, «most safety for money». Altogether, the DUS-project has cost DK 21 mill. (2010-2014), which roughly corresponds to one fatality. If the increased knowledge has prevented at least one fatality over the last five years, the project could be said to have been «economically profitable».

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