

Crash counting: a review of fleet crash¹ reporting in the UK

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Abstract

Although the true extent of crashes involving company vehicles is unclear in the UK, it is known to be disproportionately high and a major financial and human cost. This paper summarises recent UK-based research into company vehicle reporting, investigation and recording.

50+ companies were interviewed and a new reporting, investigation and recording system developed and pilot-tested. Current systems tend to include pre-crash information, at-scene information, post-crash procedures and crash analysis. They are strong on claims management, but weak on investigation and risk analysis. Poor quality reporting, few comparable standards or key performance indicators (KPIs), regulation falling between or outside of several Government agencies and no formalised system of auditing company performance are problems.

The paper recommends that the pilot study should continue in a small number of case study companies to identify further system improvements and the change management processes required for wider implementation. A crash reporting and recording self-audit and KPIs are proposed, to allow companies to identify 'where they are now' and areas for improvement.

Introduction

Work related road safety is currently under review in the UK (1). Company vehicle crash counting is important because without information about the extent and causes of their crashes, companies that want to reduce their crash rates, and those that regulate them, are shooting in the dark. Put simply, you cannot treat symptoms unless you know the disease. The long-term objective of the research on which this paper is based is to help policy makers and companies which use vehicles, ranging from cars to large trucks, work out how many crashes their vehicles are involved in and why.

The actual extent of crashes involving company vehicles in the UK is not known. The evidence that does exist, for example in Figure 1, shows that it is significant.

Figure 1 – The extent of the problem of company vehicle crashes in the UK

Large goods vehicles (LGVs) make up approximately 1% of vehicles registered or 6% of kilometres (kms) travelled, and are involved in over 15% of fatalities in the UK. It is not known how many of these are actually caused by LGVs. Small goods vehicles (eg vans) are also involved in a large number of fatalities, but remain outside of strict regulations on drivers' hours, tachographs and licences.
Company car drivers are 50% more likely to crash than private motorists are.
Almost 25% (800-1,000) of all road fatalities in the UK appear to be work-related.
Driving 40,000 kilometres per annum for work is as risky as coal mining or construction.
Approximately 77,000 road-related injuries occur per annum to employees and the self-employed.
Between one in five and two in three company cars will be involved in a crash each year.
Each commercial vehicle averages approximately one crash per year in the UK.
Many crashes get 'lost' somewhere between the police, insurers, vehicle operator's own statistics, the DETR, the Health and Safety Executive (HSE) and local authorities, and are never recorded.
High profile landmark crashes have cost multiple lives and been featured extensively in the media. Particular cases are the 'Sowerby Bridge' disaster in September 1993 where six people were killed by a large goods vehicle with faulty brakes and the November 1993 'M40 school minibus' crash, where 12 children and their teacher, who fell asleep at the wheel, were killed.
Sources: 2, 3, 4, 5, 6

¹ A crash is defined as any contact or alleged contact, both on- and off-road, including 'damage only'.

Given this unsatisfactory situation and the need for change, the research discussed in this paper is based on an on-going project called CoVIR (company vehicle incident reporting and recording) which was supported by the UK Department of the Environment Transport and the Regions and had two primary objectives.

1. To produce a comprehensive review of company vehicle crash reporting systems currently employed by a range of organisations.
2. To develop best practice recommendations for a company vehicle crash recording system that could be used throughout the UK.

Methods

The methodology adopted to meet these objectives included a literature review, analysis of 80 existing company vehicle crash report forms, interviews with over 50 managers from a range of organisations, which took place at six project meetings held around the country, and a questionnaire.

Based on this analysis of existing systems, a new system was developed and pre-tested which included an at-scene 'bumpcard', a combined 'crash report and investigation form' a 'coding card' and a 'user manual'.

The exact process varied by organisation, but overall was as follows.

1. Bumpcard completed by the driver at-scene.
2. Report, investigation and recording form completed on return to site by driver, supervisor or investigator.
3. Manual and flow chart provide instructions for the process and using the form.
4. Coding sheet provides a summary of the codes to use.

This new system was pilot-tested in 13 companies, which helped to suggest areas where improvements could be made and to identify the difficulties and limitations of attempting to develop one generic system for all vehicle operators to use. From this it was possible to identify a series of recommendations.

Findings from the literature review

The true nature and full extent of crashes involving company vehicles is currently unknown in the UK (7, 8, 9). Similar on- and off-road crashes are regulated separately by different agencies (10, 11) under different legislation. The Department of the Environment Transport and the Regions (DETR) regulates on-road crashes under the Road Traffic Act 1988 and the Health and Safety Executive (HSE) regulate off-road crashes under the Health and Safety at Work Act 1974 and RIDDOR 1985 (Reporting of Injuries, Diseases, and Dangerous Occurrences Regulations). An inter-agency task group has been set up by the Health and Safety Commission to consider how to dovetail road traffic law and its enforcement with health and safety at work law and its enforcement.

The insurance system currently drives crash reporting and recording in the UK. Even though there is much best practice, both pre- and post-crash and a range of key performance indicators (KPIs) available, there are no current standards even in terms of how to define a crash, accident, incident, near hit or wear and tear. This means that it is very difficult to compare the performance of different organisations, some of whom use a traditional insurer, whilst others insure themselves or use an accident management company (12, 13, 14, 15, 16). All have a slightly different emphasis or objectives, but a culture of 'do not admit liability culture' remain strong, except for amongst a few more enlightened organisations who are self-insured and can see the benefits of settling claims quickly. The literature also shows that in other countries, particularly in Australia and the USA, more is done by policy makers at both the Federal and State levels to help vehicle operators improve their safety performance through voluntary and mandatory safety audits, which include crash reporting and recording (17, 18). Such information could also be useful for licensing and enforcement purposes. The inter-agency group mentioned above is now addressing the issue of best practice in relation to prevention of work-related crashes.

Findings from the analysis of 80 crash report forms

The analysis of 80 report forms used by UK-based vehicle operators helped to confirm many of the findings from the literature, particularly that there are few comparable standards, crash reporting and recording is currently insurance and claims-led and includes ‘pre-crash’, ‘at-scene’ and ‘post-crash’ information. Most of the forms were two sides of A4 in length but varied greatly in both content and quality, even though they collected very similar information (typically about the vehicle, driver, crash, sketch/description, third party vehicle/property, injuries, police, witnesses and claims). The driver and vehicle information particularly would lend itself towards being part of an integrated relational database, but issues such as data protection, seasonality, staff/vehicle turnover and IT skills need to be considered further. As well as the report form, a range of other documents were identified, particularly the ‘at-scene bumpcard’ and ‘post-crash investigation form’.

The extent to which the forms were coded for analysis varied greatly, and the need to develop some standard crash codes was identified. It was concluded that the ideal was for drivers to be able to describe what happened in their own words and for managers to then code this information for analysis. The current systems showed similarities to both the HSE’s RIDDOR and the DETR’s Stats19² recording systems, however most of the crashes reported at the company level would never be recorded by either RIDDOR or Stats19, and so would fall outside the scope of any current national statistics. This is because RIDDOR only covers accidents involving three or more days work time, and Stats19 forms are only completed for reported crashes involving an injury.

Findings from the 50+ company case studies

The **company case studies** provide a detailed and wide ranging insight into how organisations (including transport companies, manufacturers, retailers, accident management companies, insurers, councils and bus operators) report and record vehicle crashes and the insurance/claims-led nature of their systems. Figure 2 describes the ‘the typical company vehicle crash’ in the UK, which helps to explain why they mostly fall outside of national statistics.

Figure 2 – the ‘typical’ company vehicle crash

Low speed
Single vehicle
No injuries or only minor whiplash
Cost <£1,000 in repairs
At a collection/delivery point or other familiar location
Often below the insurance excess
Generally too minor for national statistics
Potential to be fatal!

The interviews also identified a range of best practice. For example, the development of crash codes, key performance indicators, detailed crash investigations and detailed pre-crash, at-scene, post-crash and risk management analysis process flow charts. Key issues identified included defining what a crash is, under- and incomplete-reporting by drivers, differences between vehicle types and the importance of the relationship between crash and maintenance costs. The company cases also identified the importance of change management, compromise and taking a ‘realistic’ and practical approach as key elements for standardising and improving crash reporting and recording.

Findings from the questionnaire

The **questionnaire** structured and aggregated the information from the case studies. It identified that almost half of the participants were professional transport companies. Participants averaged just over one crash per vehicle and per driver each year at an average cost of just under £1,000 each, although there are large variations in what

² Stats19 is the crash report form used by the Police to record road crashes in the UK.

individual companies actually record. Approximately half of the participants' crashes occur off-road, confirming the need to focus on both on- and off-road locations. This also highlights the need for more integration and co-operation between different agencies such as the DETR, HSE and local authorities in improving company vehicle safety, a point which many participants admitted there was scope for them to do.

Findings from the pilot study

The findings from the literature review, report form analysis, meetings and questionnaire fed into a new crash reporting and recording system, which was then pre-tested. The system, which included a bumpcard, crash report and investigation form, coding card and user manual was used by 13 'active' pilot study participants, as well as being evaluated by several other companies. In all 49 crashes, all damage only, were reported by these participants during the three month pilot study period. The main benefits of the new system were identified as formalising the crash investigation process, standardisation and ease of analysis. Its limitations were that it was seen as too long, too time consuming to implement and requiring some coding improvements (particularly in dealing with off-road crashes). User training, change management, form design, amendments/rationalisation of the system, using the outputs and the need for a longer-term pilot study were all identified as key issues.

Conclusions, recommendations and areas for further study

In meeting its aims, the research project on which this paper is based has identified that there are currently many similarities between organisations, but few comparable standards. Many current systems are claims- and insurance-led, rather than risk management-led. The new system is still at a very early stage, and requires further testing and revision. This means that in many ways the experience gained to date should be considered as the beginning, rather than the end of this area of research. Despite this, the findings have provided a major new insight into the key issues involved in company vehicle crash reporting and recording, as well as some immediate positive steps that can be taken to improve the current position. These include revising the new company vehicle crash reporting and recording system, implementation issues and developing a self-audit and key performance indicators.

The system requires some re-coding, rationalisation and design work to make it as easy as possible to implement and use. Based on the current findings this could now be undertaken. It would be more prudent, however, to continue the pilot study in a small number of case study companies over a longer time period. Further analysis and improvement of the system could then be undertaken. It may also be prudent to develop a more bespoke approach. This could have a generic core of information for all vehicle and operation types but include several specific modules, for example for buses, vans, LGVs and company cars.

Improved crash reporting and recording was shown throughout the research to be change management issue. Change management must be considered when any new system is implemented. For example the current culture of 'do not admit liability at all costs' will always lead to poor crash reporting and recording. Only the more enlightened organisations appear willing to change this approach, however. It will also not be easy to persuade companies to make wholesale changes to their existing claims-driven systems.

It is important to involve the insurers, accident management companies and the professional bodies in piloting and implementing new standards. These organisations have a major influence over their clients and members. Insurers can do more than just manage the claims process, through proactive crash prevention and monitoring and should be encouraged to play an important standardising role.

As well as change management there are training issues, in the importance of crash reporting and recording and how to do it effectively. Training courses should be provided for senior and junior managers in how to implement and use crash reporting, and for drivers into the importance of the process and how to complete the forms.

The implementation and change management issues discussed here, and throughout the project, suggest that implementing a self-audit and key performance indicators may be the best way forward, rather than trying to implement a whole new standardised system. The new system that has been developed could then act as a best

practice guide to help companies improve their existing systems, or would be available for new companies and those with nothing already in place.

Safety self-audits have been implemented in other countries including Australia (18) and the US, where the 'Safestat' model of audits, inspections and violations has been a success (17, 19). In the UK a company vehicle crash reporting and recording self-audit could be developed and disseminated relatively quickly based on the findings of this research. This would allow vehicle operators to quickly understand 'where they are now' and any gaps in their systems as a starting point. It would also help in developing a set of standards for all companies to work towards. The process flow charts mentioned above, and KPIs shown in Figure 3 could easily be adapted into a series of pre-crash, at-scene, post-crash and risk management self-audit questions.

Aiming for a standard set of KPIs may also mean that vehicle operators could actually maintain their existing reporting system and process, as long as it could provide the type of information shown in Figure 3, which companies should monitor on a weekly, monthly, quarterly, six-monthly or annual basis. The dissemination of the audit could be achieved at low cost through a range of channels and could include an evaluation, to make sure that the KPIs included are the most appropriate.

Figure 3 - Summary of the crash KPIs identified by the project

Crashes per £100,000 turnover	Collision with	Repeat offenders
Crashes per 1,000 employees	Complaints	Shifts/months per crash Terrain
Crashes per 1,000,000 kms	Costs	Third party type
Crashes per 100,000 hours worked	Customer service	Time
Crashes per 100,000 kms	Damage while parked	Time to report
Crashes per driver	Date	Type of crash
Crashes per vehicle	Day	Type of damage
Agency performance	Driver age	Underlying causes
Average crash cost	Drivers' shift and sleep pattern	Uninsured losses/recoveries
Average cost of claims per million kms	Fault/non-fault crashes	Vehicle downtime
Blameworthy/non-blameworthy	Inspection results	Vehicle manufacturer
(unavoidable/avoidable)	Level of unreported damage	Vehicle type
Claims per million kms	Location	Vehicle use
	Manoeuvre	Violations
	Kms per crash	
	Number of crashes	

(Sources: 15, 18, 20, 21 and various companies in the research)

In the longer term it may then be possible for the crash reporting and recording audit to become part of wider and more formal system, like the American model, to be regulated by an agency such as the Health and Safety Executive.

Amending the Stats19 form to include a field for 'purpose of journey' - business or domestic - would give the DETR a further insight into the extent of crashes involving vehicles being driven for work.

Developing an easy to use IT-based, pre-coded, relational database system of vehicle, driver and crash information would improve the recording process. The main problems with this are in operations with a high vehicle or staff turnover and or high seasonality. Data protection regulations and IT skills may also be issues.

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