

Contributory factors to road accidents

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Introduction

The STATS19 national system of collection of information on road accidents involving human injury gives considerable information about the circumstances of the accident including who the victims are, what types of vehicle are involved and what they are doing at the time of the accident and the general conditions at the time. However, it does not include information on the main reasons why road accidents happen.

Regular information at a national level would assist in directing the work on improving safety within the Government's Road Safety Strategy. In the 1997 Review of the Collection of Road Accident Statistics, there was a proposal that contributory factors should be collected as part of the STATS19 data collection system. Although this was not adopted at the time, it was decided that the collection of data could proceed on a voluntary, trial basis. Fifteen police forces chose to participate in the trial and have been collecting data using the specification proposed at the time. The trial has provided information on contributory factors for about a quarter of all reported road accidents in Great Britain since 1999.

In the consultation for the 2002-03 Quality Review of the Collection of Road Accident Statistics, some concerns were expressed about this trial system. A special study of contributory factor information collected in the trial and in a variety of systems adopted by other police forces was undertaken and published in March 2004 as *Road Safety Research Report No. 43*. As a result, a substantially revised specification is to be introduced from January 2005 and will be adopted by all police forces as an integral part of the STATS19 collection system. The new specification will provide comprehensive contributory factor data for the whole of Great Britain but will not be directly comparable with data collected during the trial. This article presents some of the results and conclusions of the trial. It should be noted that the statistics from the trial presented in this article are not National Statistics.

Trial data collection

The contributory factor system used in the trial was designed to summarise the events that led directly to the accident, to be simple to use and yet sufficiently comprehensive to cover circumstances leading to the majority of accidents.

The coding has two distinct phases. The first stage records what went wrong by identifying the factor leading directly to the accident; this is called the **precipitating factor** and is chosen from a list of 15 factors. The second stage records the reasons why the accident happened by identifying up to four **contributory factors** from a list of 54. For each contributory factor the reporting officer may indicate their confidence in the judgement by coding it as 'definite', 'probable' or 'possible'.

The data collected reflects the view of the reporting police officer. The information is not the result of detailed accident investigation.

Results

Precipitating factors

Table 1 shows the percentage of accidents with each precipitating factor. Five of the fifteen precipitating factors listed collectively account for over 80 per cent of accidents. The most frequently recorded factor was *failed to avoid vehicle or object in carriageway* (28 per cent¹ of all accidents) followed by *loss of control of vehicle* (19 per cent), *failed to give way* (15 per cent), *pedestrian entered carriageway without due care* (11 per cent), and *poor turn/manoeuvre* (8 per cent). The main precipitating factor in fatal and serious accidents was *loss of control of vehicle* (43 per cent of fatal and 29 per cent of serious accidents). Only 4 per cent of accidents were given a precipitating factor *other* indicating that in most cases, officers found it possible to select one of the precipitating factors listed.

Table 1: Accidents with each precipitating factor by accident severity: 1999-2002

<u>Precipitating factor</u>	percentage			
	<u>Fatal</u>	<u>Serious</u>	<u>Slight</u>	<u>All</u>
Failed to stop (mandatory sign)	1	2	3	3
Failed to give way	7	12	16	15
Failed to avoid pedestrian (pedestrian not to blame)	6	5	3	4
Failed to avoid vehicle or object in carriageway	11	15	30	28
Failure to signal / misleading signal	0	0	1	1
Loss of control of vehicle	43	29	16	19
Pedestrian entered carriageway without due care	14	17	10	11
Passenger in or near PSV	0	0	1	1
Swerved to avoid object in carriageway	0	1	1	1
Sudden braking	1	2	4	3
Poor turn/manoeuvre	5	8	9	8
Poor overtaking	4	4	3	3
Drove wrong way (e.g. 1-way street)	1	0	0	0
Opening door carelessly	0	0	0	0
Other	4	4	4	4

It is interesting that the precipitating factor *pedestrian entered carriageway without due care* was coded in a significantly higher percentage of cases than *failed to avoid pedestrian (pedestrian not to blame)*.

The percentage of accidents with each precipitating factor varied very little between individual years of the trial. The factor *failed to avoid vehicle or object in carriageway* varied the most, from 26 per cent in 1999 to 29 per cent in 2002.

Contributory factors

Table 2 shows the percentage of accidents with each contributory factor. Fifteen of the fifty-four contributory factor variables cover over 80 per cent of all contributory factors coded. The most commonly coded factor was *inattention* (25 per cent) followed by *failed to judge other persons path or speed* (23 per cent), *looked but did not see* (19 per cent), *behaviour - careless/thoughtless/reckless* (18 per cent) and *failed to look* (16 per cent). In fatal accidents the most frequently recorded factor was

¹ All percentages given are rounded to the nearest whole number. A percentage of "0" therefore does not necessarily imply that there were no cases but that the number was under 0.5% of the total.

excessive speed (28 per cent) followed by *careless/thoughtless/reckless behaviour* (21 per cent), *inattention* (18 per cent), *lack of judgement of own path* (17 per cent) and *failed to judge other persons path or speed* (16 per cent). As up to four contributory factors may be recorded for each accident, the percentages for all fifty four factors will add up to more than one hundred.

Table 2: Accidents with each contributory factor by accident severity: 1999-2002

Contributory factor	percentage			
	Fatal	Serious	Slight	All
Impairment - alcohol	14	11	6	6
Impairment - drugs	3	1	1	1
Impairment - fatigue	4	2	1	1
Impairment - illness	4	2	1	1
Distraction - stress/emotional state of mind	4	2	2	2
Distraction - physical - in/on vehicle	2	2	2	2
Distraction - physical - outside vehicle	1	1	2	2
Behaviour - panic	3	3	3	3
Behaviour - careless/thoughtless/reckless	21	21	18	18
Behaviour - nervous/uncertain	1	2	2	2
Behaviour - in a hurry	7	8	6	7
Failed to judge other person's path or speed	16	17	23	23
Disability	1	1	0	0
Failed to look	10	16	17	16
Looked but did not see	14	18	20	19
Inattention	18	20	26	25
Person hit wore dark or inconspicuous clothing	4	2	1	1
Personal Details - Other	5	3	3	3
Crossed from behind parked vehicle etc.	2	6	3	4
Ignored lights at crossing	1	1	1	1
Excessive speed	28	18	11	12
Following too close	1	2	7	6
Inexperience of driving	5	6	5	5
Inexperience of vehicle	3	2	1	1
Interaction/Competition with other road users	2	1	1	1
Aggressive driving	6	5	3	4
Lack of judgement of own path	17	14	14	14
Tyres - wrong pressure	1	0	0	0
Tyres - deflation before impact	1	1	0	1
Tyres - worn/insufficient tread	1	0	0	0
Defective lights or signals	0	0	0	0
Defective brakes	0	1	1	1
Vehicle Defects - Other	1	1	1	1
Site details - poor road surface	1	1	1	1
Site details - poor/no street lighting	3	1	1	1
Site details - inadequate signing	0	0	0	0
Site details - steep hill	1	1	1	1
Site details - narrow road	0	1	1	1
Site details - bend/winding road	5	5	3	3
Site details - roadworks	0	0	1	1
Slippery road	5	7	8	8
High winds	0	0	0	0
Earlier accident	0	0	0	0
Local conditions - Other	1	1	1	1
View - windows obscured	0	0	0	0
View - glare from sun	2	2	2	2
View - glare from headlights	0	0	0	0
Surroundings - bend/winding road	2	2	2	2
Surroundings - stationary or parked vehicle	1	3	3	3
Surroundings - moving vehicle	1	1	1	1
Surroundings - buildings, fences, vegetation etc.	1	1	1	1
Weather (e.g. mist or sleet)	2	2	2	2
Failed to see pedestrian or vehicle in blindspot	1	2	2	2
Animal out of control	1	1	1	1

Relationship of contributory factors to precipitating factors

The relative importance of different contributory factors changes according to the type of accident. For each of the five main precipitating factors, Tables 3a-3e give the numbers of accidents and proportion of accidents for the most frequently coded contributory factors in that type of accident. As the results are fairly consistent over the years, only data for 2002 are included in this table.

In accidents with a precipitating factor *failed to give way* which account for 15 per cent of all accidents though only 7 per cent of fatal accidents, the contributory factors most used relate to behaviour. In about half these accidents the road user claimed to have *looked but did not see*.

Accidents with a precipitating factor *failed to avoid vehicle or object in carriage-way*, accounting for 28 per cent of accidents, *inattention* and *failed to judge other persons path or speed* were the more important factors.

Where the precipitating factor was *loss of control of vehicle* (19 per cent of all accidents but 43 per cent of fatal accidents) the main factor is *excessive speed* which was identified in over a third of all these accidents and in 42 per cent of fatal or serious accidents. Road conditions such as bends and slippery roads often contribute to these types of accident as do the factors *inexperience of driving* and *lack of judgement of own path*. It is also notable that impairment due to alcohol features in a significantly higher proportion of these accidents.

In accidents with a precipitating factor *pedestrian entered carriageway without due care* (11 per cent of accidents) the factor *failed to look* was the most significant being cited in over a third of this type of accident. *Crossed from behind parked vehicle* was also significant in these accidents. Alcohol is also frequently a factor in this type of accident.

As in the case of accidents where the precipitating factor was *failed to give way*, the contributory factors to accidents with a precipitating factor *poor turn/manoeuvre* relate mainly to behaviour. In about a third of these accidents the road user claimed to have *looked but did not see*. Failure to judge another person's path or speed was also mentioned in about a third of these accidents.

Tables 3a-e: Main contributory factors associated with the five precipitating factors (a to e): 2002a. *Failed to give way* percentage

Contributory factor	Fatal or Serious	All
Behaviour - careless/thoughtless/reckless	26	23
Failed to judge other person's path or speed	29	33
Failed to look	27	27
Looked but did not see	51	47
Inattention	25	25

b. *Failed to avoid vehicle or object in carriage-way*

Contributory factor	Fatal or Serious	All
Behaviour - careless/thoughtless/reckless	24	18
Failed to judge other person's path or speed	28	32
Failed to look	14	14
Looked but did not see	23	19
Inattention	34	38
Excessive speed	15	11
Following too close	8	15
Lack of judgement of own path	14	15

c. *Loss of control of vehicle*

Contributory factor	Fatal or Serious	All
Impairment - alcohol	17	14
Behaviour - careless/thoughtless/reckless	21	17
Behaviour - in a hurry	8	7
Inattention	15	16
Excessive speed	42	35
Inexperience of driving	11	12
Interaction/competition with other road users	8	1
Lack of judgement of own path	22	20
Site details - bend/winding road	10	9
Slippery road	14	20

d. *Pedestrian entered carriage-way without due care*

Contributory factor	Fatal or Serious	All
Impairment - alcohol	17	13
Behaviour - careless/thoughtless/reckless	18	18
Behaviour - in a hurry	14	13
Failed to judge other person's path or speed	11	11
Failed to look	36	38
Looked but did not see	13	14
Inattention	18	19
Crossed from behind parked vehicle etc.	28	29

e. *Poor turn/manoeuvre*

Contributory factor	Fatal or Serious	All
Behaviour - careless/thoughtless/reckless	27	24
Failed to judge other person's path or speed	31	34
Failed to look	19	20
Looked but did not see	38	34
Inattention	22	22
Excessive speed	11	8
Lack of judgement of own path	20	20

The coverage of the sample

About a quarter of injury accidents in Great Britain between 1999 and 2002 have a contributory factor record. Although this is a large sample, it is not a random sample since only those police forces that chose to collect this data are included. Furthermore, not all participating police forces started to collect the information at the beginning of 1999. Therefore it is worth examining how well the sample represents road accidents in Great Britain.

The following tables compare the number of recorded injury accidents in Great Britain with the number of accidents having a contributory factor record by severity, road class and type, number of vehicles involved and type of casualty.

Table 4a: Number and percentage of all accidents in Great Britain (GB) with a contributory factor record (CF) by severity, road class and type: 1999-2002.

<u>Road class & type</u>		<u>Fatal</u>			<u>Serious</u>			<u>Slight</u>		
		<u>GB</u>	<u>CF</u>	<u>%</u>	<u>GB</u>	<u>CF</u>	<u>%</u>	<u>GB</u>	<u>CF</u>	<u>%</u>
Urban	A Roads	2,462	533	22	33,338	5,810	17	236,617	46,299	20
	Other	2,206	521	24	40,726	9,859	24	288,038	71,596	25
	All Urban	4,668	1,054	23	74,064	15,669	21	524,655	117,895	22
Rural	A Roads	4,685	1,142	24	26,672	7,008	26	117,192	31,063	27
	Other	2,401	651	27	22,398	6,613	30	101,692	27,279	27
	All Rural	7,086	1,793	25	49,070	13,621	28	218,884	58,342	27
All Roads	Motorway	692	209	30	4,113	1,182	29	31,777	9,330	29
	A	7,211	1,682	23	60,310	12,865	21	355,423	77,627	22
	Other	4,643	1,183	25	63,452	16,553	26	391,921	99,366	25
	All	12,546	3,074	25	127,875	30,600	24	779,121	186,323	24

Table 4b: Number and percentage of all accidents in Great Britain (GB) with a contributory factor record (CF) by severity and number of vehicles involved: 1999-2002

<u>Number of vehicles involved</u>	<u>Fatal</u>			<u>Serious</u>			<u>Slight</u>		
	<u>GB</u>	<u>CF</u>	<u>%</u>	<u>GB</u>	<u>CF</u>	<u>%</u>	<u>GB</u>	<u>CF</u>	<u>%</u>
1	5,701	1,344	24	56,106	13,118	23	216,734	48,068	22
2	4,987	1,233	25	59,701	14,454	24	478,702	116,175	24
3	1,295	330	25	9,157	2,307	25	66,046	17,254	26
4	352	108	31	1,977	482	24	13,113	3,575	27
5 or more	211	59	28	934	239	26	4,526	1,251	28
All	12,546	3,074	25	127,875	30,600	24	779,121	186,323	24

Table 4c: Number of casualties in Great Britain (GB) and from those accidents with a contributory factor record (CF) by severity and type of casualty: 1999-2002

Casualties and Percentage (CF / GB)

Type of casualty	Fatal			Serious			Slight		
	GB	CF	%	GB	CF	%	GB	CF	%
Pedestrian	3,328	739	22	33,690	7,553	22	127,264	28,026	22
Cyclist	567	154	27	10,507	2,795	27	68,599	17,821	26
TWMV occupant	2,344	561	24	26,743	6,750	25	82,480	17,282	21
Car occupant	6,848	1,715	25	71,391	17,050	24	734,522	185,715	25
Bus or Coach Occupant	59	16	27	2,243	306	14	36,927	6,873	19
LGV occupant	265	81	31	3,006	781	26	25,171	6,318	25
HGV occupant	224	47	21	1,911	458	24	11,512	2,857	25
Other	78	16	21	872	217	25	5,956	1,396	23
All	13,713	3,329	24	150,363	35,910	24	1,092,431	266,288	24

The accidents with contributory factor data appear broadly representative of all accidents, although there are some small differences. Accidents on motorways and rural roads are slightly over-represented whereas those on Urban A-roads are under-represented. Car user casualties and pedal cyclists are over-represented while pedestrians are slightly under-represented. These differences are very small but because differences exist it cannot be guaranteed that contributory factor data is fully representative of all accidents in Great Britain. That some of the major urban forces are not included among the police forces collecting contributory factor data, most notably the Metropolitan force, may explain the relatively lower number of accidents on urban A roads and motorways.

Differences in precipitating factors reported 'at scene' or 'elsewhere'

In some cases accident data are not gathered at the time of the accident but produced from information provided when an accident was reported subsequently at a police station. In this case, the evidence may not be available to code the full range of contributory factors. This section looks at differences between accidents reported 'at scene' and those reported at police stations. Over a quarter (28 per cent) of slight accidents where there was a contributory factor were not reported at scene as against only 13 per cent of fatal and serious accidents. Table 5 shows the percentage of each precipitating factor for accidents reported at scene and compares with the percentages for accidents reported at police stations. For the most part the distributions are similar but there are a smaller percentage of *loss of control of vehicle* accidents among those reported at police stations and a larger percentage of accidents where a vehicle failed to avoid a pedestrian. Nearly a third of fatal and serious accidents where a vehicle failed to avoid a pedestrian, and a half of slight accidents of this type, were reported at the police station. Accidents with a precipitating factor *pedestrian entered carriageway without due care* or *passenger in or near public service vehicle* were also more likely to be reported at a police station.

Table 5: Precipitating factors for accidents reported at the scene and not at the scene, by accident severity: 1999-2002

	percentage			
	Fatal or serious		Slight	
	<u>At scene</u>	<u>Not at scene</u>	<u>At scene</u>	<u>Not at scene</u>
Percentage of all accidents reported:	87	13	72	28
Failed to stop [mandatory sign]	2	2	3	3
Failed to give way	12	10	17	12
Failed to avoid pedestrian [pedestrian not to blame]	4	10	2	6
Failed to avoid vehicle or object in the carriageway	14	17	27	36
Failure to signal/misleading signal	0	1	1	1
Loss of control of vehicle	32	19	20	8
Pedestrian entered carriageway without due care[driver/rider not to blame]	16	21	9	11
Passenger in or near PSV	0	2	0	2
Swerved to avoid object in carriageway	1	1	1	1
Sudden braking	1	2	3	4
Poor turn/manoeuvre	8	7	9	8
Poor overtaking	4	3	3	2
Drove wrong way [e.g. 1-way street]	0	0	0	0
Opening door carelessly	0	1	0	1
Other & undefined	4	4	3	5

Differences in contributory factors reported 'at scene' or 'elsewhere'

Many contributory factors are reported in the same proportions in accidents recorded at scene and those reported at police stations (Table 6). However, *excessive speed* and *impairment - alcohol* are more frequently coded for accidents reported at scene. That could be related to the fact that accidents with loss of control as a precipitating factor - more likely to be associated with these contributory factors as can be seen above - is more likely to be found in accidents reported at scene. On the other hand, less specific factors such as *failed to judge other persons path or speed* and *inattention* are coded more often for accidents not reported at the accident scene. This may reflect the difficulty of gathering data on speed and alcohol consumption when a police officer does not attend the scene of the accident.

Table 6: Contributory factors for accidents reported at the scene and not at the scene, by accident severity: 1999-2002

	percentage			
	Fatal or serious		Slight	
	At scene	Not at scene	At scene	Not at scene
Impairment – alcohol	11	8	7	3
Impairment – drugs	1	1	1	0
Impairment – fatigue	2	1	1	1
Impairment – illness	2	2	1	1
Distraction - stress/emotional state of mind	2	2	2	1
Distraction - physical - in/on vehicle	2	1	2	1
Distraction - physical - outside vehicle	1	1	2	1
Behaviour – panic	3	2	3	2
Behaviour - careless/thoughtless/reckless	21	19	19	17
Behaviour - nervous/uncertain	2	1	2	1
Behaviour - in a hurry	8	8	6	7
Failed to judge other person’s path or speed	17	18	23	24
Disability	1	0	0	0
Failed to look	15	21	15	20
Looked but did not see	17	18	20	18
Inattention	19	22	24	30
Person hit wore dark or inconspicuous clothing	2	2	1	1
Personal Details – Other	3	5	3	3
Crossed from behind parked vehicle etc.	5	7	3	4
Ignored lights at crossing	1	1	1	1
Excessive speed	20	13	13	8
Following too close	2	2	6	8
Inexperience of driving	6	4	6	3
Inexperience of vehicle	2	1	1	1
Interaction/Competition with other rd users	1	1	1	1
Aggressive driving	5	5	3	3
Lack of judgement of own path	14	12	14	13
Tyres – wrong pressure	0	0	0	0
Tyres – deflation before impact	1	0	1	0
Tyres – worn/insufficient tread	1	0	0	0
Defective lights or signals	0	0	0	0
Defective brakes	1	0	1	0
Vehicle Defects – Other	1	1	1	1
Site details - poor road surface	1	1	1	0
Site details - poor/no street lighting	1	1	1	0
Site details - inadequate signing	0	0	1	0
Site details - steep hill	1	1	1	0
Site details - narrow road	1	1	1	1
Site details - bend/winding road	5	4	3	2
Site details – roadworks	0	0	1	0
Slippery road	7	6	10	5
High winds	0	0	0	0
Earlier accident	0	0	0	0
Local conditions – Other	1	1	1	1
View – windows obscured	0	0	0	0
View – glare from sun	2	1	2	1
View – glare from headlights	0	0	0	0
Surroundings - bend/winding road	2	2	2	1
Surroundings - stationary or parked vehicle.	2	3	3	3
Surroundings - moving vehicle	1	1	1	1
Surroundings - buildings, fences, vegetation	1	1	1	1
Weather (e.g. mist or sleet)	2	2	3	2
Failed to see pedestrian or vehicle in blindspot	2	3	2	2
Animal out of control	1	1	1	0

Examples of analyses of contributory factor data

The purpose of collecting contributory factors to accidents is to add value to the information already collected on accident circumstances by describing the factors that led to the accident. The examples below select two types of accidents using STATS19 information and show how the new data can supplement the types of analysis we were previously able to perform using STATS19 data. The examples given are not exhaustive. Nor do we attempt to answer some of the questions which this in-depth analysis of the data may give rise to. The analyses are only meant to demonstrate the power of looking at contributory factors together with STATS19 data for research.

Two-Wheeled Motor Vehicles

Over the past few years the numbers of deaths and serious injuries among motorcyclists has been increasing. In 2002, about 16 per cent of accidents involving two wheeled motor vehicles were single vehicle accidents not involving a pedestrian and about 60 per cent were collisions with a car. These analyses look at the factors that led to these accidents.

About half the single two-wheeled motor vehicle accidents occurred on rural roads. In 82 per cent of these accidents the precipitating factor was *loss of control of vehicle*. The contributory factors for loss of control accidents involving a single two-wheeled motor vehicle are shown in Table 7. *Excessive speed* was cited as a factor in over a quarter of all accidents and over a third fatal and serious accidents. Other major factors were *lack of judgement of own path* (24 per cent), *slippery road* (21 per cent), *inexperience of driving* (17 per cent), *inattention* (13 per cent), *inexperience of vehicle* (10 per cent) and *behaviour careless thoughtless reckless* (10 per cent). All these factors were more often recorded for TWMV accidents than for other accidents.

Table 7: Contributory factors to accidents involving a two-wheeled motor vehicle (TWMV) with the precipitating factor *loss of control of vehicle*, by severity: 2002

	percentage	
	<u>Fatal or serious</u>	<u>All Accidents</u>
Impairment – alcohol	10	8
Behaviour - careless/thoughtless/reckless	12	10
Behaviour - in a hurry	8	6
Inattention	16	13
Excessive speed	35	26
Inexperience of driving	13	17
Inexperience of vehicle	11	10
Aggressive driving	6	4
Lack of judgement of own path	28	24
Site details - poor road surface	5	6
Site details - bend/winding road	10	9
Slippery road	11	21

About three quarters of the two vehicle accidents involving a car and a motorcycle take place on urban roads. Table 8 shows contributory factors for all such two vehicle accidents in 2002. In 39 per cent of cases the precipitating factor was assigned to the two wheeled motor vehicle; in the majority of cases, it was assigned to the car. Where the precipitating factor was attributed to the car the main contributory factors were related to a failure to spot the motorcyclist such as *looked but did not see*. When

the two wheeled motor vehicle precipitated the accident, *inexperience of driving* was more important. This might reflect the fact that nearly a quarter of accidents between a car and a motorcyclist involved a rider under twenty years old. Excessive speed was also more frequently cited when the motorcyclist precipitated the accident.

Table 8: Contributory factors to accidents involving a two-wheeled motor vehicle (TWMV) and a car by precipitating vehicle: 2002

	percentage	
	Precipitating factor assigned to:	
	<u>TWMV</u>	<u>Car</u>
Behaviour - careless/thoughtless/reckless	20	24
Behaviour - in a hurry	8	5
Failed to judge other person's path or speed	32	30
Failed to look	11	24
Looked but did not see	16	52
Inattention	23	26
Excessive speed	18	4
Following too close	7	2
Inexperience of driving	15	3
Aggressive driving	6	3
Lack of judgement of own path	19	10
Slippery road	7	2

Accidents involving a pedestrian casualty and a single car

Three quarters of pedestrian injuries and nearly 60 per cent of pedestrian deaths are in accidents that involve a single car and the pedestrian. In 2002 over 60 per cent of precipitating factors in such accidents were assigned to the pedestrian mainly as *pedestrian entered carriageway (pedestrian to blame)*, as shown in table 9. Where the precipitating factor was assigned to the car, *failed to avoid pedestrian (driver to blame)* was the most common factor. However, even where the blame was attributed to the car, a substantial proportion of accidents were coded as *pedestrian entered carriageway (pedestrian to blame)*, presumably because the pedestrian stepping into the road was the factor which made the accident happen but if the driver had been driving more carefully, it could have been avoided.

Table 10 shows that in most cases where the precipitating factor was attribute to the pedestrian the contributory factors related to carelessness and inattention and a failure to look before crossing. However, in nearly a third of such accidents the pedestrians were crossing from behind parked vehicles and were probably obscured from the drivers view. In about 5 per cent of these accidents they ignored lights at a crossing.

Table 9: Number and percentage of accidents involving a car and pedestrian with each precipitating factor: 2002.

	Precipitating factor attributed to:			
	Pedestrian		Car	
		%		%
Failed to stop (mandatory sign)	13	0	95	3
Failed to give way	5	0	45	2
Failed to avoid pedestrian (pedestrian not to blame)	42	1	1,611	58
Failed to avoid vehicle or object in carriageway	37	1	90	3
Failure to signal / misleading signal	0	0	7	0
Loss of control of vehicle	0	0	108	4
Pedestrian entered carriageway without due care	4,388	96	592	21
Passenger in or near PSV	8	0	5	0
Swerved to avoid object in carriageway	2	0	4	0
Sudden braking	0	0	7	0
Poor turn/manoeuvre	2	0	86	3
Poor overtaking	0	0	17	1
Drove wrong way (e.g. 1-way street)	0	0	2	0
Opening door carelessly	2	0	9	0
Other	61	1	120	4
Total	4,560		2,798	

Table 10: Number and percentage of accidents involving a car and pedestrian with each of the most common contributory factors: 2002.

	Precipitating factor attributed to:			
	Pedestrian		Car	
		%		%
Impairment - alcohol	608	13	204	7
Behaviour - careless/thoughtless/reckless	814	18	631	23
Behaviour - in a hurry	587	13	225	8
Failed to judge other person's path or speed	479	11	311	11
Failed to look	1712	38	635	23
Looked but did not see	593	13	648	23
Inattention	800	18	603	22
Person hit wore dark or inconspicuous clothing	150	3	130	5
Personal Details - Other	165	4	119	4
Crossed from behind parked vehicle etc.	1392	31	304	11
Ignored lights at crossing	213	5	64	2
Excessive speed	26	1	217	8
Aggressive driving	14	0	231	8
Lack of judgement of own path	30	1	208	7
Surroundings - stationary or parked vehicle.	230	5	71	3
Failed to see pedestrian or vehicle in blindspot	98	2	197	7

Conclusion

The trial has demonstrated that it is possible to collect data on the factors leading to personal injury accidents and has produced information that could be used in research. No method of collecting contributory factor data will be perfect. Information is based on the opinions of officers collecting data at the scene using their best judgement from evidence gathered after the event. Inevitably some factors may be harder to determine and may be under-recorded in any system.

The main problem with the trial specification is its suitability for coding situations where interaction between road users is a factor leading to an accident. In these cases it is difficult to attribute a single precipitating factor to one participant in the accident. A case in point is accidents involving pedestrians and cars where the precipitating factor may have been the pedestrian walking into the road but the car was travelling too fast. It is also clear that where an accident is reported at a police station, there may not be sufficient information available to allow the police to make a judgement as to the cause and fewer accidents are therefore attributed to impairment due to alcohol or excessive speed.

In the consultation for the 2002-03 Quality Review of the Collection of Road Accident Statistics, concerns were expressed about the trial system. A special study of contributory factor information collected using this trial and other specifications adopted by police forces was undertaken and published in March 2004 as *Road Safety Research Report No. 43*. As a result, a substantially revised specification is to be introduced from January 2005 and will be adopted by all police forces as an integral part of the STATS19 collection system. The new specification will provide comprehensive contributory factor data for the whole of Great Britain but will not be directly comparable with data collected during the trial.