Estimated number of reported drink drive accidents and casualties: Great Britain

Drink drive limits and definitions

For the purposes of these drink drive statistics, a drink drive accident is defined as being an incident on a public road in which someone is killed or injured and where one or more of the motor vehicle drivers or riders involved *either* refused to give a breath test specimen when requested to do so by the police (other than when incapable of doing so for medical reasons), *or* one of the following:

i) failed a roadside breath test by registering over 35 micrograms of alcohol per 100 millilitres of breath

ii) died and was subsequently found to have more than 80 milligrams of alcohol per 100 millilitres of blood.

Drink drive casualties are defined as all road users killed or injured in a drink drive accident.

Data sources

Two sources of data are used to assess the extent of drink drive accidents in Great Britain. These are:

(i) **Coroners' data**: Information about the level of alcohol in the blood of road accident fatalities aged 16 or over who die within 12 hours of a road accident is provided by Coroners in England and Wales and by Procurators Fiscal in Scotland.

(ii) **STATS19 breath test data**: The personal injury road accident reporting system (STATS19) provides data on injury accidents in which the driver or rider survived and was also breath tested at the roadside. If the driver or rider refused to provide a breath test specimen, then they are considered to have failed the test unless they are deemed unable to take the test for medical reasons.

Completeness of data and reliability of drink drive estimates

Both sources of data from the Police and Coroners on drink drive accidents are incomplete. In recognition of the uncertainty associated with the estimates produced from this data the numbers of accidents and casualties are rounded to the nearest 10.

In the case of the STATS19 breath test data, some drivers and riders are not breath tested since it is not always possible to administer a test to all drivers involved. Some drivers and riders not tested might have failed if a test could have been administered.

For many drivers or riders killed in road accidents, a post-mortem blood alcohol level is not available, either because the casualty died more than twelve hours after the accident, or because no test was carried out, or because some of the data are not reported to the Department by Coroners and Procurators Fiscal.

Adjustments to the reported data are required to estimate the actual number of drink drive accidents and their related casualties. The estimates published are based on a method described in the 1989 edition of *Road Accidents Great Britain* (RAGB). This method has two parts:

a) the number of fatal accidents where a driver or rider died with an illegal alcohol level is estimated from the Coroners' and Procurators' Fiscal data.

b) the number of accidents where a surviving driver or rider had an illegal alcohol level is an estimate based on a calculation of the proportion of these alcohol-related accidents which can be identified from the STATS19 breath test data.

Part b) was revised in 1993 in the light of research by the Transport Research Laboratory (TRL), published in TRL Report PR40 *The Actual Number of Non-Fatal Drink drive Accidents*. This provided a method which takes into account the fact that relatively more of the drivers and riders involved in fatal and serious accidents are breath-tested than in slight accidents, whereas previously a single factor had been used to allow for under-reporting for all accident severities. The revised estimates were first published in *RAGB 1992*. The relevant chapter of *RAGB 1992* is attached at the end of this methodology note.

Estimates for the latest year are provisional due to Coroners' data being available for analysis a year later than the main road accident data. Typically around half per cent of the data expected to be available for analysis are ultimately available for inclusion in the provisional estimates. The estimates for fatalities depend mainly on Coroners' data and are particularly susceptible to revision between the provisional and final figures.

Drinking and driving chapter of RAGB 1992

PART 2 - Drinking and driving and insurance claims data

Drinking and driving

A drink-drive accident is defined as an accident where there was a personal injury, and at least one driver or rider involved in the accident either refused to take a breath test or failed either: i) a breath test by registering over 35 microgrammes of alcohol per 100 millilitres of breath, or ii) a blood test by registering more than 80 milligrammes of alcohol per 100 millilitres of blood.

Two sources of information are used to calculate the number of drink-drive accidents and related casualties. The personal injury road accident reporting system (STATS19) provides data on injury accidents where the driver or rider survived and was also breath tested. The STATS19 breath test information provides one part of the data for calculating the number of drink-drive accidents and related casualties. An analysis of breath test statistics is shown in **Table 1h**. For those drivers or riders who did not survive and so could not be breath tested, the calculation for drink-drive accidents and casualties is based on information from Coroners' in England and Wales and Procurators' Fiscal in Scotland. Analyses of Coroners' and Procurators' Fiscal data are shown in **Tables 1j** and **1k**. **Table 1l** shows estimates of drink-drive accidents and related casualties derived from both breath test data and Coroners' and Procurators' Fiscal data.

The main characteristics of drink-drive accidents in 1991 and major trend changes during the past decade are available in the form of a free fact sheet. Copies of the fact sheet can be ordered by post, fax or telephone from Mr R Ackroyd, Department of Transport, Directorate of Statistics, Room B649, Romney House, 43 Marsham Street, London SW1P 3PY (telephone 071 276 8774, fax 071 276 8413).

Table 1h shows the number of drivers and riders involved in injury accidents each year from 1982 to 1992, the number who were required to take a road side screening breath test, and the number who failed the test either by registering a positive reading or by refusing to take the test.

Table 1h: Drivers and riders in road injury accidents: breath tests and failures: GB: 1982-1992

number/percentage

	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992
a: Total involved	401,460	377,289	396,735	389,473	397,671	387,521	404,571	429,237	427,625	391,769	390,621
b: Total tested	43,341	42,265	43,461	44,702	61,218	65,026	74,985	101,620	112,641	109,919	108,856
c: Total failed	13,494	12,432	12,557	12,557	11,946	11,042	10,225	10,378	9,523	8,613	7,972
b as % of a	*10.8*	*11.2*	*11.0*	*11.5*	*15.4*	*16.8*	*18.5*	*23.7*	*26.3*	*28.1*	*27.9*
c as % of b	*31.1*	*29.4*	*28.9*	*28.1*	*19.5*	*17.0*	*13.6*	*10.2*	*8.5*	*7.8*	*7.3*
c as % of a	*3.4*	*3.3*	*3.2*	*3.2*	*3.2*	*2.8*	*2.5*	*2.4*	*2.2*	*2.2*	*2.0*

Table 1i gives figures supplied by the Home Office which show the total number of drivers and riders required to take a roadside screening breath test, whether or not they were involved in an injury road accident, in England and Wales over the period 1982 to 1992. About 20 per cent of the screening breath tests were taken following a personal injury road accident.

Table 1i: Roadside screening breath tests: by outcome: England and Wales: 1982-1992

thousands

	1982	1983	1984	1985	1986:	1987[2]	1988	1989	1990	1991	1992[3]
Number required	207	241	208	250	303:	400	443	541	597	562	531
Of which:											
positive/refused[1]	89	98	88	96	98:	111	112	108	102	90	87
percentage	*43*	*41*	*42*	*38*	*32*	*28*	*25*	*20*	*17*	*16*	*16*

1 Includes persons unable to provide a breath test specimen.
2 A new form and procedures for reporting these statistics were introduced on 1/1/87 resulting in an improvement in the comprehensiveness of reporting.
3 During 1992 a new system of collecting breath test data from police forces was introduced. Consequently data for 1992 may not be fully comparable with previous years as levels of under-reporting may have changed.

Coroners data

Information about the level of blood alcohol of road accident fatalities aged 16 or over who die within 12 hours of the accident comes from **Coroners** in England and Wales and **Procurators Fiscal** in Scotland. Final data are available for 1991 but 1992 results remain provisional.

Table 1j, which is based on 1991 Coroners' and Procurators' Fiscal data, shows the proportions of fatalities with a known blood alcohol level, for varying levels of blood alcohol and different classes of road user. The table also illustrates the difference between the proportions of fatalities exceeding the legal blood alcohol limit of 80mg/100ml during the day and night.

Table 1j: Blood alcohol levels of fatalities aged 16 and over: GB: 1991

	Percentage over blood alcohol levels. (mg/100ml)							Percentage over 80mg/100ml	
	9	50	80	100	150	200	Sample size	22:00-03:59	04:00-21:59
Motor cycle riders	*28*	*19*	*17*	*15*	*10*	*6*	335	*43*	*12*
Other vehicle drivers	*31*	*23*	*20*	*18*	*14*	*9*	888	*50*	*10*
Passengers	*33*	*24*	*19*	*17*	*11*	*6*	377	*41*	*9*
Pedestrians	*38*	*31*	*28*	*26*	*20*	*15*	545	*73*	*15*
Cyclists	*22*	*14*	*10*	*9*	*7*	*6*	98	*33*	*7*

Table 1k, again based on Coroners' and Procurators' Fiscal data, shows, for drivers and riders, the percentage killed who were over the legal blood alcohol limit, overall and by age group for the period 1982 to 1992.

Table 1k: Drivers and riders killed: Percentage over the legal blood alcohol limit: GB: 1982-1992

Percentage

	Two-wheel motor vehicle riders					Cars and other motor vehicles					
Year	Age 16-19	Age 20-29	Age 30-39	Age 40+	All Ages	Age 16-19	Age 20-29	Age 30-39	Age 40+	All Ages	All
1982	17	43	34	17	29	31	50	52	20	36	33
1983	16	29	30	8	22	34	42	43	14	31	28
1984	24	30	28	22	27	18	39	33	15	26	26
1985	15	27	39	14	22	25	40	38	15	28	26
1986	15	28	33	14	22	19	36	33	13	25	24
1987	16	31	24	16	24	16	32	27	13	22	23
1988	9	33	33	9	23	12	30	27	9	20	21
1989	11	26	19	17	21	11	24	30	10	18	19
1990	8	25	21	10	19	13	22	33	10	18	18
1991	13	16	25	12	17	11	29	24	13	20	19
1992[1]	11	29	36	18	26	14	28	17	10	18	20

1 Provisional

Drink-drive accidents and casualty estimates

Both sources of information on drink-drive accidents, breath tests given by the police at the time of the accident and tests of the blood alcohol level of drivers or riders killed in road accidents as taken by Coroners and Procurators Fiscal, are incomplete. In the case of the STATS19 breath test data, many drivers and riders involved in accidents are not breath tested and some might have failed if they had been tested, even though testing tends to be targeted at drivers and riders who are more likely to fail a test. This is because police do not administer breath tests to all drivers and riders in all accidents, and the level of breath testing following an accident varies in police force areas. Furthermore, a post mortem blood alcohol level is not available for many dead drivers and riders and some of the available data are not reported to DOT by Coroners and Procurators Fiscal. Test results taken more than 12 hours after the accident cannot reliably indicate whether or not the driver or rider had been drinking and are consequently not requested from Coroners and Procurators Fiscal.

Adjustments to the reported data are required to estimate the actual number of drink-drive accidents and their related casualties. Estimates have been published in recent editions of *Road Accidents Great Britain*, based on a method described by Derek Jones in the 1989 edition. This method has two parts:-

a) the number of fatal accidents where a driver or rider died with an illegal alcohol level is estimated from the Coroners' and Procurators' Fiscal data.

b) the number of accidents where a surviving driver or rider had an illegal alcohol level is estimated from data, based on a calculation of the proportion of these alcohol-related accidents which can be identified from the STATS19 breath test data.

Part b) has been revised in the light of recent research by the Transport Research Laboratory (TRL) which has provided a more comprehensive method for estimating the proportion of drink-drive accidents which can be identified from the breath test data. Full details of this

research will be published shortly in a TRL report *'The Actual Number of Non-Fatal Drink Drive Accidents'* by Dr J Broughton. An important aspect of the revised method is that it takes account of the fact that relatively more of the drivers and riders involved in fatal and serious accidents are breath tested than in slight accidents, whereas previously a single factor had been used to allow for under-reporting for all accident severities. **Table 1l** presents revised estimates for the years up to 1991 and a provisional estimate for 1992, which should be more reliable than previously published figures. Estimates for slight accidents and casualties are little changed, but estimates for fatal and serious accidents and casualties are on average 8 per cent less.

Table 1l: Estimates of accidents involving illegal alcohol levels and the consequent casualties adjusted for under reporting: 1982-1992

Number

	Accidents				Casualties			
Year	Fatal	Serious	Slight	Total	Fatal	Serious	Slight	Total
1982	1,300	5,420	12,070	18,800	1,550	8,010	20,660	30,220
1983	950	4,750	11,430	17,130	1,110	6,800	18,610	26,520
1984	1,000	4,790	11,540	17,330	1,170	6,820	19,410	27,390
1985	900	4,900	11,460	17,260	1,040	6,810	19,380	27,220
1986	850	4,590	11,510	16,940	990	6,440	19,220	26,650
1987	780	4,220	10,560	15,560	900	5,900	17,670	24,470
1988	680	3,660	10,190	14,520	790	5,100	16,860	22,740
1989	700	3,390	10,300	14,390	810	4,790	16,620	22,220
1990	650	2,910	9,650	13,210	760	4,090	15,550	20,400
1991	570	2,590	8,530	11,690	660	3,610	13,610	17,880
1992[1]	510	2,400	7,940	10,840	610	3,280	12,840	16,720

1 Provisional data

Motor insurance claims

The data given in **Table 1m** are the latest available figures provided by the Association of British Insurers (ABI) and are extracted from the statutory returns which insurance companies are required to file with the Department of Trade. The data include not only claims arising from road accidents, but also those arising from vehicle fire or theft.

Table 1m gives claim data for the period 1986 to 1991. 'Exposure to risk' is the produce of the number of vehicles and the proportion of the year for which insurance premiums have been paid on average. The 'claim rate' is the proportion of claims per 'exposure year' (i.e. year insured). 'Claim rate' cannot be directly calculated from **Table 1m** as the number of claims are revised on an annual basis whilst exposure remains unrevised.

It should be noted that claims include non-accidental claims, e.g. fire and theft. ABI figures exclude data from vehicle owners covered by Lloyd's underwriters.

The data in **Table 1m** show that the number of claims for cars has continued to rise each year, but, for the first time since 1986, claims for commercial and fleet vehicles have fallen. The number of motorcycle claims has remained virtually unchanged since 1986, although the 'exposure to risk' continues to fall. Since 1990, 'exposure to risk' for all vehicles has risen by nearly 1 per cent, with the number of claims only rising by 0.4 per cent. This has led to