

Pedestrian casualties in reported¹ road accidents: 2008

Road Accident Statistics Factsheet No. 3 – January 2010



Introduction

This factsheet presents summary information relating to pedestrian casualties in reported road accidents; all figures relate to 2008 and to Great Britain unless otherwise stated.

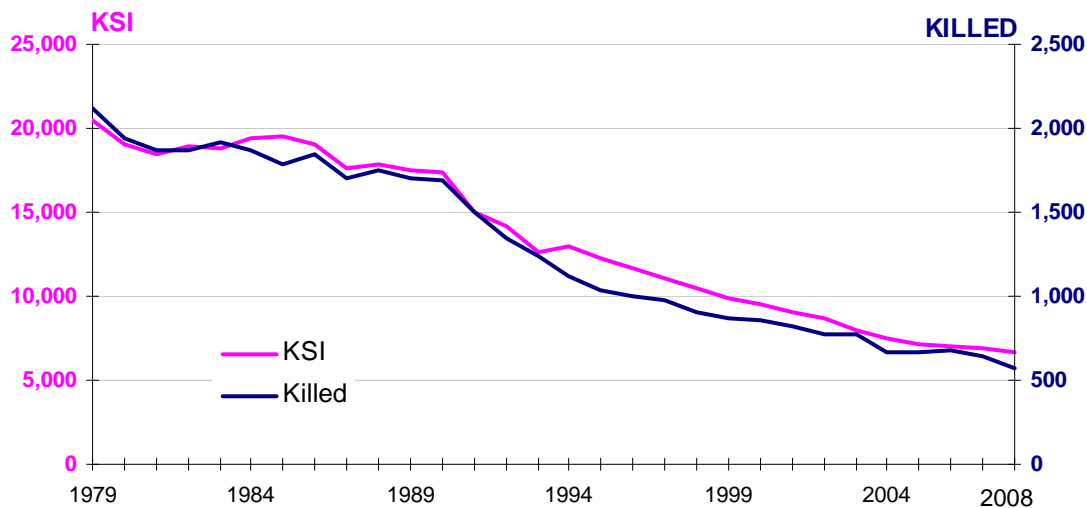
Overview – pedestrian casualties in context

Numbers: In Great Britain there were a total of 170,591 reported personal injury road accidents. 28,482 of these – around 1 in every 6 – involved a pedestrian, and in total:

- 572 pedestrians were killed (23 per cent of the total road accident fatalities)
- 6,070 were seriously injured (23 per cent of all seriously injured casualties)
- 21,840 were slightly injured (11 per cent of all slightly injured casualties)

Trends: The number of pedestrians reported killed or seriously injured (KSI) fell by 68 per cent from over 20 thousand in 1979 to 6,642 in 2008, with a 73 per cent drop in deaths from 2,118 to 572 (see chart) – this compares with a 67 per cent fall in overall KSI and a 60 per cent fall in overall road deaths.

Chart 1: Trend in fatal and KSI pedestrian casualties: GB 1979-2008



The Government has set a target to reduce the overall number of KSI casualties in road accidents by 40 per cent from the 1994-98 average by 2010.

Compared with the 1994-98 average, the number of pedestrian KSI casualties in 2008 was 39 per cent lower.

Casualty rates: Estimates of distance walked can be produced using data from the National Travel Survey (NTS). Walking accounts for nearly a quarter of all trips (22 per cent), but only around 3 per cent of all distance travelled. The average distance walked per person has remained relatively unchanged over the past decade (at around 200 miles per year); as a result, the rate of deaths and injuries per billion miles walked has fallen. However, measured per kilometre of exposure, walking remains one of the riskiest forms of travel (see table).

Table 1: Casualties per billion passenger kilometres: GB 2007

| | Killed | KSI | All |
|-------------------|-----------|------------|--------------|
| Bus or coach | 0 | 9 | 142 |
| Car | 2 | 20 | 244 |
| Pedestrian | 36 | 382 | 1,666 |
| Pedal cycle | 32 | 541 | 3,814 |
| Motorcycle | 97 | 1,116 | 3,887 |

International comparisons: The UK has one of the best overall road safety records in Europe, with only three EU countries having fewer deaths per 100,000 people in 2006. However, for pedestrian safety the UK does less well; in 2006 the UK had 11.7 pedestrian deaths per million inhabitants, putting it eighth out of the EU19².

¹ A considerable proportion of non-fatal accidents are not reported to the police. More information on this can be found in article 5 of Reported Road Casualties GB 2008

<http://www.dft.gov.uk/adobe/pdf/162469/221412/221549/227755/rrcgb2008articles.pdf>

² Source: Traffic Safety Basic Facts: Pedestrians 2008: European Road Safety Observatory.

Who are injured as pedestrians in road accidents?

Gender: Although men and women walk similar distances per year³, the majority of reported pedestrian casualties are male – men accounted for 57 per cent of all pedestrian casualties, 60 per cent of KSI casualties and 63 per cent of fatalities in 2008 (for all road users, the equivalent figures are 58, 69 and 74 per cent respectively). Around 2 in every 10 males killed in road accidents are pedestrians; for women, around a third of fatalities are pedestrians. This reflects the fact that females account for a higher proportion of casualties for pedestrians than for other types of road user (i.e. they make up 43 per cent of pedestrian casualties, but only 19 per cent of pedal cyclists' casualties and 8 per cent of motorcycle riders' casualties).

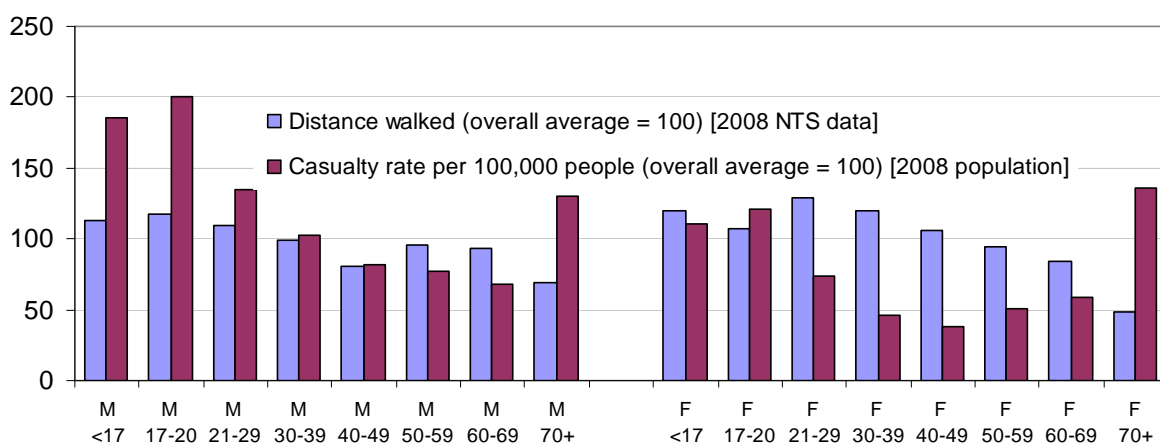
Age: The table shows the breakdown of reported pedestrian casualties by severity and age group:

- Children (aged 0-15) account for 30 per cent of pedestrian casualties, and 27 per cent of KSI casualties – but only 10 per cent of fatalities. However, of a total of 124 children killed in road accidents in 2008, 57 (46 per cent) were pedestrians.
- Pedestrian casualty and KSI rates per 100,000 people are highest for 12-15 year olds, but fatality rates are highest for those aged over 80. Nearly a third of pedestrian fatalities are aged 70 and over – 187 in total. For the 80 and over age group, 9 per cent of all casualties are fatal.

Table 2: Severity of reported pedestrian casualties by age: GB 2008

| | 0-4 | 5-7 | 8-11 | 12-15 | 16-19 | 20-29 | 30-39 | 40-49 | 50-59 | 60-69 | 70-79 | 80+ | All ages |
|--|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|---------------|
| Number | | | | | | | | | | | | | |
| Killed | 11 | 7 | 16 | 23 | 37 | 66 | 67 | 52 | 50 | 56 | 76 | 111 | 572 |
| KSI | 216 | 285 | 518 | 765 | 577 | 968 | 653 | 574 | 503 | 431 | 504 | 514 | 6,642 |
| All severities | 1,034 | 1,286 | 2,607 | 3,721 | 2,719 | 4,488 | 3,030 | 2,663 | 1,932 | 1,543 | 1,457 | 1,181 | 28,482 |
| Rate per 100,000 population | | | | | | | | | | | | | |
| Killed | 0.3 | 0.4 | 0.6 | 0.8 | 1.2 | 0.8 | 0.8 | 0.6 | 0.7 | 0.9 | 1.8 | 4.1 | 1.0 |
| KSI | 6.0 | 15 | 19 | 27 | 18 | 12 | 8.1 | 6.5 | 7.0 | 6.9 | 12 | 19 | 11 |
| All severities | 29 | 66 | 95 | 129 | 87 | 56 | 38 | 30 | 27 | 25 | 34 | 43 | 48 |
| Percentage of total road casualties for particular age group: | | | | | | | | | | | | | |
| <i>Killed</i> | 42 | 64 | 44 | 45 | 12 | 12 | 17 | 15 | 21 | 32 | 37 | 55 | 23 |
| <i>KSI</i> | 62 | 73 | 67 | 59 | 15 | 16 | 15 | 14 | 19 | 25 | 36 | 47 | 23 |
| <i>All severities</i> | 33 | 41 | 40 | 40 | 9 | 8 | 8 | 8 | 9 | 13 | 19 | 26 | 12 |

Chart 2: Indexed reported pedestrian KSI casualty rate and distance walked by age group and gender: GB 2008



The chart shows that although women aged 21-29 walk the most, pedestrian casualty rates are highest for young males and people aged 70 and over.

Pedestrian casualty rates are around 70 per 100,000 people in the most deprived 10 per cent of areas in England, compared with just 21 per 100,000 in the least deprived areas⁴. This pattern, which is similar across all age groups, is explained to some extent by the fact that people living in more deprived areas (which are mainly in cities) make more walking trips, but other factors will also have an influence.

³ Males walked on average 188 miles per year and females walked 198 miles (source: NTS, 2008 data).

⁴ Data uses 2007 Index of Multiple Deprivation

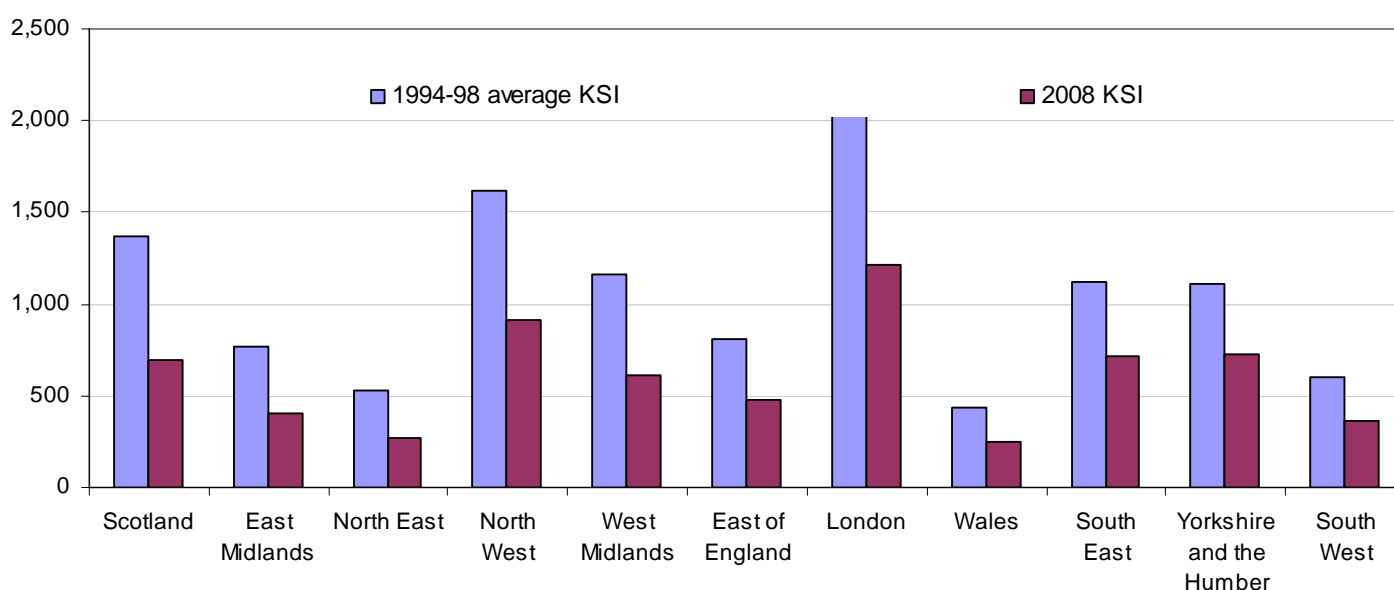
Where do pedestrian accidents happen?

Urban/rural: The majority (87 per cent) of reported pedestrian accidents happened in urban areas. This is accounted for both by the greater population in urban areas and also the fact that those living in urban areas tend to walk further, on average. In comparison, 59 per cent of accidents with no pedestrian casualties occurred in urban areas.

Region:

- 18 per cent of KSI casualties and 18 per cent of all pedestrian casualties were in the London region.
- The greatest reduction in pedestrian KSI casualties (in percentage terms) compared with the 1994-98 average occurred in Scotland, followed by the North East, East Midlands and West Midlands.
- In 2008, London had the highest rate of pedestrian KSI casualties per 100,000 people. This possibly reflects the fact that London has a higher number of commuters and a lower level of car ownership than other areas (NTS, 2008).

Chart 3: Reported pedestrian KSI casualties by Government Region: GB 2008



Type of road: Most (96 per cent) pedestrians are injured on roads with speed limits of 40mph or below ('built up roads') as these roads tend to be in urban areas where most people live.

- On built up roads, 21 per cent of accidents have a pedestrian casualty, compared with around 1 in 50 on non-built up roads.
- Pedestrians hit on built up roads are less severely injured, on average (23 per cent of pedestrian casualties are killed or seriously injured, compared with 43 per cent on non-built up roads).

Table 3: Reported accidents with pedestrian casualties by road type: GB 2008

| | Number of accidents | | | Number of ped. casualties | | | Proportion of ped. casualties | | |
|--|----------------------------|----------------|-----------------------------------|---------------------------|--------------|----------------|-------------------------------|------------|----------------|
| | With a pedestrian casualty | Total | Per cent with pedestrian casualty | Killed | KSI | All severities | Killed | KSI | All severities |
| Built-up roads | | | | | | | | | |
| A roads | 9,026 | 52,763 | 0 | 208 | 2,401 | 9,329 | 0 | 0 | 0 |
| Other roads | 17,498 | 71,608 | 0 | 221 | 3,766 | 18,065 | 0 | 1 | 1 |
| <i>All built-up roads</i> | <i>26,524</i> | <i>124,371</i> | <i>0</i> | <i>429</i> | <i>6,167</i> | <i>27,394</i> | <i>1</i> | <i>1</i> | <i>1</i> |
| Non built-up roads | | | | | | | | | |
| A roads | 511 | 24,076 | 0 | 92 | 276 | 538 | 0 | 0 | 0 |
| Other roads | 435 | 14,895 | 0 | 30 | 153 | 466 | 0 | 0 | 0 |
| <i>All non built-up roads</i> | <i>946</i> | <i>38,971</i> | <i>0</i> | <i>122</i> | <i>429</i> | <i>1,004</i> | <i>0</i> | <i>0</i> | <i>0</i> |
| <i>All roads (including motorways)</i> | <i>27,543</i> | <i>170,591</i> | <i>0</i> | <i>572</i> | <i>6,642</i> | <i>28,482</i> | <i>100</i> | <i>100</i> | <i>100</i> |

When do pedestrian accidents happen?

Day of week: In 2008 more pedestrian accidents happened on Friday than any other day of the week, with Sunday having the fewest number of pedestrian accidents, on average. 78 per cent of pedestrian accidents happened on weekdays, compared with 75 per cent of all accidents.

Time of day:

- The patterns shown (in the chart) for pedestrians are very broadly similar to overall patterns for all road casualties.
- On weekdays, most pedestrian casualties occur during the morning and evening peak period. On weekends, most casualties occur throughout the afternoon.
- A considerable number of casualties (9 per cent) occur between 8pm and 4am on Friday/Saturday and Saturday/Sunday. For other road users, this figure is around 7 per cent. This probably reflects the fact that more pedestrian accidents involve alcohol than other types of accident (see section on why accidents happen).

Chart 4: Reported pedestrian casualties by time of day: GB 2008

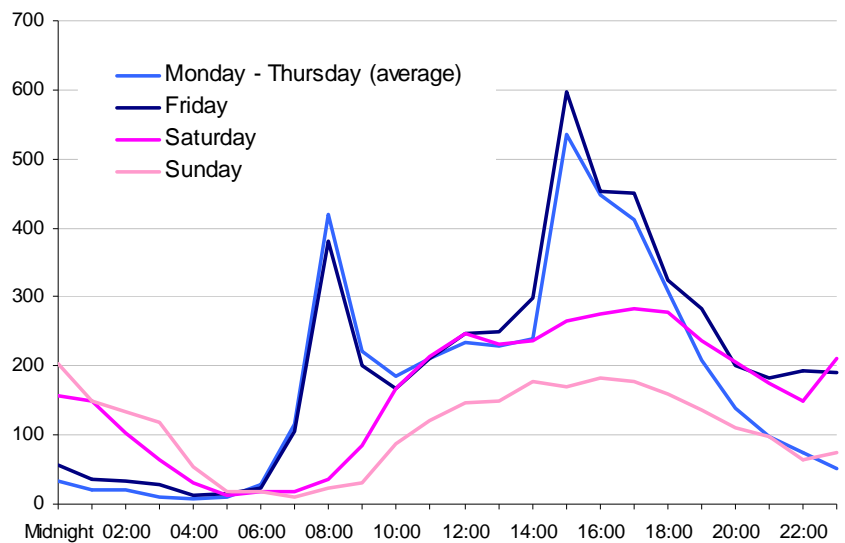
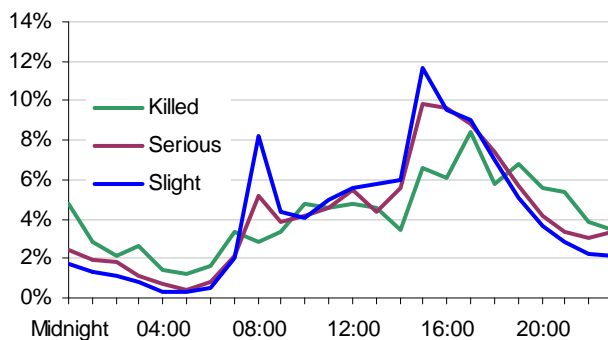


Chart 5: Severity of reported pedestrian casualties by time of day: GB 2008

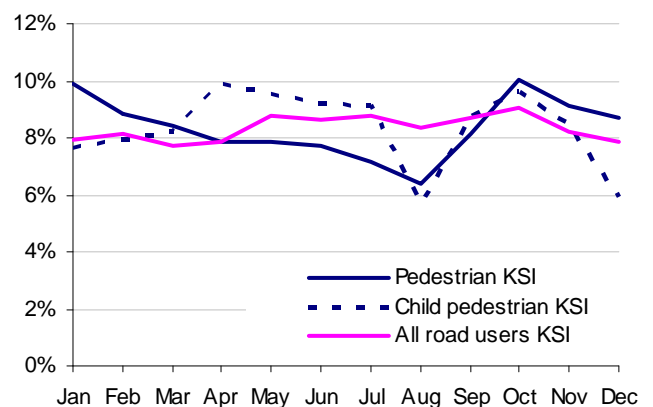


The above patterns shown for all reported pedestrian casualties are broadly similar for those seriously injured. However, a slightly greater proportion of pedestrian deaths occur during the evening and night.

Month of year: Compared with all road users, a greater proportion of pedestrian KSI casualties occur during the winter months, with fewer during the summer. For child pedestrians, the pattern is somewhat different with a higher proportion occurring during the spring months (care is needed as numbers each month are small and subject to some fluctuation).

Children: The National Travel Survey records that 48 per cent of primary school children and 40 per cent of secondary school children walk to school - 4676 (54 per cent) of all child pedestrian casualties happen between 3pm and 7pm - 1004 of these are killed or seriously injured.

Chart 5: Reported KSI pedestrian casualties by month of year: GB 2008



What are the accident circumstances?

Number of vehicles: Most reported accidents with pedestrian casualties tend to involve only one vehicle – 94 per cent, compared with 19 per cent of accidents with no pedestrian casualty. Accidents involving pedestrians have an average of 1.08 casualties per accident (compared with 1.35 for other accidents). 95 per cent of the casualties are pedestrians.

Vehicles involved. In *single vehicle* accidents, most pedestrians are hit by cars (77 per cent - see **Table 4**). This reflects the fact that cars form the majority of traffic. However, when allowing for distance travelled, motorcycles and buses pose greater risk to pedestrians, particularly in urban areas.

Accidents where pedestrians are hit by larger and heavier vehicles tend to result in more serious outcomes, with 14 per cent of accidents between HGVs and pedestrians resulting in a fatality, compared with less than 2 per cent of all accidents involving a pedestrian.

Chart 6: Reported KSI pedestrian casualty rate per billion vehicle kilometres by vehicle type: GB 2008

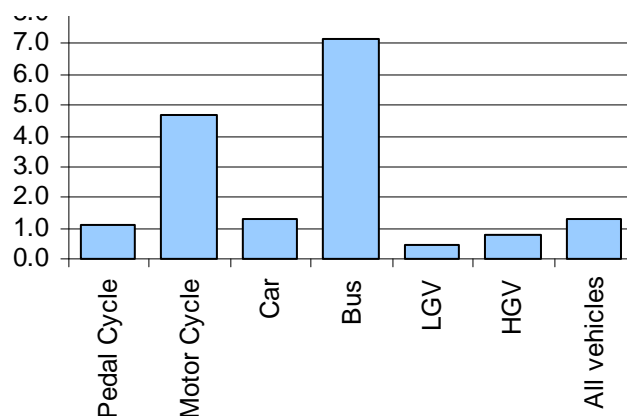


Table 4: Reported single vehicle accidents with pedestrian casualties: GB 2008

| | Number of accidents | | | | | | | | |
|--------------------|---------------------|------------|--------------|------------|---------------|------------|----------------|------------|---|
| | Fatal | | Serious | | Slight | | All severities | | Proportion of acc. involving vehicle that are fatal |
| | Number | Per cent | Number | Per cent | Number | Per cent | Number | Per cent | |
| Pedal cycle | 1 | 0 | 54 | 1 | 181 | 1 | 236 | 1 | 0.4 |
| Motorcycle | 15 | 3 | 216 | 4 | 705 | 4 | 936 | 4 | 1.6 |
| Car | 310 | 64 | 4,236 | 76 | 15,506 | 78 | 20,052 | 77 | 1.5 |
| Bus or coach | 35 | 7 | 310 | 6 | 1,122 | 6 | 1,467 | 6 | 2.4 |
| LGV | 27 | 6 | 270 | 5 | 915 | 5 | 1,212 | 5 | 2.2 |
| HGV | 62 | 13 | 128 | 2 | 253 | 1 | 443 | 2 | 14.0 |
| Any vehicle | 487 | 100 | 5,583 | 100 | 19,892 | 100 | 25,962 | 100 | 1.9 |

Vehicle characteristics: 71 per cent of vehicles⁵ that hit and injured a pedestrian had a male driver (around 70 per cent of all drivers involved in accidents are male). In around 1 in 5 cases the driver was aged 25 or under, but only 5 per cent of cases involved a driver aged 70 or over.

Most reported pedestrian casualties were hit by vehicles recorded as 'going ahead' (63 per cent, rising to 72 per cent for killed or seriously injured pedestrians). Vehicles in accidents with a pedestrian casualty were 4 times more likely to have been recorded as being on the footway than vehicles involved in other accidents - but these vehicles still only account for 3 per cent of vehicles involved in pedestrian accidents.

Pedestrian location: In total, more than half (57 per cent) of reported pedestrian casualties were crossing the road (not masked by a stationary vehicle) when injured. *Of these*, 19 per cent were on a pedestrian crossing and a further 12 per cent within 50 metres of one. Of the remaining 43 per cent of casualties:

- 14 per cent were masked by a stationary vehicle
- 10 per cent were in the carriageway but not crossing
- 10 per cent were on the pavement or verge.

Hit and run: Nearly 1 in every 5 reported pedestrian casualties (19 per cent) occurs in a 'hit and run' accident – a total of 5,404 in 2008 of which 835 were seriously injured and 63 killed. Pedestrians account for nearly a quarter of those injured by drivers who fail to stop.

⁵ This only accounts for vehicles where the driver was traced – i.e. this excludes hit and run cases where the driver was not found

Why do pedestrian accidents happen?

Contributory factors: Details of factors contributing to injury accidents are recorded by the police. Whilst it is not possible to determine blame from these contributory factors they may offer some insight into common types of accident⁶:

- In 54 per cent of accidents⁵ contributory factors were only assigned to pedestrians (with *pedestrian failed to look properly* being the most common individual factor).
- In 21 per cent of accidents factors were only associated with vehicles involved (with *failed to look properly* being the most common vehicle factor, as in all accidents).
- In the remaining 25 per cent of accidents at least one factor was assigned to both a pedestrian casualty and a vehicle (with the most common combination being both participants failing to look properly, recorded in around 8 per cent of all pedestrian accidents)

The most frequently recorded contributory factors in accidents involving a pedestrian are shown (note that more than one factor may be recorded for each accident):

Table 5: Contributory factors for reported accidents⁵ involving pedestrians: GB 2008

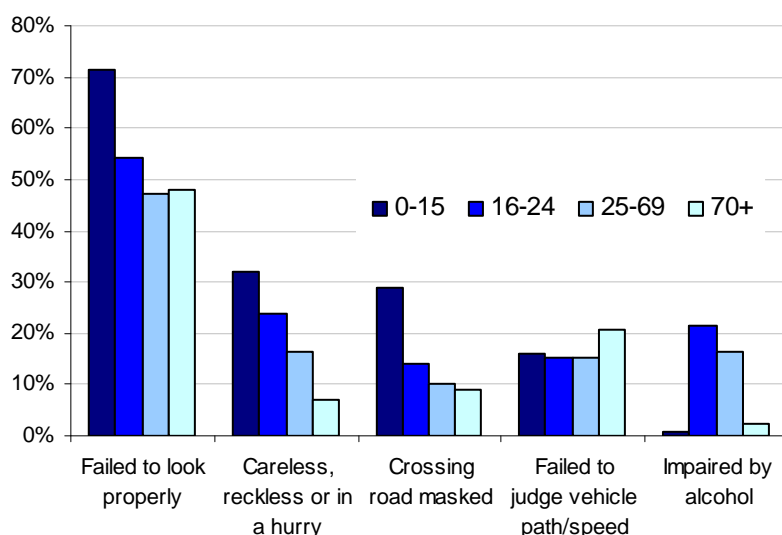
| Contributory factor | Factor assigned to: | Fatal | | Fatal and serious | | All severities | |
|--|---------------------|--------|----------|-------------------|----------|----------------|----------|
| | | Number | Per cent | Number | Per cent | Number | Per cent |
| Pedestrian failed to look properly | Pedestrian | 249 | 46 | 3,295 | 58 | 12,152 | 60 |
| Pedestrian careless, reckless or in a hurry | Pedestrian | 49 | 9 | 1,196 | 21 | 4,757 | 23 |
| Failed to look properly | Vehicle | 128 | 24 | 1,106 | 19 | 4,232 | 21 |
| Pedestrian crossing road masked by vehicle | Pedestrian | 51 | 9 | 990 | 17 | 3,700 | 18 |
| Pedestrian failed to judge vehicle's path or speed | Pedestrian | 130 | 24 | 1,072 | 19 | 3,551 | 17 |
| Pedestrian impaired by alcohol | Pedestrian | 79 | 15 | 783 | 14 | 2,340 | 11 |
| Careless, reckless or in a hurry | Vehicle | 40 | 7 | 398 | 7 | 1,443 | 7 |
| Dangerous action in carriageway (eg. playing) | Pedestrian | 52 | 10 | 410 | 7 | 1,367 | 7 |
| Vision impaired by stationary or parked vehicle(s) | Vehicle | 12 | 2 | 303 | 5 | 1,198 | 6 |
| Pedestrian wrong use of pedestrian crossing facility | Pedestrian | 28 | 5 | 271 | 5 | 1,012 | 5 |
| Number of accidents | | 537 | 100 | 5,676 | 100 | 20,348 | 100 |

The chart shows the five most common factors attributed to pedestrian casualties, by age group:

- Child pedestrian casualties were more likely to have at least one factor recorded (89 per cent have at least one factor, compared with 77 per cent of all pedestrian casualties)
- Children were more likely to have the factors *failed to look properly*, *careless, reckless or in a hurry* and *crossing road masked by vehicle*. In addition 10 per cent of child pedestrian casualties had the factor *dangerous action in carriageway (e.g. playing)*.

Involvement of alcohol: Around 1 in every 5 pedestrian casualties aged between 16 and 60 had *impaired by alcohol* assigned as a contributory factor. Based on coroners data (from 2007), 92 per cent of pedestrians killed between the hours of 10pm and 4am were over the legal alcohol limit (for driving) compared with around half of drivers – though data is available for less than half of pedestrian fatalities. The figures may therefore overestimate the proportion of pedestrian fatalities which are over the limit since a pedestrian fatality is more likely to be tested if there is a suspicion of alcohol use. Conversely, only a small proportion of KSI casualties in accidents involving a drink-driver were pedestrians – 160 out of 2,170

Chart 7: Contributory factors assigned to pedestrians involved in reported accidents⁵ by age: GB 2008



⁶ Figures relate only to those accidents at which a police officer attended the scene and at least one contributory factor was recorded.

What are the medical consequences of accidents for pedestrians?

Information on the medical consequences of pedestrian casualties in road accidents can be obtained from hospital inpatient data (2006/7 - Hospital Episode Statistics, HES).

- Most pedestrian admissions are the result of injuries to the head/face or the legs/hips.
- Compared to other road user types, a higher proportion of pedestrians were admitted with head/face injuries - nearly half of pedestrian admissions, compared with around a third of all road casualty admissions (including pedestrians). There is a similar pattern for injuries to legs/hips.

Notes

Coverage: The pedestrian category on the DfT national road accident database includes children riding toy cycles on the footway, persons pushing bicycles, pushing or pulling other vehicles or operating pedestrian controlled vehicles, those leading or herding animals, children in prams or buggies, and people who alight safely from vehicles and are subsequently injured.

Further information

This factsheet presents summary information relating to pedestrian casualties in road accidents in Great Britain. The following are sources of further information:

- **Reported Road Casualties Great Britain: Annual Reports.** This contains information on all road accidents in Great Britain, including more detailed figures and tables relating to pedestrian accidents and casualties. In particular, the 2007 volume contains
 - an article containing further details of coverage of pedestrian casualties in hospital data
 - further details of the contributory factors associated with pedestrians by age group and genderThe publication can be accessed online at <http://www.dft.gov.uk/pgr/statistics/datatablespublications/accidents/casualtiesgbar/>
- **National Travel Survey.** The Department's National Travel Survey collects information about walking activities, and provides data on trends that can be used to calculate pedestrian casualty rates. An overview is published in the NTS factsheet on walking: <http://www.dft.gov.uk/pgr/statistics/datatablespublications/personal/factsheets/walkingfactsheet.pdf>
More details can be found in the NTS annual report: <http://www.dft.gov.uk/pgr/statistics/datatablespublications/personal/mainresults/>
- **Research studies.** The Department for Transport has commissioned a number of research studies into different aspects of pedestrian road safety. Details can be found on the Department's road safety webpage at <http://www.dft.gov.uk/pgr/roadsafety/research/rsrr/theme1/>

Any enquiries relating to the figures in this factsheet or requests for further information on pedestrian accidents and casualties in Great Britain can be addressed to the Road Accident Statistics branch at the Department for Transport:

Telephone: (020) 7944 6595
Email: roadacc.stats@dft.gsi.gov.uk

Figure 1: Areas of injury for pedestrian casualties: GB 2007

