



Workplace Injury: Comparison of Great Britain with Europe and the USA

Summary

Individual countries define and report workplace injuries in different ways. In 1991 HSE undertook its own analysis of injury statistics of the large member states of the EU ie France, Germany, Italy and Spain. The study adjusted the national injury statistics to bring them to a broadly comparable basis with Great Britain. It was extended to cover the USA and Ireland. The available statistics from other smaller member states also give an indication of relative British safety performance.

Eurostat, the Statistical office of the European Commission, is working with Member States on realistic proposals for the production of comparative European injury statistics. Eurostat has published some interim results for rates of over 3 day injury (injury leading to more than 3 days absence from work or to a defined serious condition).

Summary results of the HSE study on rates of fatal injury and Eurostat interim rates of over 3 day injury are given in Table 1. Rates of fatal injury for some industries are given in table 2.

Main Points

The key conclusion is that rates of fatality and of injury in Great Britain are one of the lowest in Europe and lower than the USA.

The British rate of workplace fatal injury for all industries combined is lower than in other EU member states, and lower than in the USA.

Rates of fatal injury within main industrial sectors are lower in Britain than in other large member states, except in agriculture where British rates are higher than in Germany, and are similar to those in Spain; and except in construction where British rates are similar to those in Germany.

The British rate of over 3 day injury for all industries combined is lower than other member states with the exception of Sweden and Ireland.

**Table 1 Workplace Injury in Great Britain, Europe and the USA
Rates of Fatality per 100,000 Employees/self-employed people**

| | | |
|----------------------|----------------------------|--------------------|
| Great Britain | 1993/94 1994/95 | 1.2 0.9 |
| Denmark | 1992 | 1.7 |
| Finland | 1993 | 2.0 |
| Netherlands (1) | 1991 | 2.6 |
| USA | 1994 | 3.2 |
| Germany | 1994 | 3.2 |
| France | 1993 | 3.9 |
| Belgium (1) | 1992 | 3.6 |
| Ireland | 1992 | 4.0 |
| Spain | 1993 | 5.1 |
| Italy | 1991 | 5.5 |
| Portugal (1) | 1992 | 5.7 |

Rates of Non-Fatal Over 3 Day Injury for Europe (published by Eurostat) and the USA

| | | |
|----------------------|-------------|--------------|
| Sweden | 1993 | 1,100 |
| Ireland | 1993 | 1,200 |
| Great Britain | 1994 | 1,700 |
| Denmark | 1993 | 2,200 |
| USA (2) | 1994 | 2,800 |
| Finland | 1993 | 4,200 |
| Belgium | 1993 | 4,500 |
| Austria (2) | 1993 | 4,600 |
| Italy | 1993 | 4,800 |
| Netherlands (2) | 1993 | 4,800 |
| Germany | 1993 | 5,000 |
| France | 1993 | 5,200 |
| Spain | 1993 | 7,000 |
| Luxembourg | 1993 | 7,500 |
| Portugal | 1993 | 9,500 |

Notes to the table

1. Rates of fatality in these countries include some road traffic accidents but exclude the public sector. The rate in the Netherlands is an estimate to allow for under-reporting of fatal injuries in that country.
2. The rates of non-fatal injury in the USA, Austria and the Netherlands include injuries which result in 1 to 3 days absence from work. They are rates of over 1 day injury. The equivalent British rate was 2,550 in 1993, based on the Labour Force Survey.

Table 2**Rates of Fatality in Great Britain, Germany, France and Italy by Industries (a)**

| Industry | Great Britain | | Germany | | France | Spain | | Italy |
|-----------------------|----------------------|-------------|----------------|-------------|---------------|--------------|-------------|--------------|
| | 1993 | 1994 | 1993 | 1994 | 1993 | 1992 | 1993 | 1991 |
| Agriculture (b) | 7.3 | 8.5 | 6.0 | 6.7 | 9.8 | 9.1 | 5.4 | 18.4 |
| Utilities | 0.5 | 0.6 | 3.1 | 4.3 | 5.6 | 12.5 | 10.1 | 4.4 |
| Manufacturing | 1.6 | 1.2 | 2.3 | 1.6 | 2.3 | 6.7 | 4.9 | 3.3 |
| Construction | 8.9 | 6.9 | 7.9 | 8.0 | 17.6 | 21.0 | 19.3 | 12.8 |
| Transport (c) | 2.2 | 2.0 | 7.2 | 7.5 | 6.5 | 13.0 | 10.7 | 11.2 |
| Other services (d) | 0.3 | 0.4 | 1.0 | 1.2 | 1.9 | 1.4 | 1.5 | 0.9 |
| All Industries | 1.2 | 0.9 | 3.3 | 3.2 | 3.9 | 6.4 | 5.1 | 5.5 |

Notes

(a) Rates of fatality are expressed per 100,000 employees in France and employees in Britain except for agriculture where British rates are expressed per 100,000 workers (employees and self-employed combined). Rates of fatality are expressed per 100,000 workers in Italy and insured workers in Germany. Industries are defined by Standard Industrial Classification 1992.

(b) The rate of fatal injury for agriculture in France is for 1992

(c) Transport: in Germany excludes State Railways; in Italy includes warehouse activities.

(d) Other services includes for the four countries: retail and wholesale distribution, hotels and restaurants, business activities, entertainment, social and personal services; but includes public administration, education and health in GB, and private health services in Germany.

Sources of Workplace Injury Statistics and Qualifications on Comparative Statistics

HSE Study - Great Britain, France, Germany, Spain and Italy

1. Individual countries define and report workplace injuries in different ways. As a result, the statistics of injury in some countries are a by product of reports made by employers (and others) to National Labour Inspectorates. Examples include the UK, Ireland, and Denmark. In France, Germany, Spain, Italy, Portugal and Greece the main source of statistics are claims made through insurance or social security systems. In the Netherlands statistics are derived from a mix of employer reports and social security claims. A feature of insurance and social security systems is the relatively small level of under-claiming so that injury statistics are nearly or fully complete. In contrast, there is a considerable level of under-reporting of non-fatal injuries in systems based on employer reporting.

2. The published figures on workplace injury for most countries include accidents to people who are working while injured in road traffic conditions or by road vehicles. British statistics exclude most such accidents which can account for between 20 and 40% of workplace fatalities in some other member states.

3. Non-fatal injuries are reportable in most member states on the basis of absence from work being either more than three days or more than one day. These categories include any injuries specifically defined as "serious". For example, the rate of over 3 day injury in the table for Great Britain includes major injuries as defined in the reporting regulations.

4. In 1991, HSE undertook its own analysis of injury statistics of large member states: France, Germany, Italy and Spain. The study adjusted the national injury statistics to bring them to a broadly comparable basis with Great Britain. For example, the study adjusted the national statistics to exclude road traffic or vehicle accidents, and to derive incidence rates for the five countries in the same way. The study also considered, mainly non-quantifiable, factors such as biases due to under or over claiming in national insurance systems. The study concluded that, despite the differences in statistical systems, rates of fatality and of injury, for all industries combined (and within most main industry sectors), are lower in Great Britain than in other large member states.

5. The study covered the mid 1980s. It has been extended to produce comparative rates of fatality for the period, 1991 to 1993, depending on the availability of statistics from other countries and from Eurostat, the Statistical Office of the European Commission. The study has been extended to provide summary rates of fatality for the USA and Ireland. Rates of fatal injury are expressed per 100,000 employees or workers (employees and self-employed people) whichever is the most appropriate employment group to relate to the numbers of injured people. The employment groups are therefore: employees in Great Britain and in Spain except for agriculture where rates are based on workers; insured employees ("salaries") in France; workers in Italy; and insured workers ("abhangig beschaftigte" and "unternehmer") in Germany.

6. The rates of fatality for Great Britain in table 1 relates to 1993/94 and to 1994/95 for comparison with the latest available information from other member states. The final fatal injury rate for Great Britain in 1995/96 is expected to be 1.0 per hundred thousand workers (employees and self-employed). Rates of fatal injury for industries are given according to Standard Industrial Classification 1992 (SIC92) as published in the HSC/E Annual Reports and associated Health and Safety Statistics.

Italy

7. The rates of fatal injury for Italy are based on fatal injury reports notified in 1991 and published by Eurostat in an internal document "Occupational Accident Statistics in the Member States of the European Community, Non-Harmonised Data, 1985-1992, Part A". Statistics for agent equipment involved with accidents are published by ISPESL in "The First National Atlas of Accidents at Work 1989-1991". Such statistics identify vehicle accidents for the years 1989-1991 as a whole and are the best available to adjust fatal injury statistics for road traffic accidents. They only allow adjustment for the agriculture industry and for other industries as a whole. As a result, the rate of fatal injury in agriculture, 1991, is reduced by the percentage of vehicle accidents occurring in the period 1989-1991. The rate in each other industry is reduced by the percentage occurring for industry as a whole (excluding agriculture) in the period 1989-1991. The employment estimates are given by the National Labour Force Survey.

8. The available published statistics for Italy of fatal injuries and employment are based on broadly similar industrial classifications at a main sector level. However, the employment statistics for 1991 do not distinguish the extraction and utility industries from the manufacturing sector in the same way as for injury statistics of Eurostat. The 1993 employment estimates show much improved alignment. As a result, the employment estimates for the extraction, utility and manufacturing industries, 1991, are derived by applying the 1993 proportions to the 1991 employment total for these industries.

9. The adjustments to bring Italian statistics to the British basis are relatively approximate. However, they are unlikely to affect the comparison which shows that the resulting rates of fatal injury are much higher in Italy than in Great Britain and Germany.

Smaller Member States of the EU

10. The rates of fatality in four other member states (the Netherlands, Denmark, Belgium, and Portugal) are based on injury statistics published by Eurostat in its "Internal Document". The rates for Belgium, Portugal and the Netherlands include some road accidents but exclude the public sector. However, the available statistics from these smaller member states give an indication of relative British safety performance. The Danish Working Environment Service (Ministry) reckons that about a third of reported fatal injuries in Denmark are due to road vehicle accidents. The rate of fatal injury for Denmark is adjusted to exclude vehicle accidents.

11. The rate of fatal injury for Finland 1993 is based on statistics supplied by the Finnish Ministry of Labour. The rate excludes fatal injuries arising from road traffic accidents.

12. The Dutch Ministry of Labour considers that fatal injuries are under-reported in the Netherlands. There were 43 fatalities reported in 1991 but the Ministry estimates that about 150 fatalities occurred. The rate of fatal injury for the Netherlands in the table is 2.6 per 100,000 employees and is based on the higher number of fatalities. The British rate is lower even allowing for work related road traffic accidents.

Eurostat

13. Eurostat and member states are working on a project to produce and publish comparative European Statistics of injuries at work. The project builds upon the methodology of the HSE Study. The main proposals so far are for member states to provide statistics which: are based on the over 3 day criterion for absence; are adjusted for under-reporting of injuries; identify road traffic accidents; and which cover most industries and types of employment. The British statistics of workplace injury, based on employer reports or the results of the Labour Force Survey, meet these key proposals.

14. Eurostat has published some rates of non-fatal over 3 day injury as interim results of its project. They cover five main industry sectors: manufacturing, construction, retail and wholesale distribution, hotels and restaurants, and financial services and real estate (categories D,F,G,H,J and K of the Standard Industrial Classification 1992).

15. The published rates are reproduced in table 1 and rounded for convenience. The rates for Sweden, the Netherlands, Ireland, Denmark and the UK are adjusted to allow for the known under-reporting of injuries in those countries. The adjustments for Great Britain and Ireland are based on the results of the National Labour Force Surveys.

16. Greece has not supplied Eurostat with statistics in a right form which can be compared with other countries, and so figures for Greece are excluded from table 1.

USA

17. The workforce of the USA was 122.4 million in 1994, nearly five times that of Great Britain. For this large workforce there are a number of agencies and systems which provide estimates of the number of workplace fatalities and injuries. The rates in table 1 are derived from statistics presented in "Accident Facts 1995 and 1996", a publication of the National Safety Council (NSC). The rate of fatality in the USA is based on surveys of workplaces conducted by the Bureau of Labour Statistics. It excludes road traffic accidents.

18. The NSC estimates that about 3.4 million people suffered a disabling injury in non motor-vehicle accidents at work in 1994. The NSC derived this estimate from data supplied

by the National Center for Health Statistics. The definition "disabling" means injury leading to death, some degree of permanent impairment, or renders the injured person unable to effectively perform their duties or activities for a full day beyond the day of injury. The rate of non-fatal injury for the USA is the ratio of 3.4 million injured and the estimate of the workforce. In effect, the rate of injury for the USA is a rate of over 1 day injury. It was 2,780 per 100,000 employees and self-employed people in 1994. The British rate of over 1 day injury is estimated from the Labour Force Survey (LFS) and was 2,550 in 1993.

19. The National Health Interview Survey (NHIS) estimated that 6.72 million people were injured at work in 1994 and needed one half day of restricted activity. The corresponding rate of "half-day" injury is 5,490. The nearest British equivalent is the rate of all workplace injury estimated from the LFS. This rate carries a wider definition than the USA and was 4,460 in 1994/95. It is arguable that the British rate is lower though the comparison will depend on the nature of the questions used in the British and American surveys (LFS and NHIS).

Overall Conclusion

20. Table 1 presents the results of HSE's study and the published comparisons of Eurostat. It shows that Great Britain has the lowest rate of fatality, overall, among member states and the USA. Also, Great Britain has one of the lowest rates of non-fatal injury, the exceptions being Sweden and Ireland. We do not have rates of fatality from Sweden yet. Past work by the OECD suggested that Sweden has rates of injury which are as low as Britain's if not lower. The current work of Eurostat suggests that the rate of non-fatal injury is lower in Sweden. The rate of non-fatal injury appears to be similar or about 10% lower in Great Britain than in the USA, depending on the definition of injury.

21. Table 2 presents rates of fatal injury for a number of main industries in Great Britain and four other large member states of the EU - France, Germany, Spain and Italy. The main point is that

British rates of fatal injury are lower , both for all industries combined and for and within most main industries, than in Germany, France, Spain and Italy.

22. The exceptions are in agriculture where British rates are higher than in Germany and are similar to those in Spain, and in construction where British rates are similar to those in Germany.

23. In summary, British rates of fatal injury are lower for all industries combined and within most sectors. Given the evidence available, we can say that the rates of fatality and of injury of Great Britain are one of the lowest in Europe, and lower than the USA.