

Interim update of the “Costs to Britain of Workplace Accidents and Work-Related Ill Health”

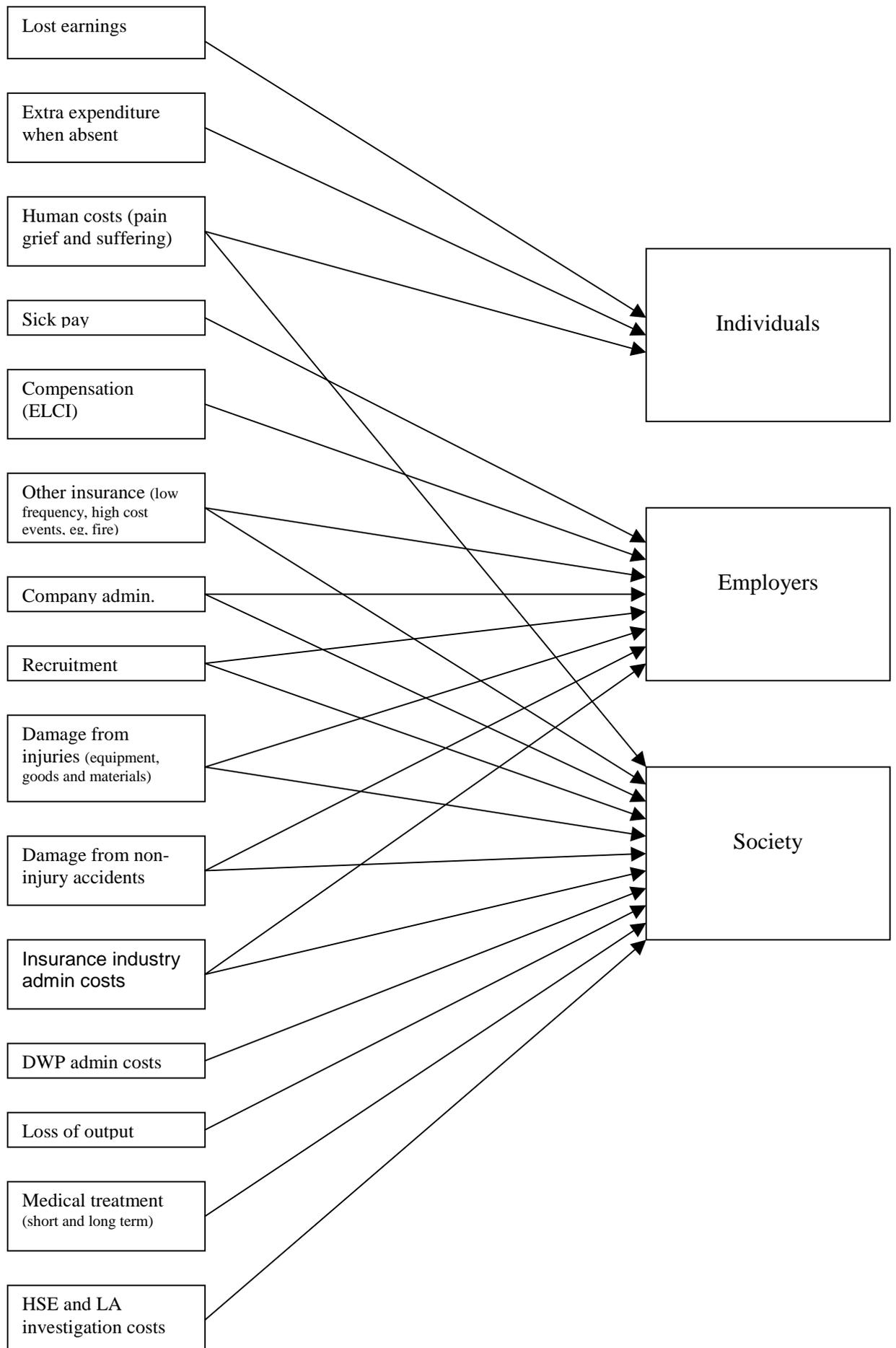
Background

1. This explanatory note provides estimates of the total costs to individuals, employers and society of workplace accidents and work-related ill health. It also discusses the categories of costs that make up the totals and it presents estimates for the major categories. For employers, figures are given by sector, occupation and region.
2. In their efforts to reduce harm within society, the government and its partners need to identify where the greatest burdens of health and safety failures fall. Estimates of the costs to the key stakeholders can help. Although the estimates can never show how easy or successful attempts to reduce harm might be, they nevertheless provide a good starting point from which to analyse the problems.
3. Previously, HSE has published two sets of estimates of the cost of accidents and ill health using data firstly from 1990 and then from 1995/96. These publications have been used widely within HSC/E to inform strategic policy, new programme development, appraisals of policy proposals (Regulatory Impact Assessments), and more recently, evaluations of HSE’s impact. The information has also been used to provide evidence to the Treasury during spending reviews and to answer many hundreds of minor enquiries from colleagues in HSE, other government departments, the press, the private sector, employer organisations, trade unions, academics and the public.

The current update

4. To carry out these detailed calculations, HSE needs to draw on a large amount of data, from many different sources. The next year for which all the required data will be available, is 2004/5. To fill the gap, HSE has provided an interim update by using the best available occupational injury and illness data from 2001/02. Assumptions have been made to fill the gaps in the data, and previously used figures have been changed to account for general changes in prices and incomes.
5. The figures from this interim update carry some limitations. Firstly, the estimates are only meant as broad indications of cost. Secondly, a review of the previous update led to the adoption of proportionately wider ranges for many of the estimates. This better reflects the uncertainty in the figures. Finally, only broad comparisons can be made between the 95/96 and 01/02 estimates, and even these need to be treated with caution. Unfortunately there are differences in the design of the 1995 and the 2001/02 SWI surveys that provided the bulk of the data used in the calculation of the ill health cost estimates.

Figure 1. Cost Categories.



Cost categories

6. HSE has traditionally estimated costs for three types of stakeholder: individuals, employers and society. Figure 1 describes the different categories that make up the total costs for each of these stakeholders¹.

7. The following tables report the estimates for the major cost categories broken down by whether the outcome is ill health, injury or non-injury accidents. In some cases the rounding of figures has caused the totals not to equal the sum of the subtotals.

8. Table 1 gives the lost earnings that individual workers and their dependents suffer as a result of health and safety failures. The figures do not include state benefits and compensation paid through employers' liability insurance.

Table 1. Lost earnings	£million
<i>Ill health</i>	2,560 to 4,020
<i>Injury</i>	1,180 to 2,370
TOTAL	3,730 to 6,390

9. Table 2 gives the human costs of pain grief and suffering. Valuation of these costs is complicated and readers requiring further information should refer to HSE's publication *The costs to Britain of workplace accidents and work-related ill health in 1995/96*.

Table 2. Human costs	£million
<i>Ill health</i>	3,680 to 5,700
<i>Injury</i>	2,670 to 4,480
TOTAL	6,340 to 10,180

10. Table 3 gives estimates of the sick pay that employers pay to workers with occupational illnesses and injuries. The figures do not include Statutory Sick Pay, since this is ultimately paid by the government.

Table 3. Sick pay	£million
<i>Ill health</i>	960
<i>Injury</i>	310

¹ The methodology that underlies the estimates was adopted unaltered from the last full update of "Costs to Britain". A full description of methodology and definitions appears in that publication.

TOTAL 1,270

11. Table 4 presents the cost of damage to materials, machinery and property that occurs through non-injury accidents. Although no one is harmed in such events, HSE takes the view that;

- (a) they have the potential to cause human harm; and
 - (b) they are caused by the same management failures that lead to injury accidents.
- The result, in terms of whether harm to humans occurs, is therefore a matter of chance. This approach of viewing injury and non-injury accidents in the same light is often called the “total loss approach”.

Table 4. Non-injury accident costs £million

Non-injury accident costs 780 to 4,310

12. Table 5 gives the loss of output (as measured by the wages of those affected) that arise from health and safety failures. In this context, lost output acts as a measure of welfare lost by society.

Table 5. Loss of output £million

<i>Ill health</i>	7,010 to 10,240
<i>Injury</i>	2,970 to 5,580
<i>TOTAL</i>	9,980 to 15,820

13. Table 6 gives the costs of treating workers who have occupational injuries and illnesses. The costs relate to both private and public health care providers.

Table 6. Medical treatment £million

<i>Ill health</i>	230 to 970
<i>Injury</i>	70 to 320
<i>TOTAL</i>	300 to 1,280

Total costs to stakeholders

14. The total costs to individuals, employers and society are among the most commonly quoted “Costs to Britain” estimates. The 2001/02 interim estimates are presented in Tables 7 to 10. As well as costs to the three “traditional” stakeholders mentioned above, the costs to the economy are also presented. These bear the closest relationship to the costs to society, the only difference being that the costs to the economy exclude the human costs of pain, grief and suffering.

15. A feature of tables 7, 9 and 10 is that the “Totals” have been estimated using proportionally narrower statistical ranges than those used for the “Ill health” and

“Injury” subtotals. Consequently, the subtotals in the tables do not add up to the totals. This approach reduces the gap between the upper and lower limits of the often quoted “headline” estimates, while preserving an appropriate level of uncertainty within the subtotals².

Table 7. Costs to individuals	£billion		
<i>Total</i>	10.1	to	14.7
<i>Ill health</i>	5.9	To	9.4
<i>Injury</i>	3.3	To	6.3

Table 8. Costs to employers	£billion		
<i>Total</i>	3.9	to	7.8
<i>Ill health</i>	1.5		
<i>Injury</i>	1.0	to	1.1
<i>Non-injury</i>	1.4	to	5.3

Note: Upper limit is not the sum of the subtotals due to rounding

Table 9. Costs to society	£billion		
<i>Total</i>	20.0	to	31.8
<i>Ill health</i>	11.3	to	17.3
<i>Injury</i>	5.9	to	10.7
<i>Non-injury</i>	1.4	to	5.3

² When “never return” sample cases for injury and ill health are combined, the uncertainty about the population estimate decreases and the confidence interval therefore narrows. When taken separately, the injury and ill health sample cases introduce greater uncertainty about the injury and ill health population estimates and this is reflected in proportionately larger confidence intervals for each estimate. Care must therefore be taken when quoting the figures. For instance, quoting the headline estimates and then, using the tables, explaining that this comprises £X billion ill health costs and £Y billion injury costs will clearly lead to accusations of poor arithmetic. Where possible, it would be best not to quote the headline figures and breakdowns at the same time. If unavoidable, it would be preferable to express the headline figure as the sum of the subtotals, thereby increasing the range of headline estimate.

Table 10. Costs to the economy £billion

<i>Total</i>	13.1 to 22.2
<i>Ill health</i>	7.6 to 11.6
<i>Injury</i>	3.2 to 6.2
<i>Non-injury</i>	1.4 to 5.3

Costs to employers broken down by sector, occupation and region³

16. Tables 11 to 13 provide estimates of the costs to employers broken down by sector, occupation and region.

Table 11. Costs to employers broken down by sector

Sector	SIC	<i>Ill health</i> £million	<i>Injury</i> £million	<i>Non-injury</i> £million	<i>TOTAL</i> £million
Agriculture	A,B	Not available ⁴	20 to 20	30 to 90	Not available
Energy & water supply	C,E	20 to 60	10 to 10	10 to 50	50 to 130
Manufacturing	D	200 to 300	210 to 220	270 to 1,000	670 to 1,520
Construction	F	100 to 180	140 to 140	420 to 1,570	660 to 1,890
Distribution & repair	G	90 to 140	140 to 150	180 to 670	410 to 970
Hotels & restaurants	H	20 to 60	50 to 50	70 to 250	140 to 360
Transport & comms.	I	90 to 160	100 to 110	100 to 390	300 to 650
Finance & business	J,K	140 to 220	70 to 70	0 to 10	210 to 310
Public admin. & defence	L	120 to 200	60 to 60	70 to 280	250 to 540
Education	M	110 to 170	50 to 50	70 to 260	220 to 480
Health & social work	N	180 to 260	100 to 110	110 to 410	390 to 790
Consumer/leisure	O,P,Q	20 to 60	60 to 60	80 to 300	160 to 420

³ The 1999 "Costs to Britain" publication presented costs to individuals, employers and society broken down by economic sector, occupation and geographical region. The inability to separate out the 01/02 "never return" data into the relevant categories means that the breakdowns presented in the 1999 document could not be fully replicated. However, employers bear only very modest costs related to "never returns" and so it is still possible to present the relevant breakdowns (Tables 11 to 13).

⁴ Ill health estimates for agriculture are not available because the number of sample cases in SWI01/02 was too small

Table 12. Costs to employers broken down by occupation

	<i>Ill health</i>			Injury			<i>Non-injury</i>			<i>TOTAL</i>		
	£million			£million			£million			£million		
Managers & administrators	140	To	230	70	to	70	130	to	480	340	to	780
Professional occupations	140	To	230	40	to	50	80	to	300	270	to	580
Associate professionals & technical occupations	190	To	290	70	to	80	110	to	420	380	to	790
Clerical & secretarial occupations	110	to	170	80	to	80	110	to	400	300	to	650
Craft & related occupations	150	to	230	230	to	250	310	to	1,180	700	to	1,660
Personal & protective service occupations	80	to	140	140	to	150	190	to	730	410	to	1,010
Sales occupations	50	to	90	50	to	60	70	to	280	180	to	430
Plant & machine operatives	130	to	220	170	to	180	220	to	830	530	to	1,230
Other occupations (mainly unskilled)	120	to	200	140	to	150	180	to	670	440	to	1,020

Table 13. Costs to employers broken down by region

	<i>Ill health</i>			Injury			<i>Non-injury</i>			<i>TOTAL</i>		
	£million			£million			£million			£million		
South East (exc London)	230	to	320	200	to	210	320	to	1,190	750	to	1,720
East Anglia	40	to	80	50	to	50	70	to	250	150	to	380
London	120	to	200	100	to	110	140	to	540	370	to	850
South West	110	to	170	100	to	100	130	to	500	340	to	770
West Midlands	120	to	190	90	to	90	100	to	380	310	to	660
East Midlands	70	to	110	80	to	90	120	to	460	270	to	660
York & Humberside	120	to	180	130	to	140	140	to	510	380	to	830
North West	130	to	200	90	to	100	140	to	520	360	to	810
Northern	70	to	120	50	to	50	80	to	280	190	to	460
Wales	50	to	90	40	to	50	70	to	260	160	to	400
Scotland	80	to	140	80	to	80	110	to	400	270	to	620

Economic Advisers Unit
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