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Health and Safety Statistics 2011/12: Key facts and international comparisons

Purpose of the paper

1. To present the latest health and safety statistics for 2011/12 and to provide international comparisons where possible to put the statistics for Great Britain into context.

Background

2. Each autumn we publish a compendium release of statistics related to ill health and injury at work. This release includes self-reported injury and ill health from the Labour Force Survey, reported non-fatal injury from RIDDOR, ill health reports from the THOR GP and specialist schemes, claims for Industrial Injuries Disablement Benefit (IIDB) and deaths from asbestos-related disease. The latest release, with statistics for 2011/12, was published on 31 October 2012.
3. In addition to an update on the latest statistics, the Board have requested information about international comparisons. This is presented in the second part of this paper.

Argument

Headline statistics for 2011/12

- The total number of people who worked in the last 12 months who self-reported suffering from work-related illness fell by 79,000 to 1.1 million and there is a measurable downward trend in total work-related ill health over the past decade. Whilst the latest annual fall is not quite statistically significant, seen in the context of the longer time series, it indicates a continuing downward trend in ill health rates.
- The estimated number of new cases of self-reported work-related illness amongst those who worked in the past 12 months fell by 43,000 to 452,000 and again there is a significant downward trend since 2001/02.
- Self-reported injuries were effectively unchanged over the year (injuries leading to over 3 days absence from work increased by 12,000 to 212,000 but the change was not statistically significant).
- RIDDOR reported over-3-day injuries fell by 3% in the year whilst reported major injuries fell by 10%.

- Fatal injuries to workers remained essentially flat (173 in 2011/12 compared with 175 in 2010/11) and the data now indicate a levelling off in the previous downward trend.
- Deaths from Mesothelioma continue to rise year on year due to past exposure to asbestos (2347 deaths in 2010).
- The number of working days lost due to work-related ill health and injury increased slightly to 27 million and the average days lost per case of work-related ill health or injury increased from 15.5 to 16.8.
- Workplace injuries and ill health (excluding cancer) cost society an estimated £13.4 billion in 2010/11 (compared with £13.9 billion for 2009/10).

Part A - Commentary on the statistics (also see accompanying charts in Annex 1)

Work-related ill health – common ill health conditions

4. Our headline measure of work-related ill health comes from the Labour Force Survey, supplemented with information reported by the THOR-GP network. Data from both sources shows that around three-quarters of the new cases of work-related ill health that arise each year are due to stress or Musculoskeletal Disorder (MSD). Incidence rates from the two sources are similar.
5. Overall, we currently estimate that 1.8 million individuals are suffering from a work-related illness. Approximately 40% of these are people who have not worked for over 12 months and the majority of those are over normal retirement age (60 for women and 65 for men). Of the 1.1 million sufferers who have worked in the past 12 months, an estimated 452,000 have a new ill health condition which started in the last year. The remainder have conditions which have lasted for more than 12 months and are predominantly cases of MSD (see chart 1 in the annex).
6. Work-related ill health is difficult to measure with precision and, as a result, individual LFS results can be subject to wide confidence intervals which makes interpretation of trend complex. By combining data over a number of years, this uncertainty is reduced and we can be more confident in the conclusions drawn. We have been able to model a smoothed trend in the LFS data which shows a measurable downward trend for both total and new cases of work-related ill health over the past decade. This reduction has been driven by a significant fall in the number of MSD cases whilst levels of work-related stress have remained broadly flat.

Although MSD and stress make up the bulk of the common ill health conditions which are attributed to work in terms of numbers, other conditions such as respiratory and skin conditions also make a sizeable contribution. We are unable to reliably measure these conditions using the Labour Force Survey. However, THOR reports from specialist physicians give us an indication of the most severe cases and, in both cases, a strong downward trend is observed.

Work-related ill health – long latency conditions

7. Our evidence base on long latency health conditions is much weaker than for injuries or common ill health conditions because of the challenges in studying these diseases. For example, it may be difficult to attribute cases of disease occurring now to workplace exposures that occurred many years ago, particularly where non-workplace causes may have also played a role. Most of what we know is based on studying the effects of past exposure, whereas the future effects of current workplace exposures – i.e. those that can be influenced and prevented – are less certain.
8. We estimate that there are at least 12,000 deaths each year as a result of work-related exposures in the past: 8,000 cancer deaths and 4,000 deaths from COPD. There are a number of other conditions for which a proportion of cases are likely to be caused or made worse by work but where the epidemiological evidence is not sufficiently robust to produce an estimate. These include cardiovascular, neurological and reproductive disease. HSE continues to monitor the epidemiological evidence about the causes of such diseases and will produce statistical estimates in future where it is feasible to do so with reasonable precision.
9. Mesothelioma is the only mainly occupational cancer we are able to track specifically year on year. Total deaths are continuing to rise every year and are not expected to peak until around 2016 (see chart 3). Deaths at ages below 50 have been falling since the early 1990s, reflecting reductions in usage since the 1960s and subsequent bans on all usage.

Injuries - fatalities

10. The annual count of fatal accidents at work is not an estimate and therefore is not subject to sampling variation. However the count is subject to substantial chance variation as a result of fatalities being relatively rare events. The effect of this chance variation can be estimated and will be proportionately higher for smaller counts, for example figures by industry. We can estimate that this year's count of 173 could have been anywhere between 147 and 199 based on chance alone. Hence, it is important to consider trends in fatal injuries over a number of years.
11. Chart 4 in the annex shows the trend in the rate of fatal injury over the last 20 years using a three-year moving average. This shows that:
 - Over the 20-year time period there has been a downward trend in the rate of fatal injury;
 - The rate in 2009/10 represents the lowest on record;
 - Adding the latest 2011/12 data, the rate since 2008/09 indicates a levelling-off in the trend.
12. The tables in Annex 2 show fatal (and reported non-fatal) injuries broken down into employees and self-employed for main industry sectors. For all industries combined, fatality rates are higher for the self-employed because a greater proportion of the self-employed are engaged in higher risk industries such as agriculture and construction than for employees as a whole. However, the annual number and rate of self-employed fatalities

has remained largely unchanged since 2006/07 with the exception of the dip in 2009/10 which was also seen for employees.

13. Within industries, the data suggests different patterns of risk of fatality for employees and self-employed. In the agriculture sector, the self-employed rate is consistently higher than the employee rate whereas in construction the self-employed rate is generally lower than the employee rate.

Injuries – non-fatal incidents

14. There are two sources of data for non-fatal injuries: self-reported injuries from the Labour Force Survey and employer-reported injuries from RIDDOR. We know that RIDDOR under-reports non-fatal injury and that reporting levels are higher for certain industries and for larger employers. Hence, our headline measure of workplace injury comes from the LFS since this provides a more complete picture.
15. There has been a strong downward trend in both the LFS and RIDDOR non-fatal injury series since 2001/02 (see Charts 5 and 6) although the LFS figures were flat in the most recent year. RIDDOR reports continued to fall in 2011/12 for both major injuries and over-3-day injuries.
16. The move to over-7-day reporting for RIDDOR from April 2012 will impact on the statistics from next year. Furthermore, if there are additional changes to the reporting criteria for RIDDOR over the coming months, this will also impact on the statistics and the ability to use RIDDOR reliably to measure trends. These changes will make it increasingly important for HSE and external users to use the LFS injury measure for targeting, prioritising and assessing injury trends.

Cost to the economy of work-related ill health and injuries

17. There are two measures of economic cost linked to these statistics: sickness absence as a result of work-related injuries and ill health and the more comprehensive data on the cost to society as estimated from the HSE cost model.
18. We can estimate sickness absence from the Labour Force Survey and this shows a substantial reduction in working days lost over the past decade although a levelling off, at around 27 million days lost, over the past four years (see chart 7). Over 80% of the days lost are as a result of work-related ill health.
19. The HSE cost model, which was substantially updated last year, measures the cost to society of workplace injury and work-related ill health (excluding cancer). The model includes costs to individuals, costs to business and costs to government. The most recent estimate of £13.4 billion relates to 2010/11 and estimates have fallen in each of the last four years, reflecting the downward trend in injuries and cases of ill health (see chart 8).

Part B - International comparisons

20. Comparing health and safety performance across countries is very complex because of substantial differences in definitions, reporting systems, enforcement practices and cultural factors which impact on the propensity to report incidents. Particular examples include the inclusion or exclusion of road traffic accidents, injuries to the self-employed, suicides and injuries in the public sector.
21. The most comparable data we have available is from Eurostat where an attempt is made to harmonise definitions for countries in the EU – particularly for fatal injury statistics. Periodically, the EU also run surveys using standardised questionnaires across European countries which provide us with an opportunity to compare our performance with peers.
22. In the following table, UK performance on key health and safety outcomes is compared with other European systems. ‘Peer’ comparisons refer to the rates for other large economies; Germany, France, Italy, Spain and Poland. Comparisons are made against the EU-15 group of countries and EU-27 where available.

		Peers (DE, FR, IT, ES, PO)	EU-15	EU-27
Fatalities standardised incidence rate per 100,000 employed. (Eurostat 2012)	In 2009 GB had the second lowest fatality rate of those published by Eurostat at 0.59 per 100 000. GB performs well against other large economies such as France (2.07), Germany (0.66), Italy (1.73), Spain (2.04) and Poland (5.3).			
Work related accidents resulting in sick leave (LFS 2007)	2% of UK workers reported an accident resulting in sick leave, this was mid-table performance ; lower than the EU-27 rate of 2.3%, and 16 individual EU countries including DE, FR, ES, IT. While IT and DE have similar rates to the UK with 2.3% and 2.4% respectively, ES and FR have higher rates, 3.2% and 3.6%. Only ten member states achieved a lower percentage than the UK, including PO with 1%.			
Work related health problems resulting in sick leave (LFS 2007).	In comparison with DE, IT, ES and PO (FR excluded in this instance as data not comparable), the UK has the lowest self-reported rate of work-related ill health resulting in sick leave at 3.2%. Wider comparison shows only 7 countries with levels lower than this, and IE having the lowest at 1.7%.			
KEY				
	UK performance exceeds comparators		UK performance in line with comparators	
			UK performance below comparators	
				Comparison not available

23. Recent European survey data is also available on the health and safety system in member states covering areas such as enforcement, policy and practice. The table below summarises some of this information and, as with the outcome data, presents a very positive picture for the UK.

		Peers (DE, FR, IT, ES, PO)	EU-15	EU-27
Managers reporting H&S inspection in last 3 years (ESENER 2009)	UK performance lies in the middle of the pack . Around 60% of UK businesses (with more than 10 employees, and excluding agriculture) interviewed in 2009 reported receiving an inspection in the last 3 years. IT had similar levels of inspection to the UK, DE reported higher levels of inspection, while PO, ES and FR had lower levels.			
Managers reporting an established OSH management policy. (ESENER 2009)	The UK has the highest percentage of managers (in businesses employing more than 10, and excluding agriculture) reporting that their workplace has an action plan or management system for health and safety: around 98%. ES reports similar levels, whereas IT reports around 83%. PO and FR perform much less well in this area with 65% and 63% respectively, and DE has the lowest rate of the larger economies with 54%.			
Workers who consider their health and safety to be at risk because of their work (EWCS 2010)	According to the 2010 European Working Conditions Survey, 18% of UK workers think their jobs risk their health or safety; this is one of the lowest proportions in the EU, compared with around 24% of all EU-27 workers. Germany have similar results to the UK, while more workers in France, Italy, Spain and Poland think that their health or safety is at risk because of work			
KEY				
	UK performance exceeds comparators		UK performance in line with comparators	
			UK performance below comparators	
				Comparison not available

24. Comparison with countries outside of Europe becomes particularly difficult and unfortunately there are no standardised data collections across the industrialised nations. However, the ILO do collect and publish injury data from a range of countries. The table below shows the latest available data (for 2008) together with rates where available. The final column in the table summarises what we know about the differences in coverage although there may well be other factors we are unaware of.
25. This data does suggest some exaggeration of the positive picture for the UK compared to other countries in a similar economic position. For fatalities, the exclusion of road traffic accidents clearly has an impact as the majority of countries include these. For non-fatal injuries there is substantial variation in the data shown which will largely be due to definitional differences.

ILO, 2008

Country	Fatalities	Non-fatal lost time injuries	Fatality rate per 100k employed	Non-fatal rate per 100k employed	Comments on coverage
Australia	207	98,740	2.1	1020	Insurance records/ compensated cases
France	569	703,976	2.0	n/a	Insurance records, >1 day absence, employees only
Germany	765	1,063,150	2.0	2829	Insurance records, >4 day absence, commuting injuries included
Italy	780	499,210	4.0	2445	Insurance records, >4 day absence, commuting injuries included
Japan	1268	118,023	n/a	n/a	Labour inspectorate reported injuries, excludes construction
New Zealand	90	26,482	3.4	n/a	Insurance records
Spain	530	802,778	3.3	5055	Reported injuries, >1 day absence, excludes public sector
UK *	179	133,155	0.6	522	Reported injuries, >3 days absence, excludes road traffic accidents
US	5214	1,078,140	3.7	n/a	Business census records, includes homicides and suicides in fatalities.

* Non-fatal figures provided to the ILO are from RIDDOR. Using the LFS estimate of all lost time injuries would give a figure around 450,000 and a non-fatal rate around 1700.

26. Whilst the UK still has noticeably lower fatality rates than other similar countries, there is some evidence from available data that others have seen improvements in recent years whilst the UK has been relatively flat. The relevant figures are shown in the table below (NB – for EU countries, figures are shown excluding road traffic accidents and transport).

Fatal injuries to 'workers' - international estimates*

*Subject to definitions for individual countries. Data may be subject to change.

Country	Latest figures			Five-year average (preceding five-year period to 'latest figures')	
	Year	No.	Rate per 100 000	No.	Rate per 100 000
Great Britain	2011/12	173	0.6	196	0.7
France	2009	290	2.1	321	2.4
Germany	2009	213	0.7	395	2.0
Italy	2009	276	1.7	405	2.6
Spain	2009	222	2.0	353	3.0
USA	2011	4609	3.5	5190	3.7
Canada	2008	1036	7.2	1004	7.5
Australia	2009/10	216	1.9	282	2.7

Source:

Great Britain - RIDDOR

Other EU - Eurostat

USA - Bureau of Labor Statistics, 'Census of Fatal Occupational Injuries'

Canada - Human Resources and Skills Development Canada report,
'Occupational Injuries and Diseases in Canada, 1996 - 2008'
(data taken from Association of Workers' Compensation Boards)

Australia - Safe Work Australia, 'Work-related Traumatic Injury Fatalities' annual reports

27. Comparable ill health data, outside of the EU, is even more difficult to source. The US, Canada and Australia all publish joint injury and ill health rates from survey sources but don't appear to separate out ill health figures. The US figures exclude mental ill health conditions. The table below summarises the most recent data that is available from the country-specific sources and shows figures of the same order of magnitude to the GB estimates which are based on LFS data.

International source	Rate per 100k	GB equivalent estimates	Rate per 100k
USA – incident rate of lost time injuries and MSDs 2010	1179	Incident rate of MSD and lost time injury (LFS 10/11)	1600
Australia – Prevalence rate of work-related injury or ill health 09/10	5300	Prevalence rate of injury and illness (LFS 09/10)	6800
		Prevalence rate of lost time injury and illness (LFS 09/10)	4100
Canada – Rate of injury and illness 2010	3860	Prevalence rate of injury and illness (LFS 10/11)	6000
		Prevalence rate of lost time injury and illness (LFS 10/11)	3600

28. For long latency disease, there doesn't appear to be any useful information to compare the GB position. This is perhaps not surprising given the complexities of measuring long latency disease and reliably attributing cases to work. This is an issue which all industrialised nations are grappling with and there doesn't appear to be a model of ideal practice to follow.
29. Mesothelioma figures are available for some countries, notably Australia where they record 500-600 deaths each year in a population around a third the size of GB. Nonetheless, it is widely reported that Great Britain has the highest Mesothelioma rates in the world due to our extensive use of asbestos in the past and the particular types of asbestos which were used.

Action

30. For information.

Paper clearance

31. This paper has been cleared by Dave Bench.

Annex 1 – Latest statistics and trends presented graphically

Chart 1 – How the 2011/12 work-related ill health estimate from the LFS breaks down

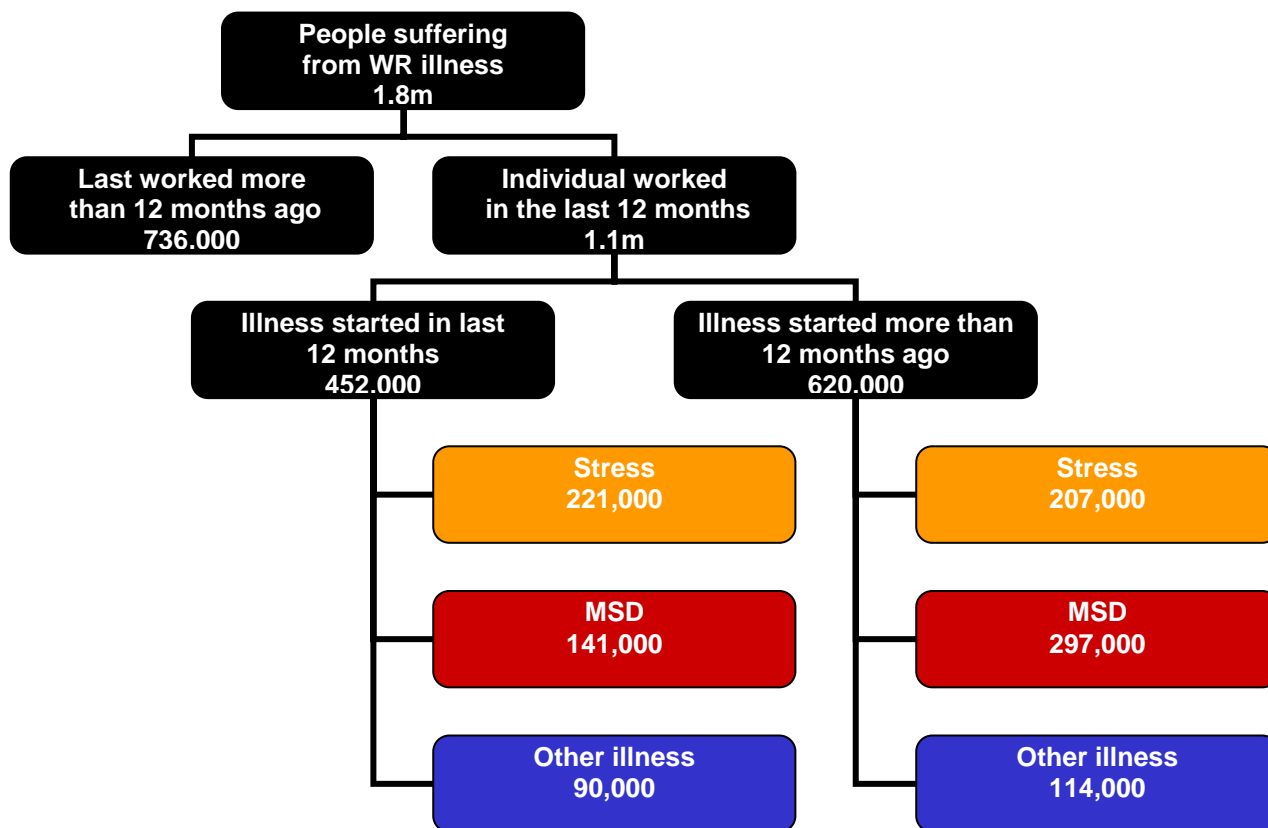


Chart 2 – New cases of work-related ill health as estimated from the Labour Force Survey (and 3-year moving average line)

Note: sample variability +/- 7% on the total

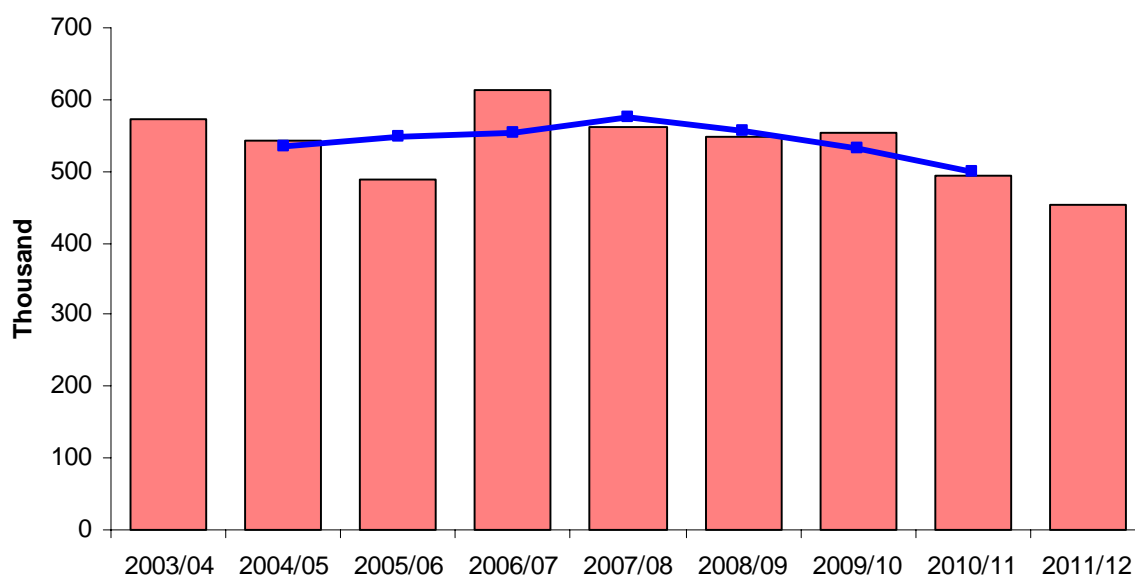


Chart 3 – Deaths from Mesothelioma and claims for disablement benefit for Mesothelioma

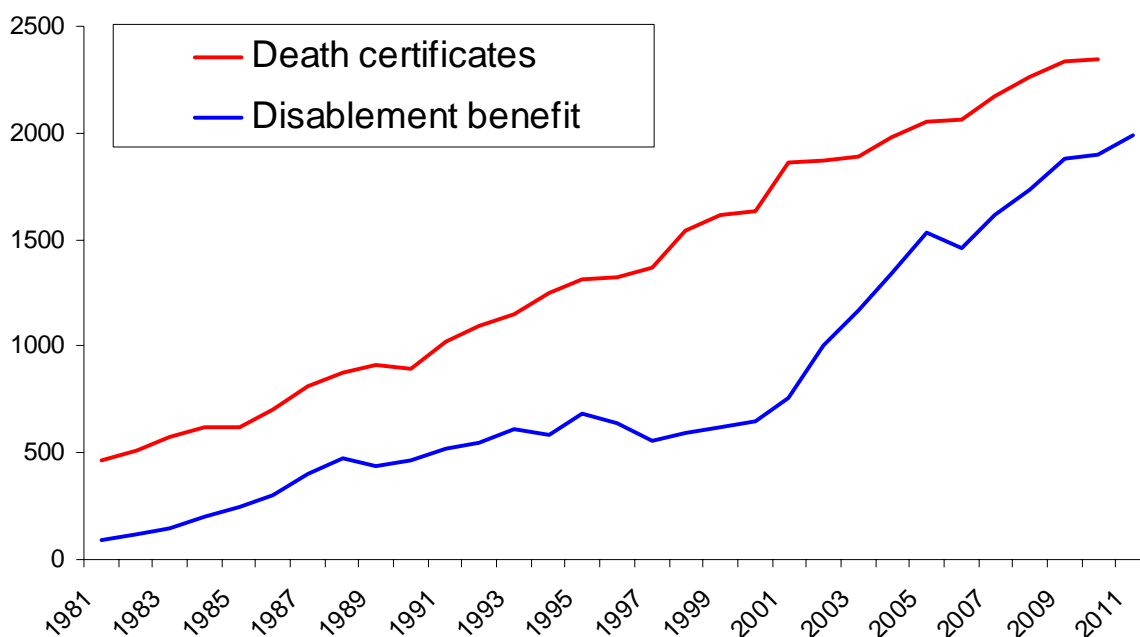


Chart 4 – Worker fatality rate

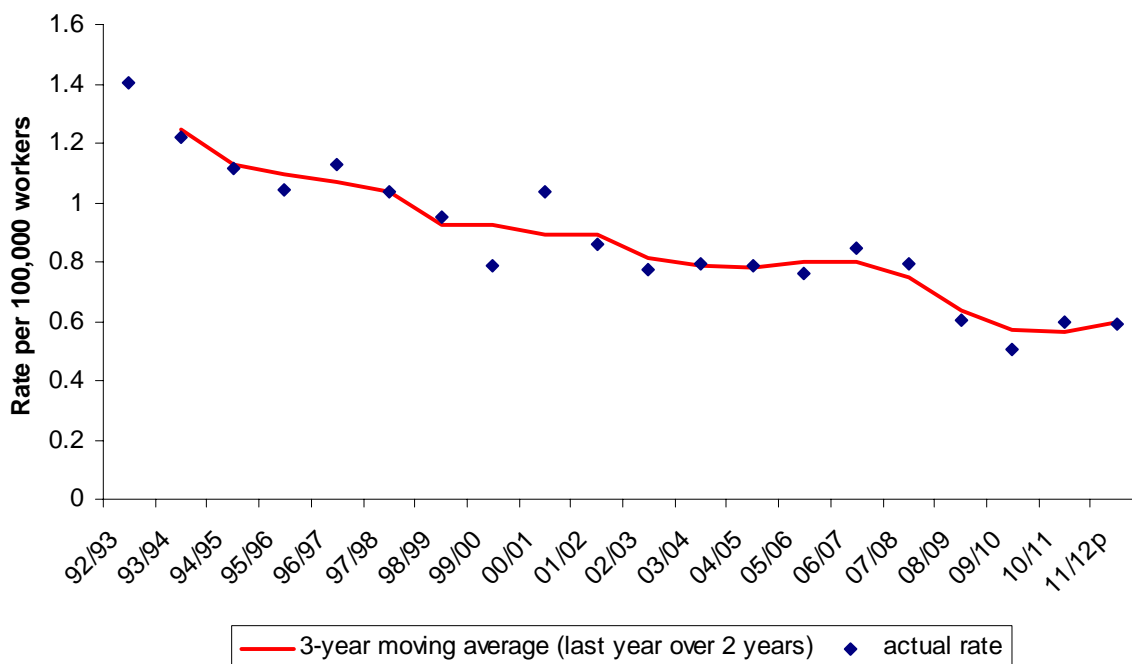


Chart 5 – Reported non-fatal injuries under RIDDOR

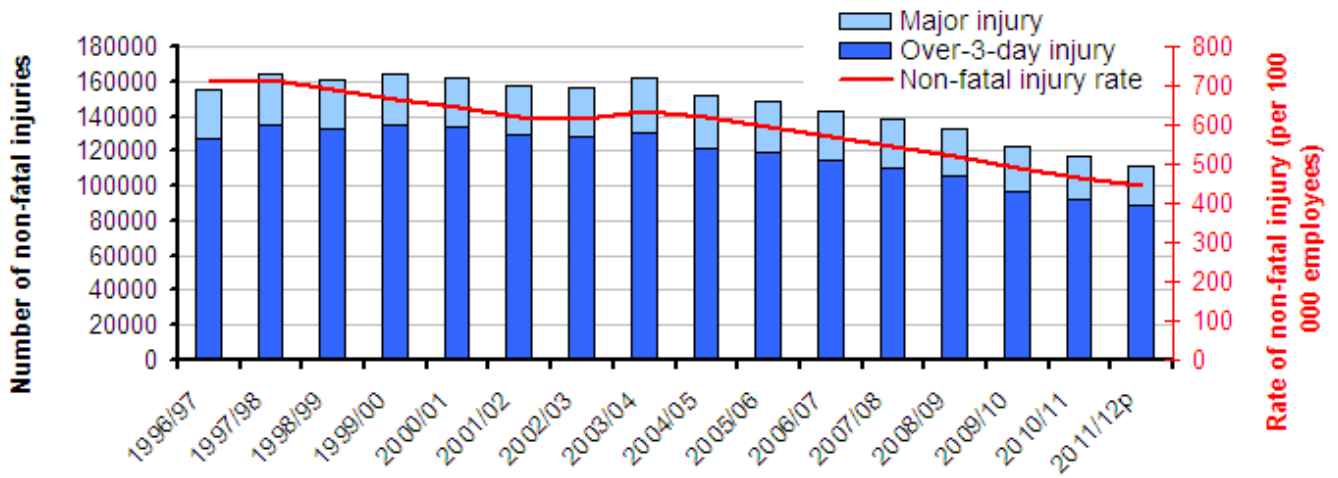


Chart 6 – Self-reported injuries from the Labour Force Survey

Note: average sample variability +/- 6% on the total

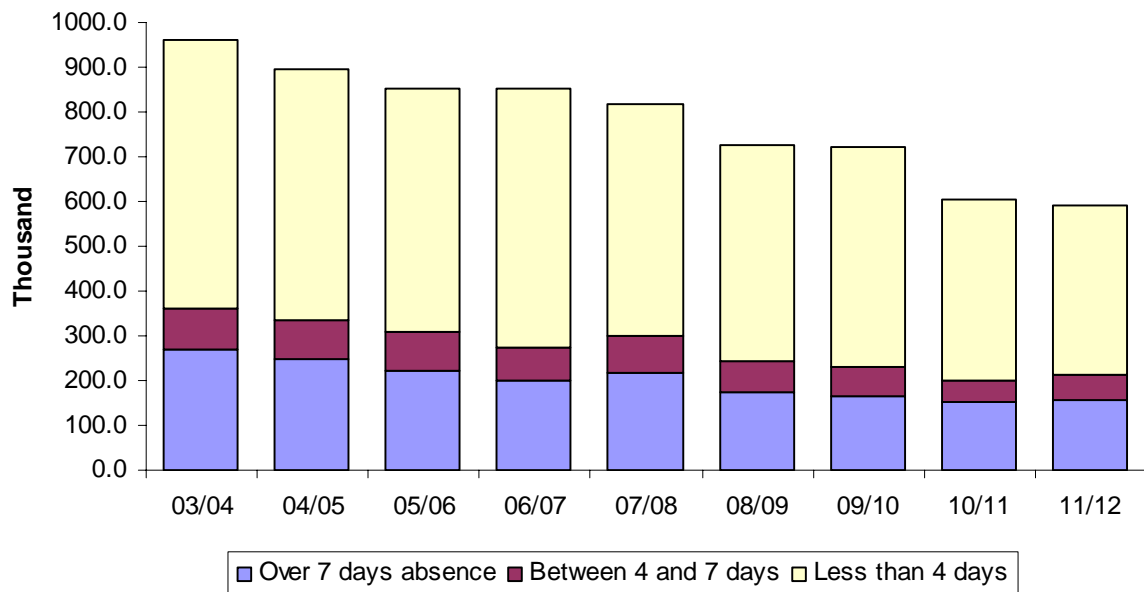


Chart 7 – Working days lost due to work-related injury and ill health

Note: average sample variability of +/-9% on the total

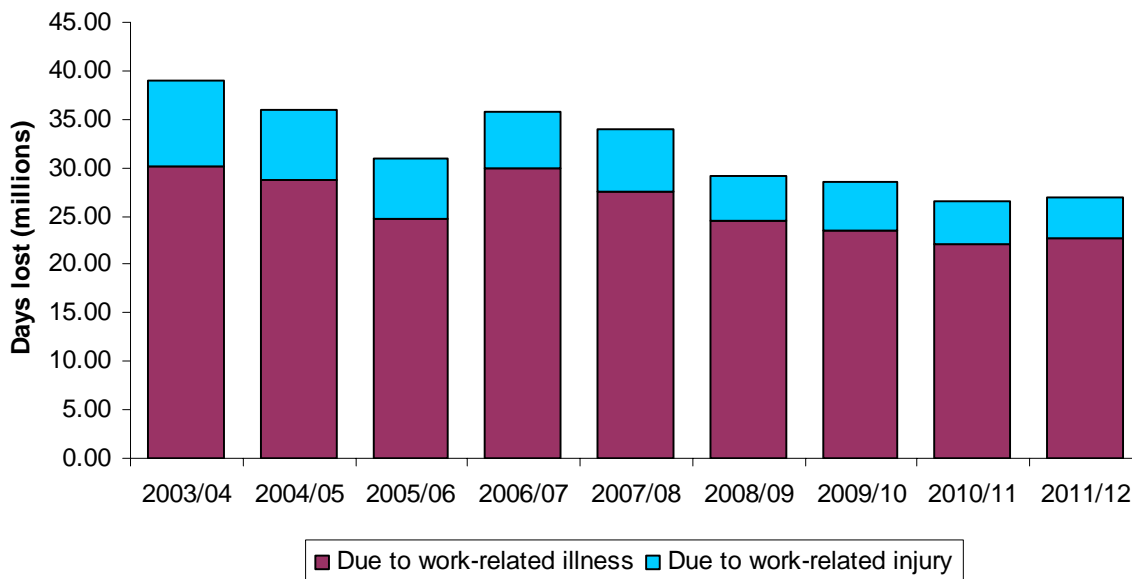
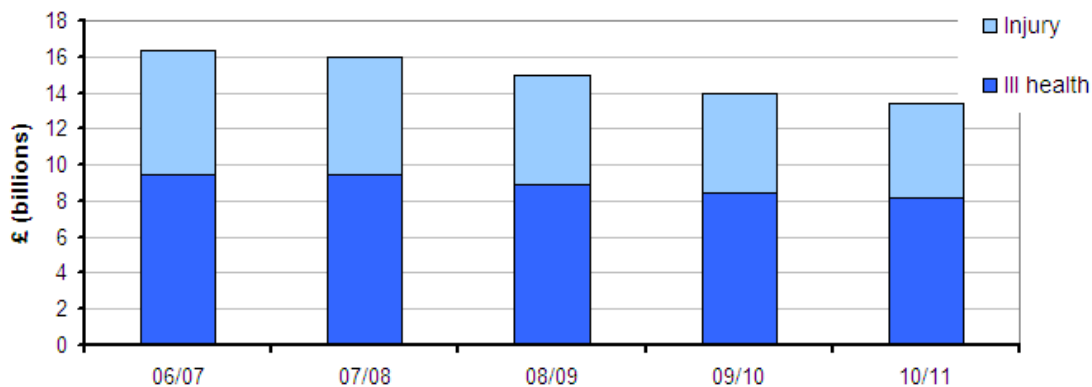


Chart 8 – Cost to society of workplace injury and ill health



Annex 2 – Fatal and reported non-fatal injury by sector
Fatal injuries to workers by main industry sector, 2006/07 - 2011/12p

Employment status	Industry sector (SIC2007)	2006/07		2007/08		2008/09		2009/10		2010/11		2011/12p		5-year average (06/07 - 10/11)	
		No	Rate per 100 000	No	Rate per 100 000	No	Rate per 100 000	No	Rate per 100 000	No	Rate per 100 000	No	Rate per 100 000	No	Rate per 100 000
Employee	A: Agriculture	13	8.7	22	13.8	9	5.1	14	9.4	11	6.9	11	7.3	14	8.8
	C: Manufacturing	34	1.1	28	0.9	29	0.9	22	0.9	25	1.0	29	1.1	28	1.0
	F: Construction	54	3.3	53	3.3	32	1.9	29	2.0	33	2.5	26	2.0	40	2.6
	G-S: Services	69	0.4	57	0.3	44	0.2	29	0.1	39	0.2	38	0.2	48	0.2
	All industries	191	0.8	178	0.7	127	0.5	104	0.4	122	0.5	118	0.5	144	0.6
Self Employed	A: Agriculture	20	14.8	24	18.6	16	10.3	25	15.1	23	12.4	22	11.7	22	14.2
	C: Manufacturing	1	0.4	1	0.4	0	-	2	1.0	3	1.5	2	1.1	1	0.7
	F: Construction	25	2.9	19	2.1	20	2.3	12	1.4	17	2.1	23	2.8	19	2.2
	G-S: Services	10	0.4	11	0.4	16	0.6	4	0.1	10	0.3	6	0.2	10	0.4
	All industries	56	1.4	55	1.4	52	1.3	43	1.0	53	1.3	55	1.3	52	1.3

Reported non-fatal injuries* to workers by main industry sector, 2006/07 - 2011/12p

*Reported non-fatal major and over-3-day injuries, combined.

NB - reporting levels for non-fatal injury to the self-employed are estimated to be between 5% and 10% compared to around 50% for employees

Employment status	Industry sector (SIC2007)	2006/07		2007/08		2008/09		2009/10		2010/11		2011/12p		5-year average (06/07 - 10/11)	
		No	Rate per 100 000	No	Rate per 100 000	No	Rate per 100 000	No	Rate per 100 000	No	Rate per 100 000	No	Rate per 100 000	No	Rate per 100 000
Employee	A: Agriculture	986	660.7	1117	701.0	1143	645.6	1183	793.3	948	596.0	1033	687.7	1075	677.4
	C: Manufacturing	26346	815.0	25184	781.0	21702	710.0	18590	722.9	17520	674.6	17495	675.9	21868	744.7
	F: Construction	10961	678.9	11260	699.3	10178	613.7	8313	578.1	7120	536.6	7621	587.3	9566	625.4
	G-S: Services	101237	517.3	96203	487.1	95839	480.0	90646	449.1	86999	430.8	81436	403.1	94185	472.5
	All industries	143197	569.3	138253	544.9	133155	522.1	122695	490.0	116686	467.4	111164	445.4	130797	518.9
Self Employed	A: Agriculture	62	45.8	86	66.8	87	56.1	104	62.8	87	46.8	80	42.4	85	55.3
	C: Manufacturing	177	76.4	171	73.7	139	61.6	138	71.6	161	79.1	156	82.5	157	72.4
	F: Construction	1487	173.6	1421	160.6	1201	137.0	1071	127.6	1108	134.9	1395	170.3	1258	147.0
	G-S: Services	591	22.4	599	22.3	586	22.2	621	22.0	665	22.7	561	18.4	612	22.3
	All industries	2340	59.0	2311	57.2	2037	50.7	1959	47.7	2106	50.1	2235	51.8	2151	52.9