Occupational Health Statistics Bulletin 2002/03

Contents

A National Statistics publication

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Introduction and summary

Introduction

This *Occupational Health Statistics Bulletin* summarises the latest statistics on work-related ill health in Great Britain. More detailed data and commentary are available on HSE's website at www.hse.gov.uk/statistics; specific links to the relevant webpages are indicated in the corresponding parts of the document.

The *Bulletin* covers:

- the overall picture regarding work-related illness and the demographic characteristics of those affected
- comparative figures for different occupations (jobs), industries (sectors) and areas (shown in map format)
- the latest position for particular types of occupational disease.

The statistics are derived from a number of different sources, descriptions of which are given in the *Technical Note*. They draw on newly available surveillance data from specialist doctors in The Health and Occupation Reporting network (THOR, formerly known as ODIN), claims for disablement benefit under the Department for Work and Pensions' Industrial Injuries Scheme (IIS), and deaths from mesothelioma and other occupational diseases, as well as the previously published results of the Self-reported Work-related Illness Survey (SWI) 2001/02 and analyses of mesothelioma mortality by occupation and area.

A summary of statistics on all aspects of workplace health and safety, including reports on progress against the targets set in the *Revitalising Health and Safety* strategy, will be given in *Health and Safety Statistics Highlights 2002/03*, scheduled for publication in November 2003.

Summary

Overall self-reported work-related ill health prevalence in Great Britain stood at 2.3 million people in 2001/02, accounting for 33 million working days lost, according to a household survey first published last year. Breakdowns of these figures reveal that, for example:

- **Males** accounted for more of the prevalence and the working days lost than females, and had a higher prevalence rate (as a percentage of people who had ever worked).
- Among people of working age, the prevalence rate and days lost per worker generally increased with **age**, especially among males.
- In terms of Socio-economic Classification, **lower managerial and professional** workers had the highest prevalence numbers and rates.

The high risk occupations, industries and areas are different for different types of ill health, as indicated by different sources (where sample numbers were large enough to give reliable estimates):

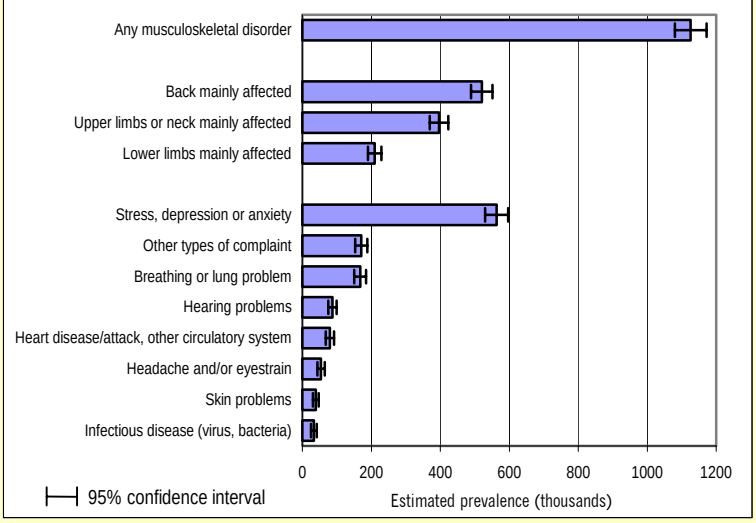
- **Occupation groups** with the highest overall self-reported prevalence rates in 2001/02 included protective services (e.g. police), health and social welfare associate professionals (e.g. nurses), skilled construction and building trades, and teaching and research professionals.
- Reports by specialist doctors in 2000-02 show relatively high incidence rates for occupations exposed to particular agents or risks (e.g. bakers for occupational asthma, metal plate workers for upper limb disorders), while analysis of death certificates reveals high mesothelioma mortality for occupations with substantial past exposure to asbestos (e.g. in shipbuilding).
- The **industry sectors** public administration and defence, education, and health and social work had high overall self-reported prevalence rates in both 2001/02 and the previous survey in 1998/99; all had high rates for stress, depression or anxiety, and health and social work also had a high rate for musculoskeletal disorders.
- In addition the agriculture, construction, extraction & utility supply and manufacturing sectors are revealed by various sources to have relatively high prevalence or incidence rates for several types of work-related ill health.
- Analysis by geographical **area**, in terms of overall self-reported illness prevalence, shows Wales with one of the highest rates and Scotland with the lowest.
- Detailed geographical analysis of mesothelioma deaths highlights the greatest excesses in areas containing industrial sites where asbestos has been used in the past, for example ports and dockyards (including several in Scotland).

The latest figures show a mixed picture for particular causes and kinds of work-related illness. For example:

- Surveillance data for **musculoskeletal disorders** and **stress** show little change in the most recent year, 2002.
- The numbers of deaths from **mesothelioma** and of new disablement benefit cases of **asbestosis** continue to rise, reflecting past exposures to asbestos.
- The estimated incidence of occupational **asthma** and of **contact dermatitis** have not changed much recently, although the data for asthma indicate a possible decrease in the last three years.
- The number of occupational **infections** reported by specialist doctors in 2002 was high due to several large outbreaks of diarrhoeal disease.
- The number of new disablement benefit cases of occupational **deafness** has remained fairly constant in the last four years, following a long-term decline.

The overall picture

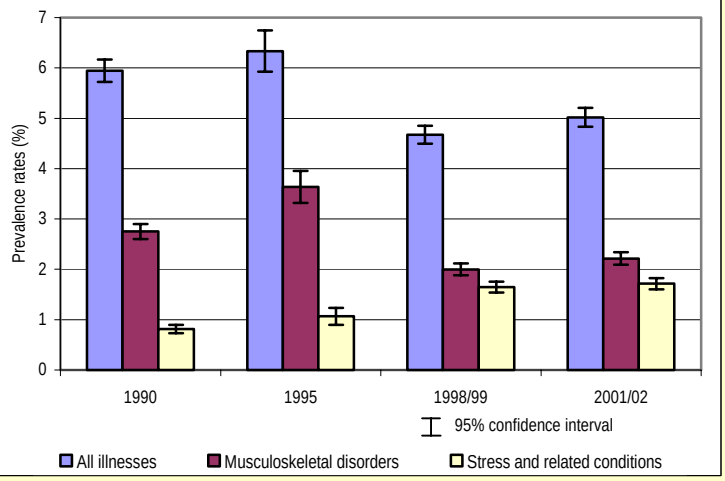
Figure 1: Estimated 2001/02 prevalence of self-reported illness caused or made worse by work, by type of illness, for people ever employed



- A self-reporting household survey carried out in 2001/02 (SWI01/02) estimated that 2.3 million individuals in Great Britain were suffering from an illness which they believed was caused or made worse by their current or past work. This prevalence estimate includes long standing as well as new cases.
- Musculoskeletal disorders (bone, joint or muscle problems) were by far the most commonly reported work-related illness, with an estimated prevalence of 1 126 000 people ever employed affected.
- Stress, depression or anxiety was the second most commonly reported illness, with an estimated prevalence of 563 000 people ever employed affected, followed by breathing and lung problems (168 000) and hearing problems (87 000).

More at: http://www.hse.gov.uk/statistics/pdf/ewi3ps.pdf

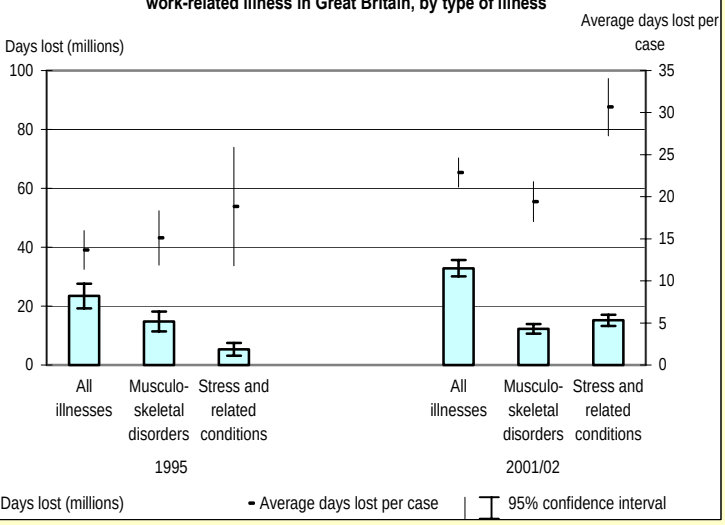
Figure 2: Comparison of estimated 1990, 1995, 1998/99 and 2001/02 prevalence rates (%) of self-reported illness caused or made worse by work, by type of illness, for people working in the last 12 months in England and Wales



- Comparisons between the latest figures and those from HSE's previous three SWI surveys have to be based on a restricted coverage (e.g. limited to people who worked in the last 12 months), and even on this basis are affected by differences in survey design.
- These comparisons suggest that over the past decade the overall rate of self-reported work-related illness prevalence has fallen; the rate in 2001/02 was somewhat higher than in 1998/99, but both were below the levels recorded for 1990 and 1995.
- The estimated prevalence rate of stress and related (mainly heart) conditions has increased over time and is now around double the level it was in 1990.
- Musculoskeletal disorders had a higher prevalence rate in 2001/02 than in 1998/99, but lower than a decade ago.

More at: http://www.hse.gov.uk/statistics/pdf/ewi3ps.pdf

Figure 3: Roughly comparable 1995 and 2001/02 estimated days (full-day equivalent) off work and associated average days lost per case of self-reported work-related illness in Great Britain, by type of illness

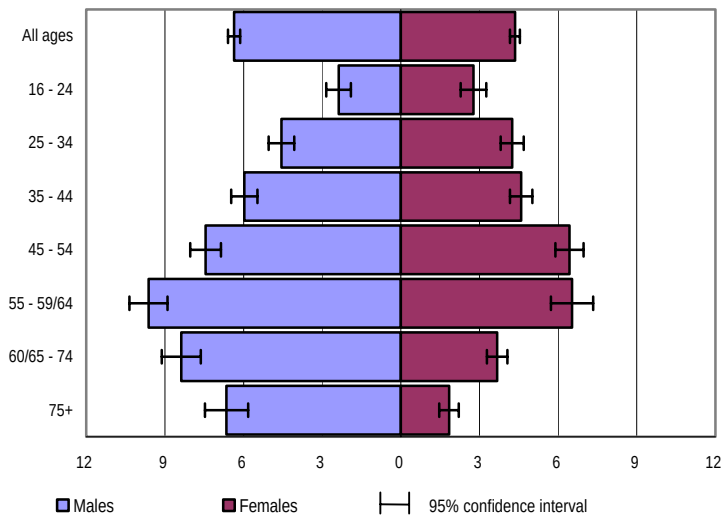


- An estimated 32.9 million working days (full-day equivalent) were lost in 2001/02 through illness caused or made worse by work. On average, each person suffering took an estimated 22.9 days off in that 12-month period. This equates to an average of 1.4 per worker.
- In 2001/02, stress, depression or anxiety and musculoskeletal disorders accounted for the majority of days lost: an estimated 13.4 million and 12.3 million days off work respectively.
- The estimated annual working days lost from SWI01/02 was higher than estimated by SWI95, as was the average number of days taken off. However, these are only roughly comparable estimates and should be treated with caution.

More at: http://www.hse.gov.uk/statistics/pdf/ewi3ps.pdf

Demographic characteristics

Figure 4: Estimated 2001/02 prevalence rates (%) of self-reported illness caused or made worse by work, by age and gender, for people ever employed



- An estimated 1 368 000 males were suffering from a work-related illness in 2001/02, compared with 959 000 females. At 6.4% of males ever employed, the prevalence rate was statistically significantly higher than for females (4.4%). In particular, male rates were statistically significantly higher than female rates in the 35-44 year age group and all older age groups.
- For males, the prevalence rate was highest in the 55-64 age group and lowest in the 16-24 age group, 9.6% and 2.4% of males ever employed respectively. Both rates were statistically significantly different from the rates for all other age groups and for males as a whole.
- For females, the 55-59 and 45-54 year age groups carried the highest prevalence rates of work related illness, 6.5% and 6.4% of females ever employed respectively. Both rates were statistically significantly higher than in each of the remaining groups and for females as a whole.

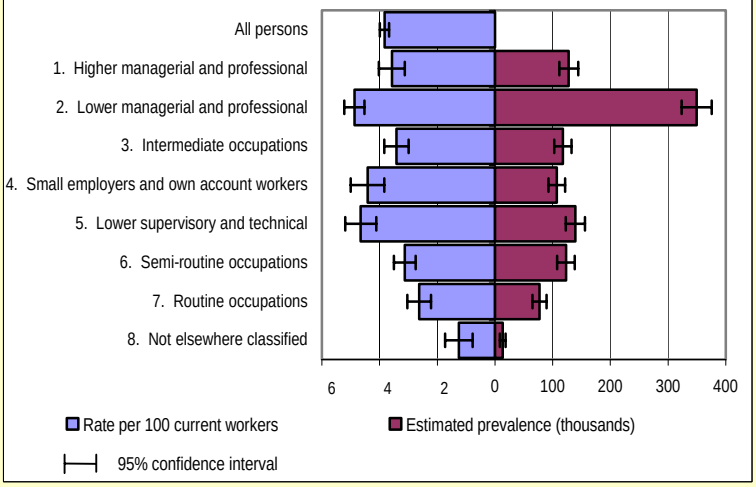
More at: http://www.hse.gov.uk/statistics/pdf/ava5p1.pdf

Figure 5: Estimated days off work (full-day equivalent) and associated average days lost per worker in 2001/02 due to self-reported illness caused or made worse by work, by age and gender

- Males took more time off work than females - an estimated 19.2 million and 13.7 million working days respectively. Nevertheless, average days lost per worker were of a similar order at 1.3 and 1.6 working days respectively.
- For males, the estimated average days lost per worker generally increased with age reaching 2.9 working days for the oldest age group (55+). This was statistically significantly higher than for all other age groups.
- There is a less clear pattern for females. Nevertheless, at 0.65 the average days lost per worker for the youngest age group (16-24 years) was statistically significantly lower than all other age groups, all of which were of a similar order.

More at: http://www.hse.gov.uk/statistics/pdf/ava5p2.pdf

Figure 6: Estimated 2001/02 prevalence and rates (%) of self-reported illness caused or made worse by current job, by socio-economic classification

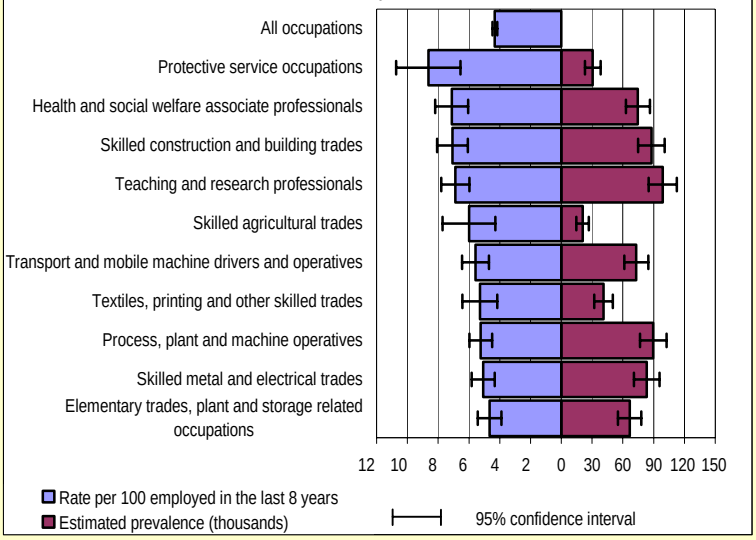


- Because of its link to the Labour Force Survey, estimates from the SWI can be classified according to the National Statistics Socio-economic Classification.
- An estimated 350 000 workers (33%) suffering from an illness attributed to their current work were classified as lower managerial and professional. This group, along with those classified as lower supervisory and technical, carried the highest prevalence rates: 4.9% and 4.7% respectively.
- Workers classified as in routine occupations (2.6%), semi-routine occupations (3.1%) and intermediate occupations (3.4%) carried the lowest rates of work-related illness (excluding the not elsewhere classified group).

More at: http://www.hse.gov.uk/statistics/pdf/ava5p3.pdf

Occupation groups

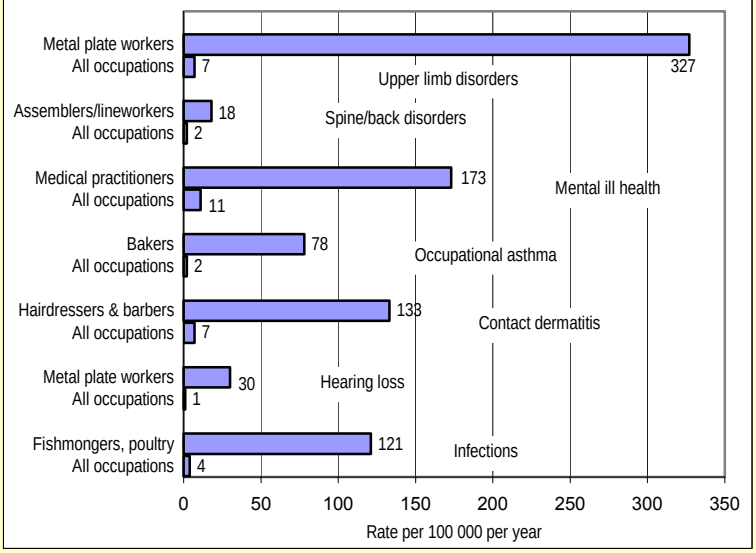
Figure 7: Estimated 2001/02 prevalence and rates (%) of self-reported illness caused or made worse by current or most recent job, by occupational sub-major group, for people working in the last 8 years: 'Top 10'



- The SWI survey results can be analysed by the affected person's occupation – in their current or most recent job in the last 8 years – for sub-major groups of the Standard Occupational Classification 2000, where sample numbers were large enough to provide reliable estimates.
- Occupation groups with the highest estimated prevalence rates of self-reported work-related illness, at between 1½ and 2 times the overall average, included protective service occupations (e.g. police officers), health and social welfare associate professionals (e.g. nurses), skilled construction and building trades, and teaching and research professionals.
- Other groups with rates which were statistically significantly above the average were transport and mobile machine drivers and operatives, process/plant/machine operatives, and skilled metal and electrical trades.

More at: http://www.hse.gov.uk/statistics/pdf/swi3p1.pdf

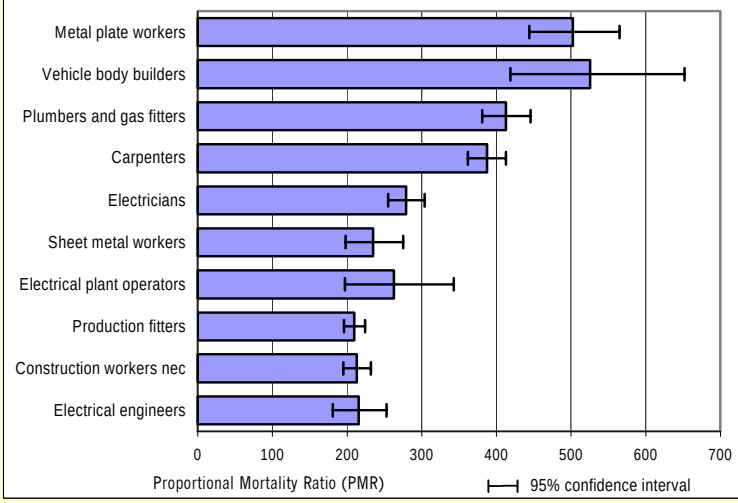
Figure 8: Top occupations reported to disease specialists in each THOR scheme, annual average incidence rates per 100 000 workers, 2000-2002



- Alternative sources of data on work-related illness give information about the occupations of those affected. New cases reported to The Health and Occupation Reporting Network (THOR) can be analysed at the detailed level of Unit groups in SOC 90. For this analysis, only categories where there were 10 or more actual cases are included.
- The six disease groups covered by the THOR scheme are shown separately (excluding reports from occupational physicians, since access to these varies greatly by occupation), with musculoskeletal disorders split further into upper limb and spine/back disorders. The occupations with high incidence rates are mostly very different for the different disease groups.
- The ratio between the top occupation and the average ranged from under 10 (for spine/back disorders) to over 40 (for upper limb disorders).

More at: http://www.hse.gov.uk/statistics/disease.htm

Figure 9: Mesothelioma: Proportional mortality ratios by occupation for males, 1980-2000 (excluding 1981): 'Top 10'



- Mortality due to the asbestos-related cancer mesothelioma can be analysed according to the occupation recorded on the death certificate, by means of Proportional Mortality Ratios (PMRs – see technical note for details) and classified using the Southampton Classification of Occupations.
- Due to the long latency period for mesothelioma, these deaths during 1980-2000 will generally relate to exposures during the 1970s and earlier decades. Death certificates only record the most recent full-time occupation, which may not be where the deceased was exposed to asbestos, and so the analysis of PMRs will dilute the observed difference between jobs with asbestos exposure and other jobs.
- Occupations with the highest risks – between 2 and 5 times the average – are generally in three broad areas of asbestos use: shipbuilding, railway carriage and locomotive building, and the installation and maintenance of lagging or other insulation materials.

More at: http://www.hse.gov.uk/statistics/causdis/meso.htm

Industry sectors

SIC 92 Industry Section	SWI 01/02 prevalence rate	Whether statistically significantly different from the all industries average		Types of ill health with prevalence rates which are statistically significantly above average (SWI01/02) or incidence rates which are relatively high (IIS or THOR, 2000-02)
		SWI01/02	SWI98/99	
A&B: Agriculture, hunting, forestry, fishing	6.5%	Above	No	Musculoskeletal disorders (SWI01/02); Asthma (THOR).
L: Public administration and defence	5.7%	Above	Above	Stress, depression or anxiety (SWI01/02); Mental illness (THOR).
F: Construction	5.6%	No	No	Musculoskeletal disorders (SWI01/02); Spine/back disorders (THOR); Asbestosis, mesothelioma, dermatitis (IIS).
C&E: Extraction & utility supply	5.6%	No	No	Upper limb disorders, hearing loss (IIS & THOR); Vibration white finger, dermatitis (IIS).
M: Education	5.4%	Above	Above	Stress depression or anxiety (SWI01/02); Mental illness (THOR).
N: Health & social work	5.2%	Above	Above	Musculoskeletal disorders, Stress depression or anxiety (SWI01/02); Mental illness, spine/back disorders, dermatitis, infections (THOR).
I: Transport, storage & communication	5.0%	No	No	None.
D: Manufacturing	4.4%	No	No	Musculoskeletal disorders (SWI01/02); Upper limb disorders (THOR); Asthma, dermatitis, hearing loss (IIS & THOR).
ALL INDUSTRIES	4.3%	-	-	-
J: Financial intermediation	3.9%	No	No	Stress depression or anxiety (SWI01/02).
O: Other community, social & personal service activities	3.8%	No	No	Dermatitis (THOR).
K: Real estate, renting & business activities	3.3%	Below	Below	None.
G: Wholesale, retail & motor trade	2.9%	Below	Below	None.
H: Hotels & restaurants	2.7%	Below	Below	Dermatitis (THOR).

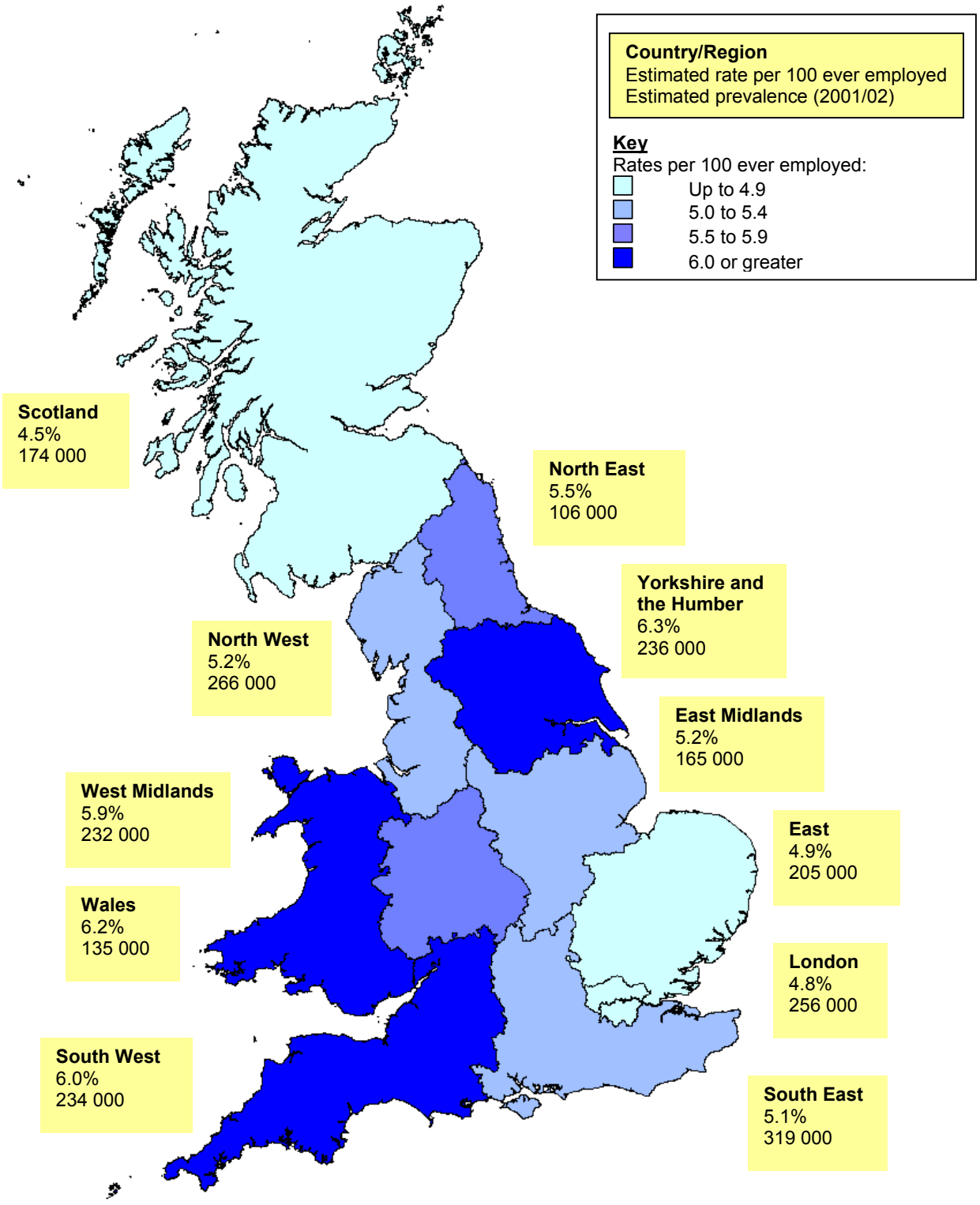
The table shows the SIC92 industry sections of people's current or most recent jobs, ranked according to their overall work-related ill health prevalence rate estimated from SWI01/02 (for people who worked in the last 8 years), where the sample numbers were large enough to provide reliable estimates.

It indicates whether the rate was statistically significantly above or below the average for all industries, for SWI01/02 and for SWI98/99 (both restricted to people who had worked in the last 12 months).

Three industries (highlighted in orange) were significantly above average in both surveys, and three (highlighted in green) below average.

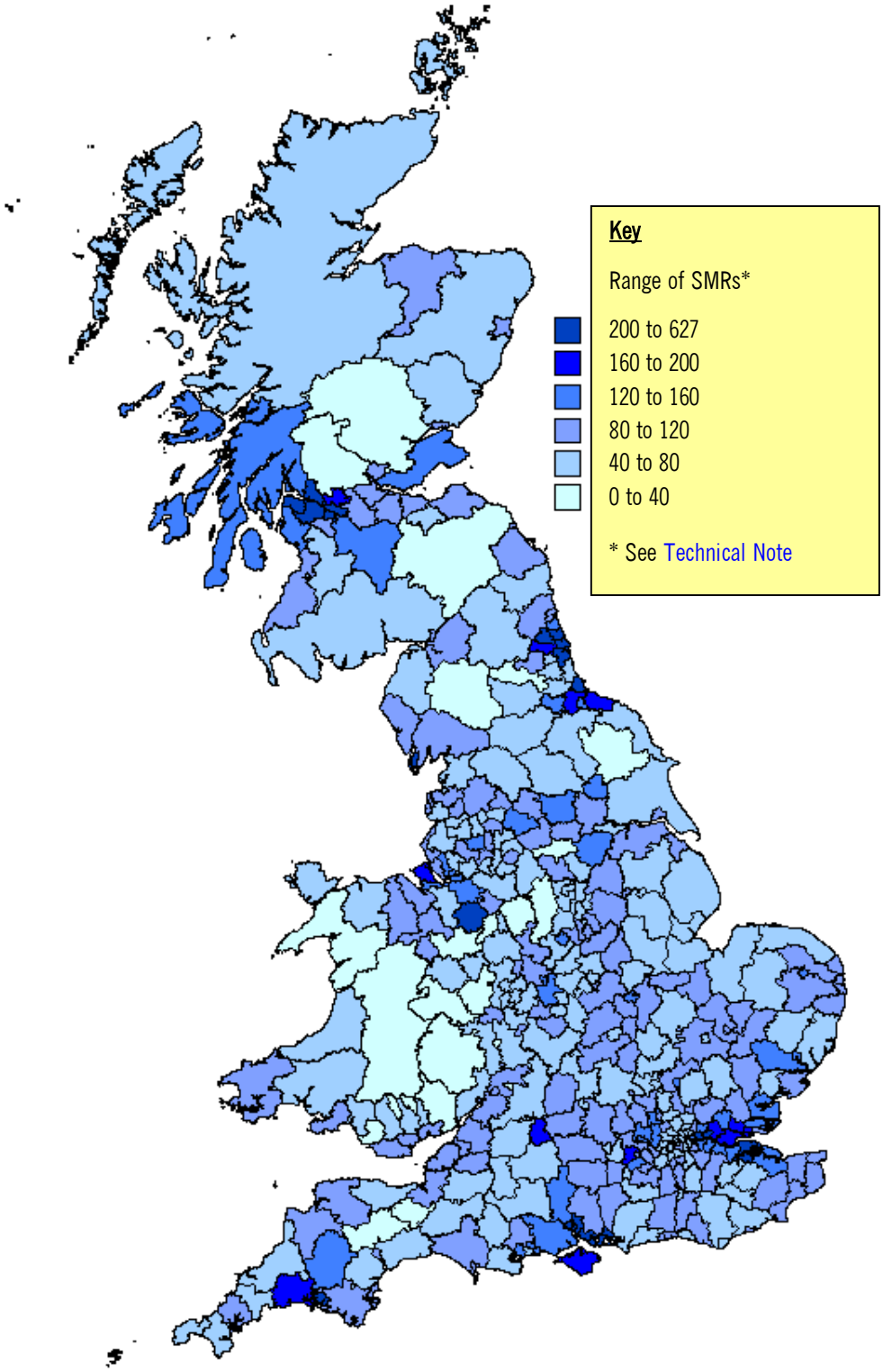
- In the final column, the table lists types of ill health for which each industry had relatively high rates. This uses data on the prevalence of musculoskeletal disorders and stress from SWI01/02, and on the incidence of various diseases based on cases assessed under the Industrial Injuries Scheme (IIS) or reports by disease specialist doctors in The Health and Occupation Reporting network (THOR) in 2000-02.
- In addition to the three industries mentioned, four others (shaded in light orange) also had above average rates for a number of types of ill health.

Self-reported work-related illness: Countries and regions



- SWI 01/02 prevalence estimates and rates per 100 ever employed can be broken down by country and by Government Office Region within England.
- With an estimated 6.2% of people (ever employed) suffering from a work-related illness, Wales had a statistically significantly higher prevalence rate than Great Britain (5.3%) and than England (5.4%). The rate for Scotland, at 4.5%, was statistically significantly lower than the rate for England and for Great Britain as a whole.
- Within England, the government office regions with the highest prevalence rates were Yorkshire and the Humber, the South West and the West Midlands, all of which were statistically significantly higher than the rates for England and Great Britain as a whole. London and the East carried the lowest prevalence rates, both being statistically significantly lower than those for England and Great Britain.

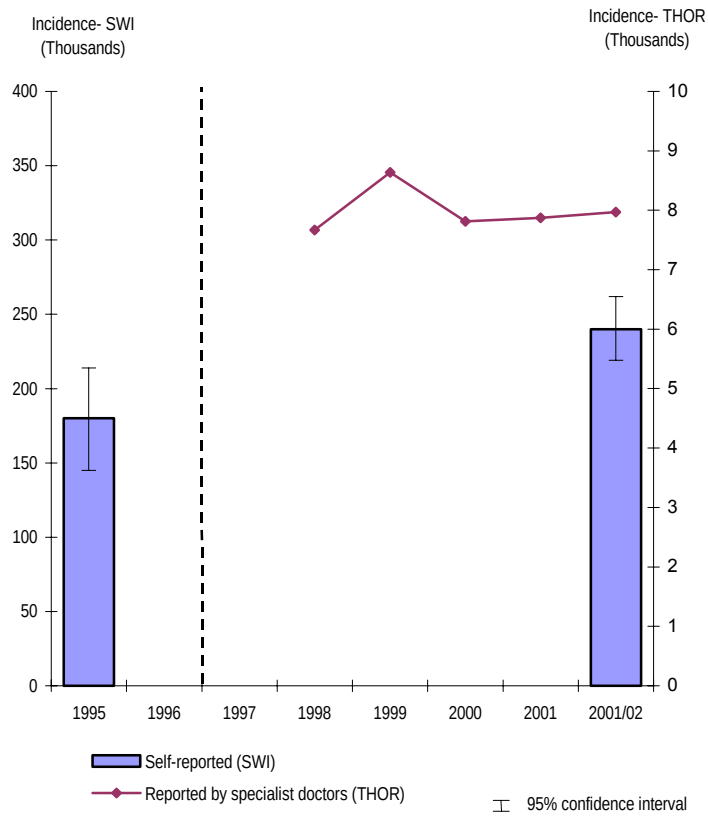
Male mesothelioma deaths: Counties and unitary authorities



- A geographical analysis of deaths from mesothelioma according to the area where they were registered is available at the more detailed level of counties (including their constituent Local Authorities (LAs)) and Unitary Authorities (UAs) and uses Standardised Mortality Ratios (SMRs – see technical note for details).
- Due to the long latency period for mesothelioma, these deaths during 1986-2000 generally relate to exposures before the early 1980s. The major hot spots highlighted in these data are mainly areas close to known industrial sites where asbestos has been used in the past.
- In particular, the areas with the highest mesothelioma excesses in males tend to be those which contain ports and dockyards. The area with the highest SMR – in excess of six times the average for Great Britain – was the UA of West Dunbartonshire in Scotland and this is likely to be primarily due to shipbuilding.
- Other areas with significantly elevated SMRs for men include those with a large railway engineering industry, which made extensive use of asbestos in the past (e.g. the LA of Crewe & Nantwich), and some containing factories that used raw asbestos during production (e.g. the LA of Sunderland, also containing shipyards).

Musculoskeletal disorders and stress

Figure 10: Estimated incidence of work-related musculoskeletal disorders

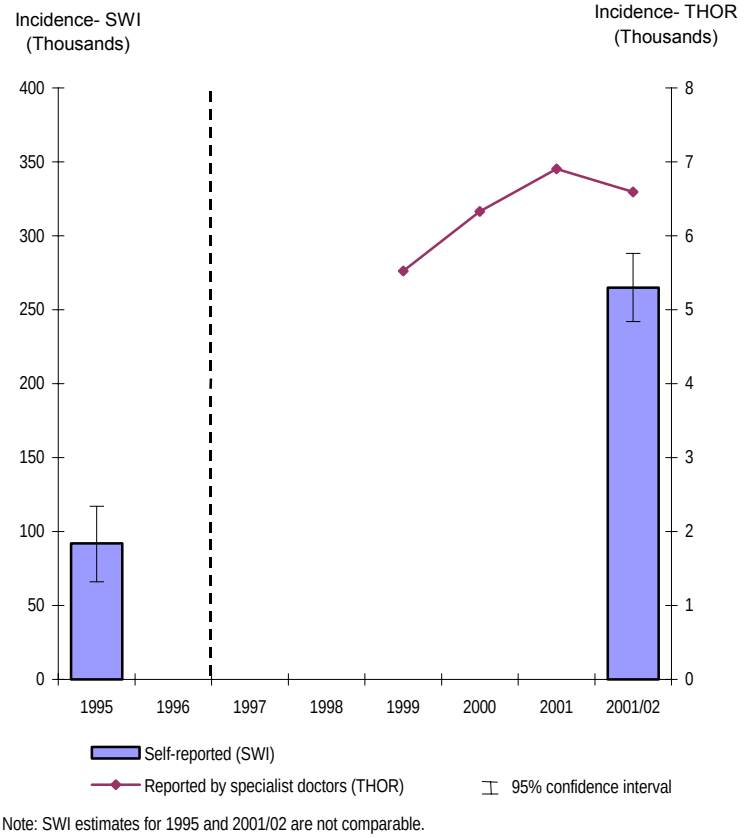


Note: SWI estimates for 1995 and 2001/02 are not comparable.

- In 2001/02, an estimated 1 126 000 people in Great Britain suffered from a musculoskeletal disorder which, in their opinion, was caused or made worse by their current or past work. This prevalence estimate equates to 2.6% of people who have ever worked.
- SWI01/02 estimated that 21% of sufferers, 240 000 people ever employed, first became aware of their work-related musculoskeletal disorder in the previous 12 months. In terms of people employed in the last 12 months, this equates to an estimated incidence rate of 0.76%.
- Estimates presented here from SWI, the most comprehensive source of data, on the incidence of work-related musculoskeletal disorders are not directly comparable between 2001/02 and 1995. However, the number of first visits to THOR specialists appears to have remained fairly stable in recent years; an estimated 8000 cases were seen for the first time in 2002 by rheumatologists and occupational physicians reporting to the THOR surveillance schemes.
- Occupations carrying above average prevalence rates in the SWI01/02 survey included skilled trades (e.g. painters and decorators, carpenters and joiners) and process plant and machine operatives (e.g. heavy goods vehicle drivers). Occupations in construction and other skilled trades along with those involving typing and repetitive tasks (e.g. typists and word processor operators, packers, bottlers, canners and fillers) were amongst those with the highest incidence rates reported by rheumatologists to THOR.

More at: http://www.hse.gov.uk/statistics/causdis/musc.htm

Figure 11: Estimated incidence of work-related stress, depression or anxiety

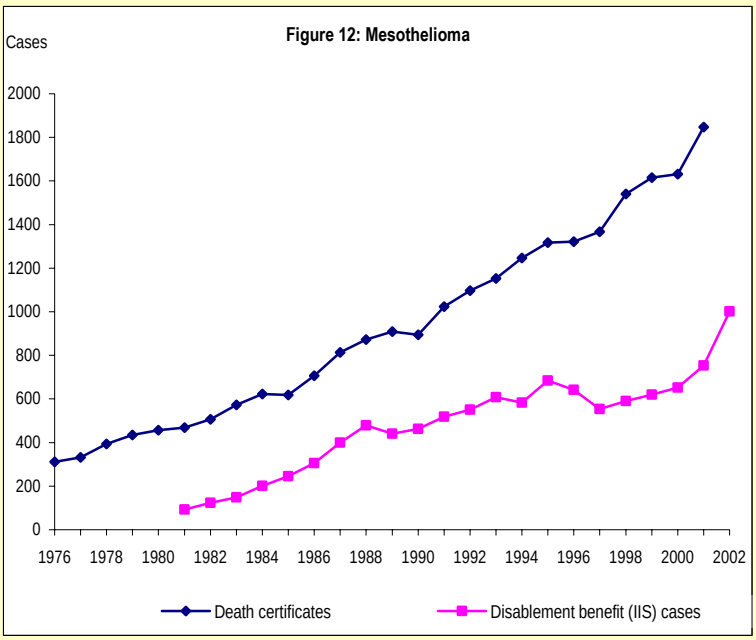


Note: SWI estimates for 1995 and 2001/02 are not comparable.

- The 2001/02 survey of Self-reported Work-related Illness gave a prevalence estimate of over half a million people in Britain who believed they were experiencing work-related stress at a level that was making them ill.
- The annual incidence of work-related mental health problems in Britain in 2002, as estimated from the THOR surveillance schemes, was just under 7000 new cases per year. However, this almost certainly underestimated the true incidence of these conditions in the British workforce. The most recent survey of work-related illness SWI01/02, indicates that an estimated 265 000 people who had ever worked first became aware of work-related stress, depression or anxiety in the previous 12 months.
- Survey and surveillance data suggest that work-related stress and related disorders had been increasing in the British population in the recent past. The latest year of THOR surveillance data shows a small fall, but it is too early to assess whether this represents any changing trend.
- Occupation and industry groups containing teachers and nurses, along with protective service occupations and some managerial groups have high prevalence rates of work-related stress in the SWI and SHAW surveys. The THOR datasets also report high incident rates of work-related mental illness for these occupational groups, along with other public sector workers such as police officers, social workers, probation officers, UK armed forces personnel and medical practitioners.

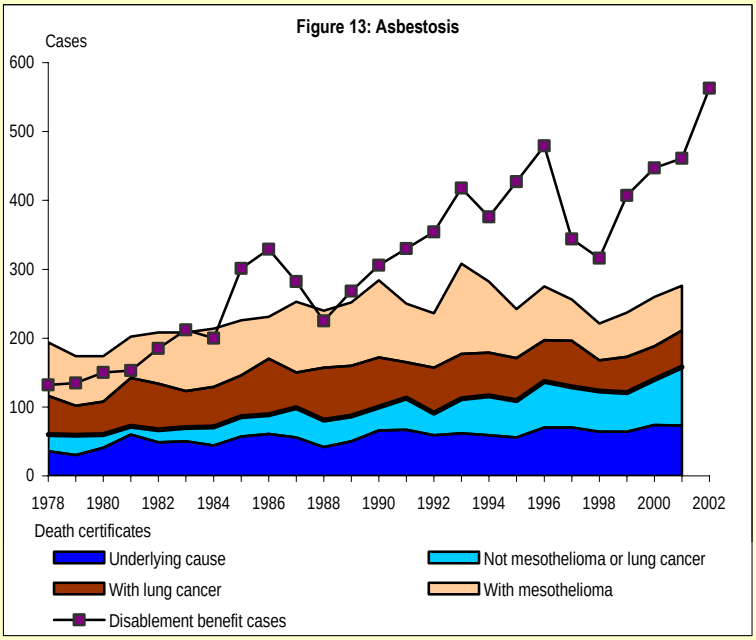
More at: http://www.hse.gov.uk/statistics/causdis/stress.htm

Asbestos-related diseases and cancers



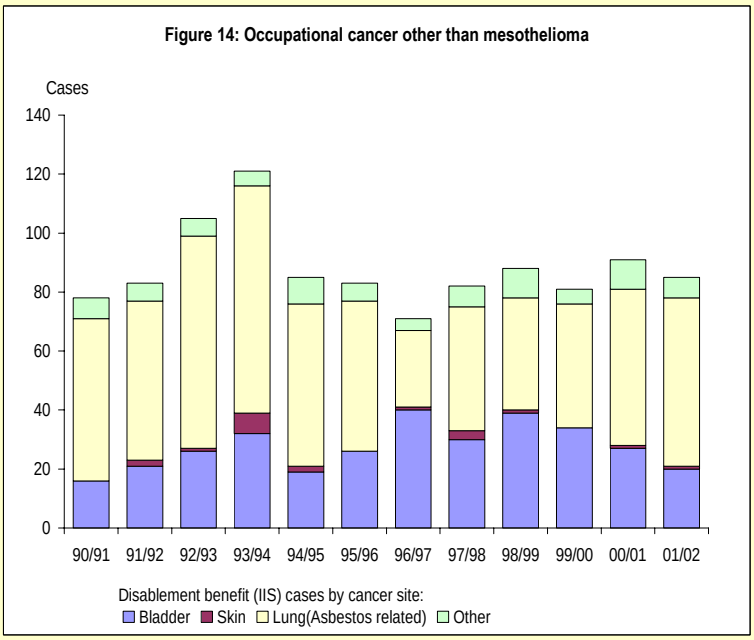
- The number of deaths from mesothelioma (an asbestos-related cancer) has increased from 153 in 1968 to 1848 in 2001. Of these deaths in 2001, 1579 were among males.
- Current projections suggest that male deaths from mesothelioma may peak around the year 2011, at about 1700 deaths per year. Modelling which includes the most recent year is now being carried out and the results will be published later in the Autumn.
- Deaths occurring now, and most of those expected in the future, reflect past industrial conditions; deaths in males aged under 45 have been falling since the early 1990s.
- The industry groups with the highest incidence rates of Industrial Injuries Scheme assessments for mesothelioma in 2000-2002 were construction (including insulation and asbestos removal) and extraction, energy and water supply.

More at: http://www.hse.gov.uk/statistics/causdis/meso.htm



- IIS disablement benefit cases for asbestosis, a type of lung fibrosis caused by inhalation of asbestos fibres, have risen erratically, but rather strongly since the early 1980s, and have reached a peak of 563 in 2002. This is an increase of over 100 compared to 2001.
- Based on death certificates mentioning asbestosis, the number of deaths due to the disease in 2001 is likely to have been at least 160.
- The industry groups with the highest incidence rates of DWP assessments for asbestosis, based on 2000-2002 figures, were construction (including insulation work and asbestos removal), extraction, energy and water supply, and manufacturing.

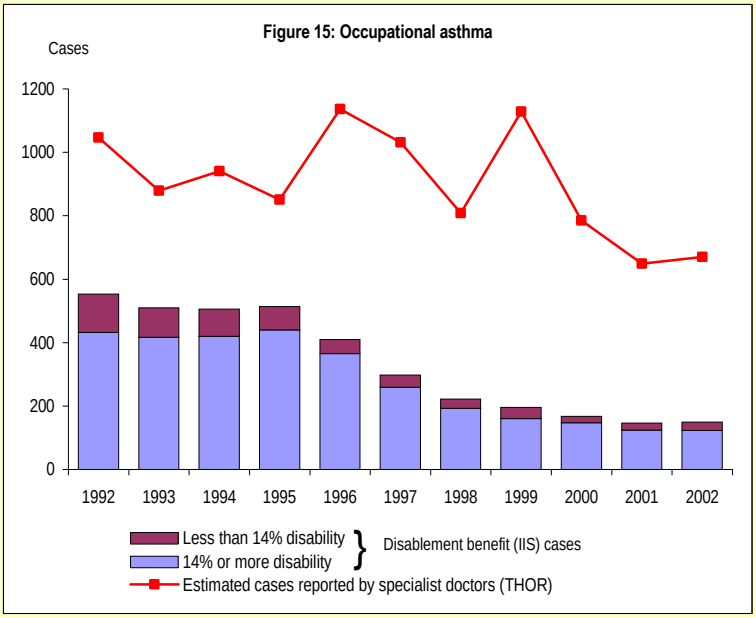
More at: http://www.hse.gov.uk/statistics/causdis/asbestos.htm



- The current best estimate of the proportion of cancer deaths in Great Britain due to occupational causes is 4%, with an associated uncertainty range of 2% to 8%. Applying these estimates to the latest 5 years' mortality data for Great Britain provides an estimated annual number of cancer deaths from work-related causes of 6 000 (uncertainty range 3 000 to 12 000).
- The total number of Industrial Injuries Scheme (IIS) disablement benefit cases of cancer other than mesothelioma has remained at around 80 per year since 1994/95.
- Asbestos-related lung cancers are hard to identify individually; the number of IIS cases is likely to be a substantial underestimate. From various studies, a reasonable rule of thumb is to allow for one or two lung cancers for each case of mesothelioma.

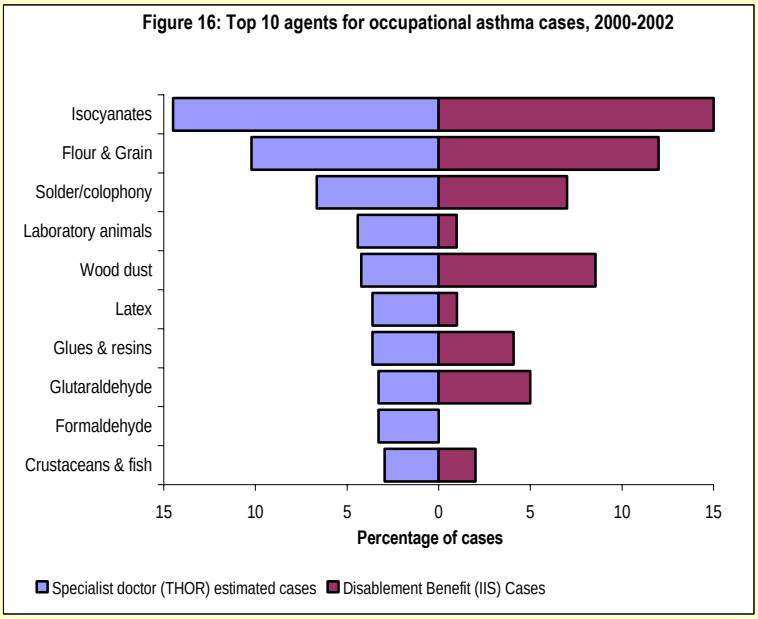
More at: http://www.hse.gov.uk/statistics/causdis/cancer.htm

Respiratory diseases



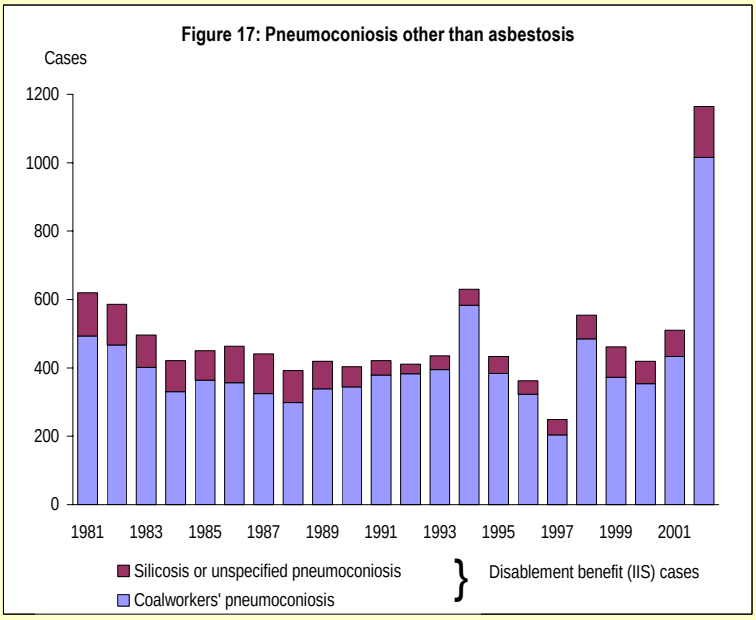
- The 2001/02 Self-reported Work-related Illness survey estimated that there were 168 000 people with breathing or lung problems which they believed to be work-related. In the corresponding 1995 survey, about 70 percent of those reporting work-related lower respiratory conditions described symptoms consistent with asthma.
- An estimated 670 cases of occupational asthma were seen for the first time by occupational and chest physicians who reported to the THOR surveillance schemes in 2002.
- Trends in occupational asthma are difficult to assess from the available data sources. Over the last ten years the number of estimated THOR cases has fluctuated around an average annual incidence approaching 1000 cases per year. However the estimated numbers for the last three years have all been well below this level, at around 700 cases per year, indicating a possible decrease in the incidence of occupational asthma.

More at: http://www.hse.gov.uk/statistics/causdis/asthma.htm



- Isocyanates (used e.g. in the manufacture of some paints and foams) were the most commonly cited agents for both THOR and Industrial Injuries Scheme cases in the three years 2000-2002, with flour & grain being the second and solder flux/colophony the third most common agents.
- The occupations with the highest incidence rate of occupational asthma as reported to chest physicians were bakers, flour confectioners, spray painters and those in the welding trades. For each of these occupations the estimated rate was over 20 times the overall rate for all occupations.
- Over half the cases reported by THOR doctors in the three years 2000-2002 came from the manufacturing sector, with the highest rates for chest physicians being in the manufacture of food products and beverages and of basic metals, both of which had rates of over five times the all industries figure.

More at: http://www.hse.gov.uk/statistics/causdis/asthma.htm

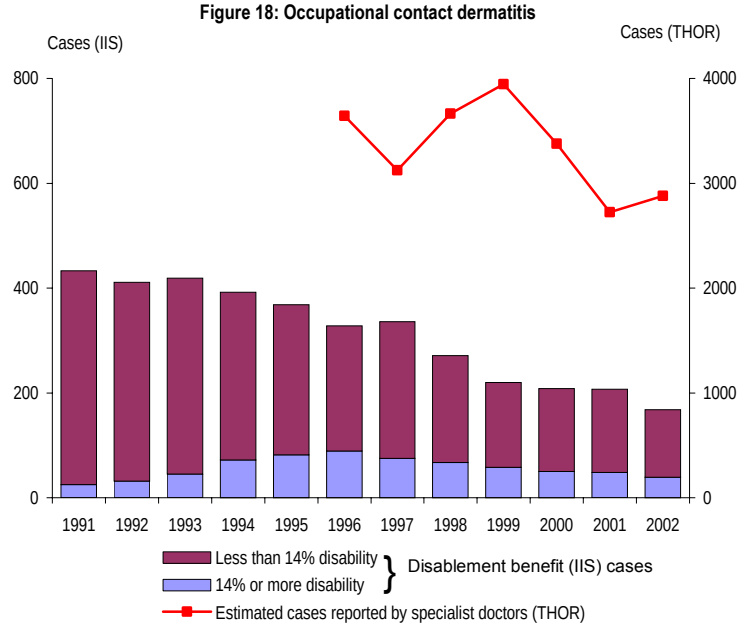


- The Industrial Injuries Scheme (IIS) compensation figures for pneumoconiosis are believed to be a relatively good indication of disease incidence because compensation is well established within affected industries. However, they are subject to fluctuations from time to time in response to changes to the administration of the compensation system.
- There were 1164 new assessed cases of pneumoconiosis (excluding asbestosis) in the IIS in 2002, a large increase on previous years. This is believed to be due to a more accurate method of data collection introduced by the Department for Work and Pensions in April 2002.
- Most new compensated cases of pneumoconiosis (excluding asbestosis) occur in retired workers, the majority from the coal mining industry; other industries affected are quarrying, foundries and potteries, where silica is the predominant cause.

More at: http://www.hse.gov.uk/statistics/causdis/coal.htm

Skin and infectious diseases

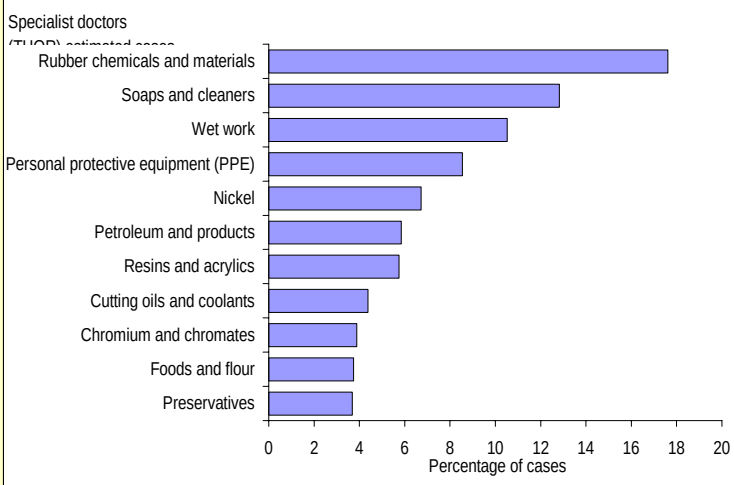
Figure 18: Occupational contact dermatitis



- An estimated average of 3900 new cases of work-related skin disease were diagnosed each year between 2000 and 2002 by dermatologists and occupational physicians reporting to the THOR surveillance schemes: approximately 80% of these were contact dermatitis.
- Trends in dermatitis incidence from the surveillance schemes are difficult to discern due to year-on-year fluctuations in the estimates, but the underlying incidence appears roughly constant at between 2700 and 3400 new cases per year.
- The annual number of workers with occupational dermatitis assessed as having some degree of disablement under the Industrial Injuries Scheme continued to fall from just over 400 in the early 1990s to just over 150 in 2001/2002.

More at: http://www.hse.gov.uk/statistics/causdis/skin.htm

Figure 19: Top 10 agents for contact dermatitis cases, 2000-2002

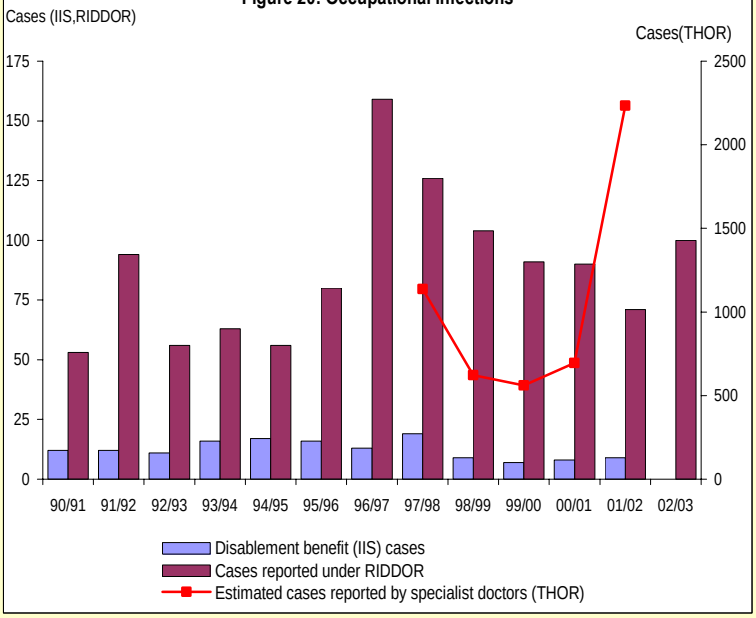


Note: Since some cases have more than one substance reported, the total percentage of all contact dermatitis cases exceeds 100.

- During 2000-2002, the most common agents cited by dermatologists and occupational physicians as causes of skin disease were rubber chemicals and materials, followed by wet work and soaps and cleaners.
- The occupations estimated to be at highest risk in 2000-2002, based on dermatologists' reports to THOR, were hairdressers and barbers, beauticians and related occupations, and printers.
- The industries where workers were estimated to be at highest risk in 2000-2002, according to dermatologists reporting to THOR, were other services (mainly hairdressing), manufacture of basic metals, and tanning and dressing of leather etc.

More at: http://www.hse.gov.uk/statistics/causdis/skin.htm

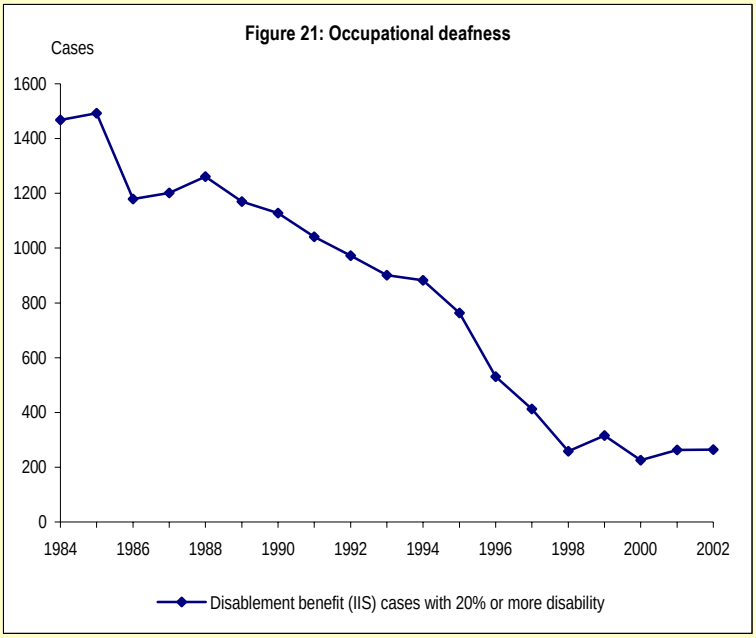
Figure 20: Occupational infections



- Consultants in communicable disease control in the THOR scheme reported 2233 new cases of occupationally acquired infection in 2002, an approximately threefold increase compared to the previous year; this was due mainly to several large outbreaks of diarrhoeal disease in 2002. The estimated number of new cases of occupational infections from THOR data probably substantially underestimates the true incidence of occupational infections in Great Britain.
- The underlying trend in recent years from RIDDOR and IIS data, which focus on a limited group of usually more serious infections, suggests no clear change in the numbers of occupational infections over time.
- THOR data for 2000-2002 indicates that fishmongers and poultry dressers had the highest estimated rates of occupational infections, at 121 per 100,000 workers per year. High rates of infections were also reported for healthcare and childcare occupations, especially for care assistants and attendants (108 per 100,000 workers per year).

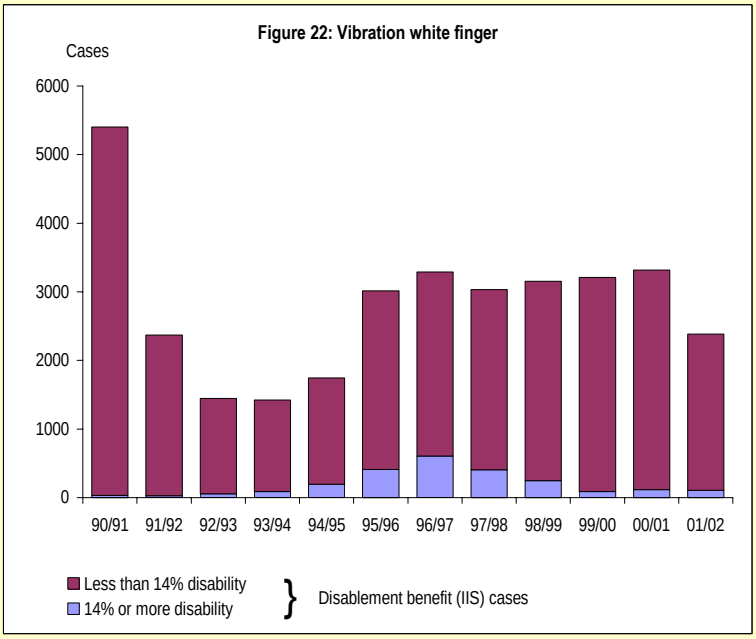
More at: http://www.hse.gov.uk/statistics/causdis/infect.htm

Other occupational diseases and exposures



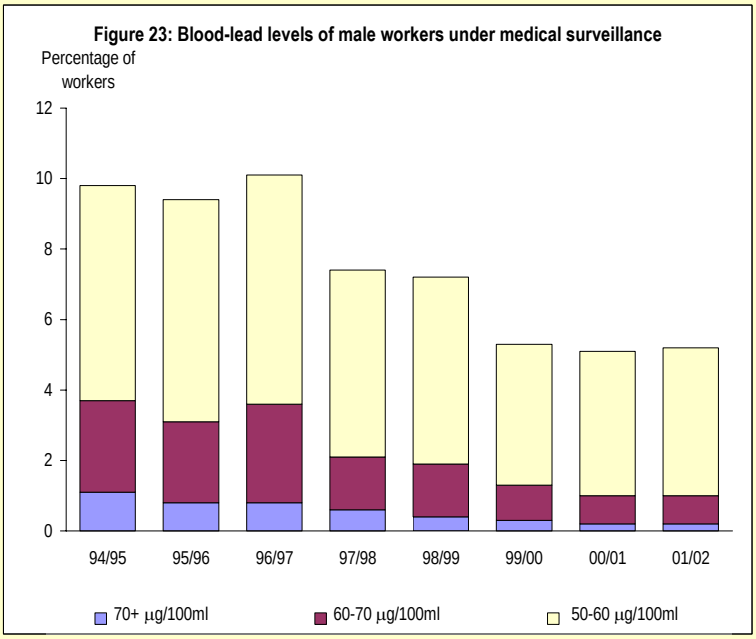
- A Medical Research Council survey in 1997-98 gave a prevalence estimate of 509 000 people in Great Britain suffering from hearing difficulties as a result of exposure to noise at work. This is much higher than estimates from the Self-reported Work-related Illness (SWI) surveys: the 2001/02 SWI survey estimated that 87 000 people in Great Britain were suffering from work-related hearing problems.
- Numbers of new cases of noise-induced deafness qualifying for Industrial Injuries Scheme disablement benefit fell steadily since the mid 1980s, reaching 226 in 2000. However since 1998 there has been little change and the number rose slightly to 263 in 2001 and 264 in 2002.
- The industry groups with the highest average annual incidence rates of new cases qualifying for benefit (based on 2000-02 figures) were extraction energy and water supply, manufacturing and construction.

More at: http://www.hse.gov.uk/statistics/causdis/noise.htm



- A Medical Research Council survey in 1997-98 gave a national prevalence estimate of 301 000 sufferers from vibration white finger (VWF), a disorder of the blood supply to the fingers and hands. This is much larger than the available estimates from the Self-reported Work-related Illness (SWI) surveys – 36 000 in 1995.
- The number of new cases of VWF assessed for disablement benefit was 2428 in 2001/02, lower than in the preceding six years (there were 3317 in 2000/01). Figures for earlier years fluctuated widely, peaking at 5403 in 1990/91 and falling to 1425 in 1993/94.
- The number of new cases of carpal tunnel syndrome (arising from entrapment or compression of nerves in the wrist) assessed for disablement benefit continues to rise, with 797 cases in 2001/02 compared with 600 the previous year and 267 in 1993/94.

More at: http://www.hse.gov.uk/statistics/causdis/vibrate.htm



- The total number of lead workers under medical surveillance fell for the fourth consecutive year to 15 200 in 2001/02.
- The number of young people (aged under 18 years) under medical surveillance fell sharply in 2001/02 to 20 from 48 in 2000/01.
- The proportion of male workers with blood-lead measurements at or above 60µg/100ml remained level between 2000/01 and 2001/02 at 1.0%, the lowest ever recorded.
- Painting (of buildings and vehicles) and lead batteries were the industrial sectors where the proportion of male workers at or above 60µg/100ml was greatest.
- The proportion of female workers with blood-lead levels at or above 30µg/100ml fell but the proportions are small and tend to fluctuate from year to year.

More at: http://www.hse.gov.uk/statistics/causdis/lead.htm

Technical note

Background

The terms 'occupational' or 'work-related' ill health cover the wide range of disorders which can be attributed to a person's work. Some, such as lead poisoning and asbestosis, are clearly occupational since the exposures which cause them are unlikely to be found outside work. However, many conditions which can be linked to work exposures may arise from a variety of factors: for example, back pain may be due to poor posture at work or at home, while stress may come from work pressures or from problems in outside life.

Another special feature of occupational ill health is that, unlike workplace injuries and fatalities, it normally does not occur immediately after exposure to the hazard. There is a delay, or latency period, between exposure and ill health, which may range from a few hours (in the case of some infectious diseases) to several decades (for many cancers).

The multifactorial nature of ill health, combined with its usually delayed effects, can make it difficult to attribute individual cases of ill health to causation by work factors. Attribution will be done differently by different people – e.g. doctors, employers and individual workers – reflecting their own perspectives, knowledge and awareness. All of this means that work-related ill health cannot be defined or measured in a single, straightforward way.

Sources

Because of this, no single source of statistics is available in Great Britain on the nature and full extent of occupational or work-related ill health. HSE's policy is to make the fullest use of a range of data sources, and develop new ones where necessary. The statistics presented in this document are based on five main sources, mostly referred to by their acronyms:

- **SWI**: Household surveys of self-reported work-related illness, giving estimates of the number of people who have conditions which they think have been caused or made worse by work (regardless of whether they have been seen by doctors). SWI surveys have been carried out, in conjunction with the Office for National Statistics' Labour Force Survey (LFS), in 1990, 1995, 1998/99 and 2001/02. Headline results of the latest survey were published in December 2002; full results were published in June 2003 and are available at http://www.hse.gov.uk/statistics/causdis/swi0102.pdf.
- **THOR**: Voluntary medical surveillance schemes in The Health and Occupation Reporting network (formerly known as ODIN), counting new cases which are caused by work in the opinion of the specialist doctor who sees them. THOR data are available from 1999 for work-related mental ill health, from 1998 for hearing loss, musculoskeletal disorders and infections, and from the early 1990s for respiratory and skin disorders, up to 2002.
- **IIS:** Compensation under the Department for Work and Pensions' (DWP's) Industrial Injuries Scheme, recording new cases of specified 'prescribed diseases' (conditions whose occupational cause is well established) assessed for disablement benefit. IIS data are available annually from at least the 1980s up to 2002 (for lung diseases) and 2001/02 (for non-lung diseases).
- **RIDDOR:** Statutory reports by employers under HSE's Reporting of Injuries, Diseases and Dangerous Occurrences Regulations of cases of a defined list of diseases (similar to the IIS list of prescribed diseases) occurring in their employees. RIDDOR data, which are subject to far greater under-reporting for ill health than for injuries, are available from the 1980s up to 2002/03.
- **Death Certificates** for some types of occupational lung disease, including mesothelioma and asbestosis (for these two diseases special registers are maintained by HSE). Again these are available for a long time series, the most recent data being for 2001.

In addition, more specific sources provide data for certain conditions or hazards:

- **SHAW**: The Stress and Health at Work household survey in 1998, which reported on how stressful individuals believed their jobs were.
- **MRC**: Two Medical Research Council studies in 1997/98, which gave estimates of the numbers of people suffering from work-related deafness and from vibration white finger based on the fractions of the national prevalence attributable to work.
- **Blood-lead**: The measurement of levels of lead in workers' blood samples, as part of the medical surveillance required under the Control of Lead at Work Regulations, from which annual statistics are produced, most recently for 2001/02.

More details of the sources are at: http://www.hse.gov.uk/statistics/causdis/sources.htm.

Statistical significance and confidence intervals

The statistics are derived from a number of different sources, some of which are surveys and are therefore subject to sampling errors, because the estimates are based on a sample rather than the whole population. Where possible, "95% confidence intervals" are quoted to indicate the range of uncertainty due to this: each of these shows the range of values which we are 95% confident contains the true value. Correspondingly, a difference between two estimates is described as "statistically significant" if there is a less than 5% chance that it is due to sampling error alone.

Technical note (continued)

Classification by occupation, industry and socio-economic group

HSE's occupational health statistics use a number of standard statistical classification systems:

Standard Occupational Classification 2000 (SOC 2000): The current system used in UK official statistics for classifying jobs in terms of the kind of work performed and the skill required. This was used for the 2001/02 SWI survey. For more details please see http://www.nationalstatistics.gov.uk/nsbase/methods_quality/ns_sec/soc2000.asp

Standard Occupational Classification 1990 (SOC 90): This is the earlier version of the SOC, still used for the latest THOR statistics. For more details please see *Standard Occupational Classification 1990,* London: HMSO 1991 (ISBN 0 11 691284 7)

The Southampton Classification of Occupations: Specifically designed for analysing mortality, this amalgamates groups with similar occupational hazards. For more details please see *Occupational Health Decennial Supplement,* HMSO 1995 (ISBN 0 11 691618 4), Appendix 3.

Standard Industrial Classification 1992 (SIC 92): The system used in UK official statistics for classifying business establishments and other statistical units by the type of economic activity in which they are engaged (a minor revision, SIC 2003, has recently been published). For more details please see http://www.nationalstatistics.gov.uk/methods_quality/sic/default.asp

National Statistics Socio-economic Classification (NS-SEC): An occupationally-based classification introduced in 2001 to replace two previous systems, Social Class based on occupation and Socio-economic Groups. For more details please see http://www.nationalstatistics.gov.uk/methods_quality/ns_sec/default.asp.

Mesothelioma mortality rates

The risk of mortality from mesothelioma is analysed by comparing the observed mortality rates for different groups with the average or expected rates. This is done in two ways for the analyses in this *Bulletin*.

Figure 9 on page 4 gives statistics by occupation based on Proportional Mortality Ratios (PMRs). A **PMR** is the ratio (expressed as a percentage) of the actual number of mesothelioma cases that occurred in a given occupation to the 'expected' number, where the expected number is calculated under the assumption that occupation is not related to mesothelioma risk. If the observed number of deaths is greater or less than the expected, then the PMR will be greater or less than 100, indicating that the observed number of mesothelioma deaths is greater or less than the average expected for all occupations.

The map on page 7 presents statistics by area in the form of Standardised Mortality Ratios (SMRs). An **SMR** is the ratio (expressed as a percentage) of the observed number of deaths to that expected based on age and sex specific rates from a standard population, in this case Great Britain. Thus an SMR of over 100 signifies a ratio where the observed number of deaths is greater than that expected and conversely a ratio of less than 100 signifies fewer observed deaths than expected.

The analyses are limited to males, who account for around five-sixths of all mesothelioma deaths. Results for females are included in the factsheets referenced on page 4 and page 7.

Availability of detailed statistics

Much more information about occupational health statistics is on the HSE website at http://www.hse.gov.uk/statistics, including:

- more than a dozen detailed commentaries on different causes and kinds of disease
- over 40 tables containing data from the THOR surveillance scheme and 10 giving data from the IIS
- links to full reports of the SWI surveys and to in-depth factsheets, for example on mesothelioma and stress.

The website also contains HSE's statistics of workplace fatalities and injuries, dangerous occurrences, gas safety and enforcement action by HSE and local authorities.

Contacts:

Epidemiology and Medical Statistics Unit, Health and Safety Executive, Room 244, Magdalen House, Trinity Road, Bootle, Merseyside L20 3QZ

Telephone: 0151 951 3479/3051 Fax: 0151 951 4703 Website: www.hse.gov.uk/statistics