The health of the working age population
Chapter 2 – The health of the working age population

This chapter sets out a number of indicators which, when taken together, give a comprehensive picture of the current state of working age health in Britain.

There are many different ways of measuring health status, whether of an individual or of a population. These can vary from subjective measures of how well someone feels, to National Health Service (NHS) data, benefit records, and actuarial data on how long a person is expected to live. All of these are important, each giving a different perspective of health and its drivers. This Review draws on all of them to build up a composite baseline. The data used applies to Britain, unless stated otherwise.

What is the working age population?

For the purpose of data analysis, the working age population is taken to be females aged 16 to 59 and males aged 16 to 64. This is consistent with the current school-leaving age and State Pension age. With this definition the current working age population is 36.6 million people.

Actual working patterns do not always reflect this definition and are likely to evolve further. Over a million people are working beyond State Pension age, which, moreover, is set to rise to 68 for both men and women by 2046. This is likely to increase the average retirement age, which is currently around 62 years for women and 64 for men.

Indicators of working age health

Life expectancy is the most commonly used comparative measure of national health. It is easily compared internationally as it is based on objective mortality data collected routinely in most countries. Calculated from birth, life expectancy currently stands at 81 years for females and 77 years for males, which is the highest it has ever been. However, when compared with other countries, the UK is ranked 22nd out of a reported 195, behind Australia, New Zealand, Canada and nine European Union countries. Although most people in Britain die after retirement, 16% of men and 6% of women die during working age.

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Health can also be assessed by asking people how they feel. One such measure is derived from the General Household Survey (GHS), which asks people in Britain about self-perceived general health. In 2005, 89% of the working age population reported being in good or fairly good health, leaving 11% in poor health.

Healthy life expectancy combines life expectancy with self-reported health as reported by the GHS and estimates how many years an individual can expect to live in good or fairly good health. It has increased since the 1980s, though at a slower pace than overall life expectancy. This implies that individuals can expect to live longer in good health as well as longer in poor health.

In 2004, at birth the average male could expect to live 68 years in good or fairly good health and 8.6 years in poor health; for females the numbers were 70.3 and 11.3 respectively. A significant part of the years in poor health is likely to be experienced during working age.10

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**Figure 2.1 Male and female life and healthy life expectancy at birth**

![Graph showing life and healthy life expectancy at birth from 1981 to 2005 for males and females.](image)

**Notes:**
- Healthy life expectancy is not calculated for the years 1996, 1998 and 2000 as relevant data were not available.
- Source: Office for National Statistics

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10 Office for National Statistics.
Employment

Employment levels provide a high-level indicator of the health of the working age population. Being in employment is a reflection of the health status of individuals, but also of the probability of being in work with a given health status. With over 28 million people employed, the number of people in work in Britain is the highest it has ever been. At 74.9% of working age people, the employment rate is also close to a record high (see Figure 2.2). By international and historical standards, the British labour market is performing very well. The Government has set an aspiration of an 80% employment rate so that more adults and their children can move out of poverty and society will be better able to deal with an ageing population.

Figure 2.2  Employment rate

Supporting more people with a health condition into work will help to achieve the Government’s aim of higher employment. The employment rate for disabled people has gradually increased since 1998 from 38% to 48%, against the background of a small increase in the percentage of the working age population reporting themselves as disabled (see Figure 2.3).
Ill-health in work

When employees develop a health condition, it does not always lead to absence from work, but can lead to reduced performance on the job. This may be the result of relatively minor illnesses, such as common colds, or due to more serious conditions. Some cases of serious illness will be undiagnosed and, in other cases, people may try to hide or fail to acknowledge their condition, especially if they have mental health problems. One initial estimate for the UK suggests that, for those with mental health conditions, reduced productivity accounts for 1.5 times as much working time lost as sickness absence\(^\text{11}\).

Lower productivity may also be linked to lower job satisfaction and well-being, which in turn may be due to workplaces that sap morale and energy. There is growing evidence that links employee morale and satisfaction with health outcomes as well as business performance measures\(^\text{12}\).


Absence from work

Sickness absence is generally lower than it was in the 1990s, but is still substantial. There are various sources available that measure the level of sickness absence in the British economy. Both the Confederation of British Industry (CBI) and the Chartered Institute of Personnel and Development (CIPD) have surveyed employers and arrived at similar estimates of time off due to illness in 2006: seven days per employee in the CBI survey and 8.4 days in the CIPD survey. In total, the CBI calculates 175 million days are lost to sickness absence each year.

The Labour Force Survey (LFS), carried out by the Office for National Statistics, also asks employees about sickness absence. Based on their responses, it is estimated that 2.4% of working time is lost because of sickness. This is a little lower than the CBI and CIPD estimates, roughly comparable to six days per worker per year, and amounting to a total of around 150 million working days of annual time off (see Figure 2.4).

The CBI estimates that absences over four weeks make up about 6% of the number of absences, although they represent around 43% of days lost.

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**Figure 2.4** Sickness absence as a proportion of working time

Note: CBI data not collected in 1988 and 1995.

Source: Labour Force Survey, Office for National Statistics; CBI; CIPD
Incapacity benefits

Incapacity benefits are paid to those who are unable to work because of ill-health or disability. The proportion of the working age population on incapacity benefits – or the equivalent benefits that preceded it – has increased from just over 2% in the 1970s to around 7% today. Much of the increase occurred between the late 1970s and mid-1990s, with a small decline in recent years (see Figure 2.5).

Figure 2.5 Proportion of working age population in receipt of incapacity benefits

Note: Discontinuity prior to 1995 due to exclusion of incapacity benefits short term lower rate.

Source: DWP Administrative Data

Inflows to incapacity benefits have fallen by nearly 40% over the last decade. Currently, the annual number of new claimants is around 600,000. This has not led to a large fall in the number of benefit recipients because outflows have fallen by nearly 35% over the same period.
Worklessness

Around a quarter of the working age population are not in work. Of these, approximately 20% are unemployed but actively seeking work. The remainder have a variety of reasons for being out of the labour market, only one of which is ill-health. According to LFS data, 28% of those economically inactive are so because of sickness, injury or disability (see Figure 2.6).13

Figure 2.6 Reasons for being out of work

Working age population

- Employed
- Unemployed
- Economically inactive

Economically inactive breakdown

- Inactive, would like to work 23.3%
- 7.8% Long-term sick or disabled
- 1.2% Temporarily sick or injured
- 3.8% Student
- 6.9% Looking after family or home
- 3.5% Other
- Inactive, would not like to work 73.6%
- 17.9% Long-term sick or disabled
- 1.1% Temporarily sick or injured
- 19.5% Student
- 21% Looking after family or home
- 7.6% Retired
- 6.5% Other
- Inactive, seeking work 3.2%
- 3.2% Inactive seeking, currently unavailable

Note: Definition of unemployed follows that of the International Labour Organisation (ILO).
Source: Labour Force Survey, Office for National Statistics

13 This group is based on self-reported health status and will therefore not be exactly the same as incapacity benefits; there will be some people who report being ill without receiving incapacity benefits, and others who are in receipt of incapacity benefits but do not report being workless because of a health problem on the LFS.
Health inequalities

There is considerable evidence that there is a fundamental link between health and other socio-economic indicators such as educational qualifications, job status and income. As a result, health inequalities often go hand-in-hand with other socio-economic inequalities. Geographical variations are also evident, but appear to reflect concentrations of people with certain characteristics, rather than specific locations having an inherently perverse effect on health. Inequalities can be illustrated by the Quality Adjusted Life Year (QALY) health measure, as distributed between different social classes\(^{14}\). Figure 2.7 shows how individuals in lower social classes on average have a worse health status, here measured as the deviation from good health.

Figure 2.7 Proportion of deviation from perfect health by social class

Note: Based on QALY measure of self-reported health. Does not cover Scotland and Wales.
Source: Health Survey for England 2005, age adjusted, analysis by Department of Health

\(^{14}\) The EQ-5D QALY measure is based on self-reported health. It has a scale in which 1 represents perfect health, and 0 represents death. The vast majority of individuals at any given time will have a QALY of 1. Long-term illness or disability typically leads to a deviation from a QALY of 1.0 (deviation from perfect health) of between 0.2-0.4. Only the very few individuals with severe illness will have a QALY deviation of 0.6 or more.
The link between health and wealth can run in both directions. Having a higher income is likely to improve a person’s health status, while being in good health increases a person’s earnings potential. There is something of a self-sustaining cycle of good health and good wealth, just as there is a similar cycle of poor health and poor wealth. These inequalities are illustrated by Figure 2.8 which shows the difference in health status between those in and out of work. This is supported by a recent study which found a clear link between an individual’s health status and the probability of being in work, and also earnings levels for those in work\textsuperscript{15}. The same study found a significant association between the health status of the working age population and economic growth.

**Figure 2.8 Proportion of deviation from perfect health by work status**

<table>
<thead>
<tr>
<th></th>
<th>Male (16–64)</th>
<th>Female (16–59)</th>
</tr>
</thead>
<tbody>
<tr>
<td>In work / training</td>
<td>0.30</td>
<td>0.20</td>
</tr>
<tr>
<td>Not in work / training</td>
<td>0.35</td>
<td>0.25</td>
</tr>
</tbody>
</table>

Note: Based on QALY measure of self-reported health. Does not cover Scotland and Wales.

Source: Health Survey for England 2005, age adjusted, analysis by Department of Health

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The public health challenge and lifestyle trends

So far this chapter has concentrated on outcome measures of health, or how ill-health in the working age population might manifest itself. However, it is important to give equal consideration to the drivers of health. The improvements in health and life expectancy in recent decades were largely the result of better healthcare and improvement in certain lifestyle factors, particularly smoking.

The greater increase in life expectancy than in healthy life expectancy indicates that society has been comparatively more successful in controlling life-threatening and life-shortening disease than it has in delaying the onset of long-term conditions that impair health.

Through their lifestyles, individuals can have a significant impact on their own long-term health status. The most important indicators of healthy living relate to how and what people eat and drink, how active they are and whether they smoke or not. Unhealthy lifestyles can be threatening to the working age population as the onset of poor health might impact on the ability to work. This can eventually lead to worklessness which further exacerbates health problems.

The trends in some public health indicators have been encouraging in recent decades. Smoking in the adult population has decreased from 50% for men and 40% for women in the mid 1970s to 23% for men and 21% for women today (see Figure 2.9). The recent introduction of smoking bans in Scotland, Wales and England is likely to bring these numbers down further.

**Figure 2.9 Proportion of adult population who smoke**

Source: General Household Survey, Office for National Statistics
In contrast to trends in smoking, alcohol consumption has increased in recent decades. As a result, alcohol-related deaths have doubled over the last 15 years. Figure 2.10 shows the magnitude of the problem of excessive drinking.

![Figure 2.10 Proportion of the adult population drinking more than the recommended amount](image)

Note: The methodology for analysing alcohol consumption was changed for the 2006 data; the improved methodology takes account of the fact that alcohol content and glass sizes have increased over the years. Alcohol consumption is therefore estimated to be notably higher, especially for women. For 2006, data using the original method is provided for context.

Source: General Household Survey, Office for National Statistics

Trends in our dietary and exercise habits also threaten health. Only 30% of adults eat at least five portions of fruit and vegetables a day. We are becoming more sedentary in our lifestyles, with participation in physical activity at low levels. Twenty per cent of men and around 40% of women meet recommended physical activity guidelines\(^\text{16}\).

As a result, over two-thirds of men and over half of women are overweight (see Figure 2.11). If current trends continue, levels of working age adults who are obese or overweight will rise to around 90% in men and 80% in women by 2050\(^\text{17}\).

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\(16\) Health Survey from England (2006).

Lifestyle factors, such as smoking, drinking and obesity, have a significant impact on health conditions experienced by the working age population. Poor health outcomes related to these factors can include high blood pressure, diabetes, coronary heart disease and respiratory diseases such as chronic obstructive pulmonary disease (COPD). Other common conditions affecting the working age population are mental illness and musculoskeletal disorders (MSDs) which, along with cardio-respiratory conditions, account for two-thirds of sickness absence, long-term incapacity and early retirement.¹⁸

¹⁸ Waddel and Burton (2004); Concepts of Rehabilitation for the Management of Common Health Problems. London: TSO.
What keeps people out of work?

There is an obvious link between an individual’s health status and ability to work. However, this relationship is not always straightforward and is influenced by a number of factors. First, work itself can be a cause of illness. Health and Safety Executive (HSE) figures suggest that around a quarter of days lost through absence may be due to work-related ill-health.\(^{19}\) Figure 2.12 shows how different industries are likely to be associated with different patterns of work-related ill-health. Therefore, preventative measures need to be tailored to the industry sector, rather than adopting a ‘one size fits all’ approach. Second, timely diagnosis and intervention that could keep people in or help them to return to work is often unavailable, resulting in high numbers of people absent with relatively mild conditions and at risk of falling out of work. This can be illustrated by the examples of common mental health conditions and MSDs\(^{20}\).

Figure 2.12  Work-related illness by industry

<table>
<thead>
<tr>
<th>Industry</th>
<th>% Musculoskeletal</th>
<th>% Skin</th>
<th>% Respiratory</th>
<th>% Mental ill-health</th>
<th>% Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>All industries</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Construction</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Education</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Finance</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hair and beauty</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: Based on number of cases. Does not cover Scotland and Wales.

Source: Health and Occupation Reporting Network (THOR), a research programme of the Occupational and Environmental Health Research Group of the University of Manchester

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\(^{19}\) *Health and safety statistics 2006/07*, Health and Safety Executive.

\(^{20}\) It can be difficult to categorise individuals as having a specific condition, as many suffer from more than one. For example, of recent medically examined incapacity benefits claimants 27% had only a mental health condition, whereas 53% had a mental health primary condition and a physical condition, and an additional 17% were affected by a mental illness as a secondary condition, which means around 70% are affected by a mental health condition. Source: DWP administrative data and medical examination data.
Mental health

Five million people of working age have a common mental health disorder and just under a million a severe condition\textsuperscript{21}. Mental health conditions are an important cause of absence, both work-related and non-work-related, and of worklessness due to ill-health. There is also evidence to suggest they are one of the main causes of lower productivity due to illness while in work.

Analysis of sick notes issued to people in the Merseyside area over a 12-month period showed that one in four people had a mental ill-health diagnosis\textsuperscript{22}. However, mental ill-health accounted for over 40% of the total time covered by sick notes (see Figure 2.13). The average time certified for a person with mental ill-health (15 weeks) was nearly twice as long as the average for all conditions (8 weeks).

Figure 2.13 Sick notes issued by medical condition

\begin{figure}
\centering
\includegraphics[width=\textwidth]{sick_notes.png}
\caption{Sick notes issued by medical condition}
\label{fig:sick_notes}
\end{figure}

\textbf{Source:} Gabbay and Shiel\textsuperscript{s}

\textsuperscript{21} Mental Health and Work, a report commissioned for this Review from the Royal College of Psychiatrists.

\textsuperscript{22} Gabbay and Shiel\textsuperscript{s}. An analysis of medical certificates issued over a 12-month period by general practices in the Merseyside area, between 2000 and 2002. University of Liverpool.
The numbers on incapacity benefits reveal that the proportion with mental health conditions has increased dramatically over the last decade, from 26% in 1996 to 41% in 2006 (see Figure 2.14). This is due to a longer than average claim period as well as a relatively high share of people with mental illness among new claimants. However, this is the result of a fall in the number of new claims related to other conditions, rather than an absolute increase in the number of cases of mental illness, which has remained fairly stable at around 200,000 per year.

Figure 2.14  Incapacity benefits claimants by primary medical condition

More than many other illnesses, mental health conditions are often undiagnosed, or diagnosed only when they have become severe enough that an individual may have to be absent from work for a substantial period. Part of the problem lies with the stigma and discrimination attached to mental health conditions. Many people go to great lengths to prevent colleagues and managers knowing they are or have been ill. They may be reluctant to request time off for therapy and so reduce their chances of getting appropriate help. Moreover, line managers are often ill-equipped to recognise early signs of mental illness.
Even when individuals seek medical help they are often reluctant to admit mental symptoms. Evidence suggests only about half of those affected are diagnosed as having a mental disorder at the first consultation with their GP and often, in the case of depression or anxiety, patients receive treatment that is considered sub-optimal. The position is even less satisfactory for people whose mental health problems present as physical symptoms or for people with physical illness who have co-existing mental health problems.

Secondary mental healthcare providers have the specialist skills to detect and treat less obvious forms of common mental disorders, but their priority is severe mental illness.

Evidence submitted in the course of the Review included a report of a pilot occupational health case-management programme for staff within two regions of NHS Scotland\(^{23}\). The case-management approach entails the integration of the assessment, co-ordination, implementation and monitoring of the interventions necessary to achieve a desired goal. Typically, it would involve a single case manager responsible for referral to specialist healthcare. The pilot programme indicated that the approach was effective (and cost-effective).

**Musculoskeletal disorders**

MSDs are an important cause of work-related ill-health and certified sick leave, as illustrated by Figures 2.12\(^{24}\) and 2.13. An MSD accounted for around one in eight people who were issued a sick note. The average length of time certified for those with MSDs was 10 weeks, almost two weeks more than the average for all conditions. Interestingly, the numbers claiming incapacity benefits due to MSDs have shown a reduction in recent years (see Figure 2.14). Once in receipt of incapacity benefits, those with MSDs have a greater probability of returning to work than those with mental health conditions.

Evidence-based approaches to the management of back pain have been established since the early 1990s. These are based on the rapid assessment of early-warning symptoms and signs by appropriate healthcare practitioners, such as nurses, physiotherapists and GPs. Where no serious risk factors are identified, the emphasis is on advice, pain relief and rapid rehabilitation through self-help, staying active and supportive physical therapies, to minimise the need for sickness absence.

\(^{23}\) Hanson M et al. (July 2007) Evaluation of the OHSxtra, a pilot occupational health case-management programme within NHS Fife and NHS Lanarkshire.

\(^{24}\) See also Health and safety statistics 2006/07, Health and Safety Executive.
Good evidence for similar approaches to the management of shoulder, neck and other types of MSDs has recently become available\textsuperscript{25}.

Overall, the key finding appears to be that early intervention is critical to achieving speedy and sustained recovery. In this connection, the pilot occupational health case-management programme in two regions of NHS Scotland, referred to in the preceding section, offered evidence of an active case-management approach to MSDs. This was reinforced by the findings of research into the costs and benefits of active case management and rehabilitation for musculoskeletal disorders which was recently published by the Health and Safety Executive.\textsuperscript{26}

**Costs of poor health**

The cost of poor health among the working age population affects everyone.

For individuals themselves, it is not just a question of loss of income if poor health leads to worklessness. There are also the emotional costs of ill-health to themselves and their families to be considered. Related to this is the risk of losing valuable years of life spent in a state of poor health and the associated costs of informal care by friends and family.

For employers, there are the costs of health-related productivity losses often resulting in absence. There are also associated costs of staff turnover, loss of skills base, downtime, recruitment and re-training.

For the NHS, there is the cost of treating working age people who are sick. This covers the full range from GP consultation through to specialist care. The additional cost of treating health conditions that keep people out of work is estimated to be £5-11 billion per year.

For the Government, there are the costs to the NHS as well as the costs of benefits related to working age ill-health (£29 billion a year). These direct costs increase the burden on the taxpayer by £34-40 billion a year. In addition, the Government loses out on additional income taxes of £28-36 billion a year as a result of lost productivity, which brings the overall cost to the taxpayer up to £62-76 billion.

\textsuperscript{25} Waddel and Burton (2004); Concepts of Rehabilitation for the Management of Common Health Problems. London: TSO.

\textsuperscript{26} Hanson M et al. (2006). The costs and benefits of active case-management and rehabilitation for musculoskeletal disorders. Prepared by Hu-Tech Associated Ltd for the Health and Safety Executive.
Finally, there is a cost to the economy as a whole. This will include the forgone taxes and healthcare costs to Government, but not the benefit cost of worklessness as the latter is a transfer within the economy, resulting in a cost to Government but not the economy as a whole. The lost productivity of those who are out of the workforce is in excess of £60 billion a year. Including the costs of sickness absence brings these costs to over £70 billion each year. Adding healthcare costs and a conservative estimate of the costs of informal care brings this number to over £100 billion (see Figure 2.15). This is greater than the current annual budget for the NHS and equivalent to the entire Gross Domestic Product (GDP) of Portugal.

These estimates do not include the costs of health-related productivity losses that do not lead to absence. Preliminary calculations suggest that these costs could be in the order of £30 billion per year.

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**Figure 2.15 Costs of working age ill-health (£ billions)**

<table>
<thead>
<tr>
<th>2007 (£ billions)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Worklessness – benefits</td>
<td>29</td>
</tr>
<tr>
<td>Healthcare</td>
<td>5-11</td>
</tr>
<tr>
<td>Forgone taxes</td>
<td>28-36</td>
</tr>
<tr>
<td><strong>Total Government</strong></td>
<td><strong>62-76</strong></td>
</tr>
<tr>
<td>Worklessness – lost production</td>
<td>63</td>
</tr>
<tr>
<td>Sickness absence</td>
<td>10</td>
</tr>
<tr>
<td>Informal care</td>
<td>25-45</td>
</tr>
<tr>
<td>Healthcare</td>
<td>5-11</td>
</tr>
<tr>
<td><strong>Total economy</strong></td>
<td><strong>103-129</strong></td>
</tr>
</tbody>
</table>

The following table shows a collection of indicators which together make up the very first baseline of the health of the working age population.
Figure 2.16 Baseline indicators of working age health

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Latest data</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employment rate</td>
<td>74.7%</td>
<td>LFS (2007)</td>
</tr>
<tr>
<td>Employment rate for DDA disabled</td>
<td>48.4%</td>
<td>LFS (2007)</td>
</tr>
<tr>
<td>Proportion out of work due to sickness or disability</td>
<td>6%</td>
<td>LFS (2007)</td>
</tr>
<tr>
<td>Incapacity benefits caseload</td>
<td>2.64m, 7% of working age population</td>
<td>DWP administrative data (2007)</td>
</tr>
<tr>
<td>Inflow to incapacity benefits caseload</td>
<td>607,000</td>
<td>DWP administrative data (2007)</td>
</tr>
<tr>
<td>Inflow caseload due to mental ill-health</td>
<td>212,000</td>
<td>DWP administrative data (2007)</td>
</tr>
<tr>
<td>Sickness absence</td>
<td>2.6%</td>
<td>LFS (2007)</td>
</tr>
<tr>
<td></td>
<td>3.3%</td>
<td>CBI (2006)</td>
</tr>
<tr>
<td></td>
<td>3.7%</td>
<td>CIPD (2006)</td>
</tr>
<tr>
<td>Life expectancy</td>
<td>81 (F) / 77 (M)</td>
<td>ONS (2006)</td>
</tr>
<tr>
<td>Mortality during working age</td>
<td>6% (F) / 16% (M)</td>
<td>ONS (2006)</td>
</tr>
<tr>
<td>Healthy life expectancy</td>
<td>70 (F) / 68 (M)</td>
<td>ONS (2004)</td>
</tr>
</tbody>
</table>

**Conclusion**

There is a compelling economic and social case to act decisively to improve the health of the working age population.

Chapter 3 sets out the first elements of a new vision for health and work in Britain, by considering the role of the workplace in preventing illness and promoting health and well-being.