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# INTERNATIONAL HEALTH AND SAFETY

A course book for the NEBOSH International General Certificate  
in Occupational Health and Safety



**Series Editor:**  
Paul Randall

**Authors:**  
Dr Luise Vassie  
Tony Morriss  
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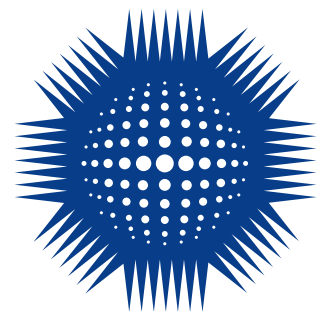
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# INTRODUCTION

This International General Certificate in Occupational Health and Safety coursebook has been designed to support learner development. A variety of topics will be covered, of which risk assessment is central.

It is a measure of the work undertaken in recent decades by bodies such as the International Labour Organization and the EU, together with various professional, standards and trade bodies, that an International Certificate qualification, relevant to all countries, has become possible. And here it is.

As you will learn, the harmonisation of scientifically based exposure limits for noise and hazardous chemicals and the worldwide adoption of the Plan, Do, Check, Act health and safety management system have all contributed to our core body of workplace health and safety knowledge.

Consistent use of the terminology 'Risk', 'Hazard', 'Danger', 'Practicable' and 'Reasonable' is now well established.

This introduction has been written by someone who has spent the last 40 years teaching and promoting workplace health and safety. I have never been on the staff of NEBOSH but have, over the years, done much work for them, and with them. My background is in materials research and, for me, workplace health and safety provides a rich combination of engineering and human behaviour. Over the years, the syllabus has seen the balance between these two (ie engineering and human behaviour) evolve, partly to reflect the changing nature of workplaces. It is now widely recognised that issues such as bullying, exhaustion, lone working, mental ill-health, etc impact on workers as much as traditional safety or health issues.

The early 'pioneers' in occupational safety and health tended to come from industrial backgrounds, such as engineering, mining and so on. Their work in the 1950s onwards laid the foundations for the various professional bodies and the qualifications that we have today. I look back with great pride and affection having known many of these (very!) stubborn people who worked so hard to 'make things better' (that seems to have been the unspoken motto for all of them).

A huge thanks needs to go to those who have contributed to the making of this coursebook, especially Dr Luise Vassie, Tony Morriss and Dr Mark Cooper. The three authors have worked together with NEBOSH in creating this content to make it as accurate and knowledge-inducing as possible.

I hope this coursebook plays a part in guiding you towards achieving your qualification.

Paul Randall

# ELEMENT

# 1

## WHY WE SHOULD MANAGE WORKPLACE HEALTH AND SAFETY

### 1.1: Morals and money

#### Syllabus outline

In this section, you will develop an awareness of the following:

- Measuring the cost of poor health and safety management
- Society's expectations of good standards of health and safety
- Financial costs of incidents

The reasons for managing health and safety in workplaces fall into two broad categories – moral and financial. Both categories can be used to describe reasons for, or benefits of, managing health and safety, but can equally be used to explain the costs of getting it wrong.

Moral reasons are concerned with our judgement about what is right and wrong. This reflects society's view that it is wrong for anyone to be injured or made ill by their work, and that there should be good standards of health and safety in all workplaces. In most countries, these expectations have led to the enactment of laws that regulate health and safety. This means that moral reasons are often split into societal and legal expectations.

Financial reasons are concerned with the costs of health and safety incidents, and also the costs of trying to prevent them. The organisation must invest in health and safety to protect its workforce. This investment will obviously have a financial cost for the organisation but a lack of investment could have a bigger financial impact if things go wrong. After an incident, an organisation could incur both direct and indirect costs. For example, there could be fines from enforcement actions; in such cases the organisation would also be expected to put right the original cause of the accident. While investing in health and safety measures is a cost to the employer, it has the benefits of reducing the costs of failure and protecting the workforce. This means not investing in health and safety could be seen as 'false economy'.

The individual and their family will also face costs, such as loss of income and medical bills. Additionally, wider society also faces costs resulting from, for example, dependency on the state's benefits system for people who are no longer able to work due to their injuries or ill-health.

We start by considering the scale of the issue.

## 1.1.1 Measuring the cost of poor health and safety management

Every day, across the world, people die because of occupational accidents or work-related diseases. Latest estimates are that there are more than 2.78 million deaths per year. Work-related diseases account for 2.4 million (86.3%) of the estimated deaths, and fatal occupational accidents account for the remaining 380,000 (13.7%). Additionally, there are some 374 million non-fatal work-related injuries each year that have resulted in each injured person taking more than 4 days of absence from work. Respiratory diseases, circulatory diseases and cancers contributed more than three-quarters of the total work-related mortality.<sup>1</sup>

In one report, Asia was the highest contributor and constituted about two-thirds of the global work-related mortality, nearly six times that of Africa at 11.8% and Europe at 11.7%.<sup>2</sup>

Statistics on occupational accidents and diseases are often incomplete because under-reporting is common and official reporting requirements frequently do not cover all categories of workers – those in the informal economy, for example. Other indicators, such as compensation data, disability pensions and absenteeism rates, could also be considered, although these too provide incomplete data. Hence the statistics do not truly reflect the scale of poor health and safety management.

For example, in Great Britain, each year there are approximately 130 fatal accidents at work. However, this figure is a small proportion of the true toll of health and safety failure. It does not include those who were killed in work-related traffic accidents (which are not separately recorded in Great Britain). It is estimated that between a quarter and a third of road fatalities involved someone driving for work. Those who died from cases of disease such as asbestos-related cancer, which claims over 5,000 lives per year in Great Britain, are also not included.

We all know that it is not just the injured person who is affected, it is their families and friends and work colleagues. Multiplying the 2.78 million cases by the number of people affected, we can readily see that the impact of poor health and safety standards goes far beyond the global estimates. From a financial perspective, the economic burden of poor occupational safety and health practices is estimated at 3.94% of global gross domestic product each year.

## 1.1.2 Society's expectations of good standards of health and safety

Understandably, many societies take the view that suffering as a result of poor health and safety standards is unacceptable and should be prevented wherever possible. Put simply, society expects that workers should leave work at the end of the day in the same condition as when they arrived to start their work – being injured or becoming ill as a result of your work or workplace is morally unacceptable.

Unfortunately, societal expectations are not quite enough to motivate employers to improve standards of safety management. Some employers will want to prioritise profit over health and safety. Therefore, most countries have enacted laws to help improve standards of health and safety management.



Many countries which have enacted health and safety legislation have based this on recognised international standards. An example of this is the International Labour Organization's (ILO) occupational Health and Safety Convention (C155) and Recommendation (R164). Organisations in countries that have not enacted specific legislation may use the convention and recommendation as 'good practice' to protect their workforce. Although obligations and standards vary, it is usually true to say that a failure to follow these obligations will leave an organisation liable to legal action. Society will expect to see organisations (or individuals) penalised for breaches of health and safety law – especially where a worker has been injured or killed as a result of obvious breaches.

Workers and others have some health and safety obligations (to be discussed later in the book) but most of the obligations are placed on the employer. As moral standards are often enshrined in laws, there is a considerable overlap between moral and legal obligations.

There are many international standards, such as the ILO conventions as well as national laws, codes, decrees, etc, but they all have certain common requirements. These include obligations for the employer to:

- provide a safe place of work;
- provide safe plant and equipment;
- provide safe systems of work; and
- ensure competence of workers.

Legal obligations will be discussed in 1.2.

### 1.1.3 Financial costs of incidents

The social and legal reasons for managing safety and health have been briefly outlined above. At the very least, an employer should have a sufficiently well-developed social conscience not to unnecessarily place workers at risk. However, what might really motivate employers to focus on health and safety is that accidents and ill-health cost an organisation money in terms of financial losses resulting from a failure to manage risk. Therefore, employers are often more likely to provide safe systems if these costs, and ways to avoid incurring them, are made clear.

#### Direct and indirect costs

There are two broad types of accident costs – 'direct' and 'indirect'. These may also be referred to as 'tangible' and 'intangible' costs.

##### Direct costs

Direct costs are those that come directly from an accident. They are measurable and quantifiable and include such things as fines paid following conviction of a criminal offence, the cost of first-aid treatment, sick pay, payments for medical treatment, equipment repairs and replacement costs, the value of lost and damaged product, lost production time, and overtime for workers who are having to cover the injured worker's job as well as their own.

##### Indirect costs

Costs arise indirectly because of an accident and cannot really be said to be a direct consequence of it. Nevertheless, they can be traced back to the event. So, if the event never occurred, these costs would not have been incurred. They are hard to quantify, not just because of the less direct relationship with the cause, but also

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because they may be incurred a considerable time after the event. Examples include workers being taken from their normal duties to take part in an investigation, loss of goodwill, reputational damage, a reduction in workforce morale that could lead to lower production rates, activation of penalty clauses for failing to meet delivery dates, cost of recruitment of replacement labour, increased insurance premiums, and loss of experienced, competent workers that will result in recruitment and training costs for replacement workers.

## Insured and uninsured costs

Some of the costs, whether direct or indirect, are insured; many are not. It is therefore important to understand the relationship between 'insured' and 'uninsured' costs.

### Insured costs

In some cases, it is possible to take out insurance cover that will pay out in the event of a loss, provided all the relevant terms of the contract of insurance have been met. Examples include coverage for equipment damage and medical costs.

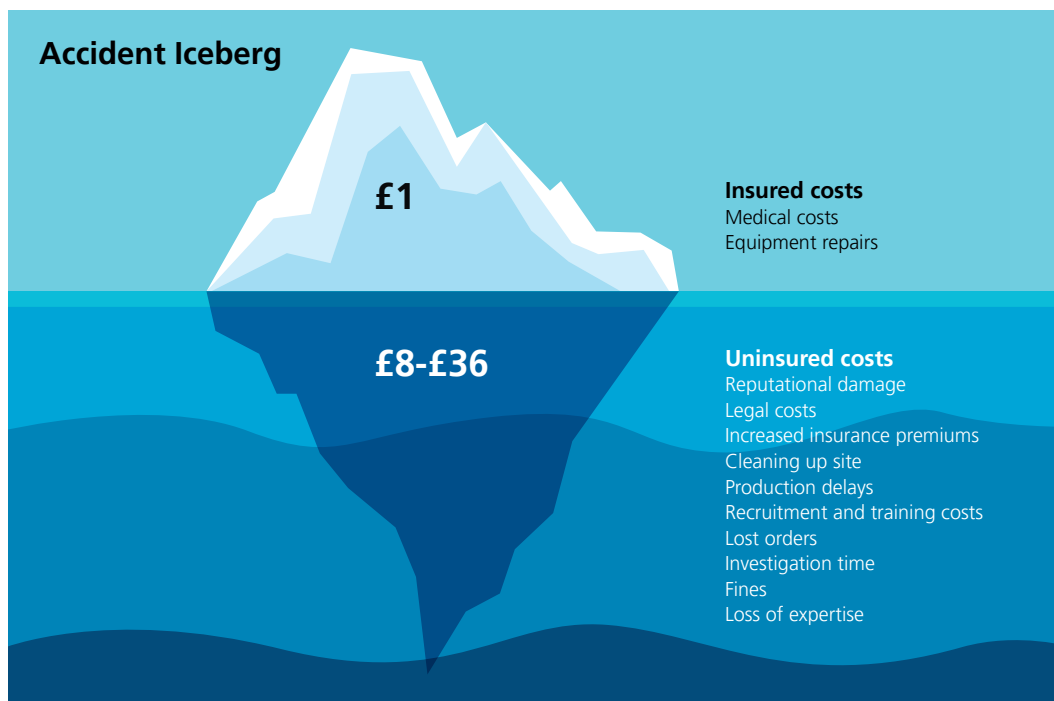


Figure 1: Insured and uninsured costs

In many countries, employers are required to take out compulsory employers' liability insurance, which ensures that there will be money available to meet compensation claims should they arise. If such insurance was not in place, workers might win their claim against the employer but find that the employer has no money to meet the judgement sum or cover legal costs. Personal injury costs are therefore 'insured'.

### Uninsured costs

In most cases, the employer will find that 'uninsured' costs exceed those for which an insurance claim may be made. This means that the organisation will lose money as these types of losses cannot be reclaimed through insurance. Uninsured costs can be more than ten times greater than the insured ones.

Losses may be uninsured for two main reasons – either it is impossible to get insurance for them (eg the payment of a fine levied by a criminal court) or because the employer has not taken out insurance cover for a specific loss. In addition, the small size of an individual loss may mean that the employer does not bother to make a claim, even if there is insurance in place that theoretically covers it. In any of the above situations, the costs will have to be met straight from company profits.

Alternatively, the amount being claimed may be less than the policy excess amount, which is set by agreement with the insurer to reduce premiums. In such cases, the employer agrees to meet the cost of the first \$x of a claim, beyond which the insurance takes over. This means that, if individual claims are less than the 'excess' amount, the employer will need to pay these claims and the insurer is not involved.

Examples of 'uninsured' costs include:

- time spent investigating accidents, ie lost production time due to workers being taken away from their normal jobs;
- fines from criminal courts;
- cost of overtime;
- recruitment costs;
- costs associated with downturns in morale that affect productivity; and
- costs associated with reputational damage, eg loss of orders if customers switch to buying goods and services from other suppliers with a better reputation.

Preventing workers being killed, injured or made ill by their work is not only morally the right thing to do, but it also makes good business sense. The direct and indirect costs associated with accidents and incidents are prevented, and it can also mean the employer pays lower insurance premiums. However, investing in health and safety has additional benefits, such as raised productivity levels, increased staff motivation and improved reputation.

## KEY POINTS

- Nearly 3 million people each year die from occupational accidents and diseases, costing approximately 4% of GDP. So, there are moral and financial drivers for managing health and safety.
- The moral reasons can be split into societal and legal expectations.
- From a financial perspective, accident costs are direct and indirect.
- Insurance may cover some but not all the costs associated with accidents.
- Investing in health and safety is associated with raised productivity, increased worker motivation and improved reputation.

## References

<sup>1</sup>Hämäläinen, P, Takala, J and Kiat, T B (2017) Global Estimates of Occupational Accidents and Work-related Illnesses 2017. Workplace Safety and Health Institute: Singapore Report Global Estimates of Occupational Accidents and Work-related Illnesses 2017 rev1.pdf (icohweb.org)

<sup>2</sup>See note 1.

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## **Paul Randall**

Paul Randall studied Materials at Imperial College in the 1960s, qualifying with a BSc and a PhD. Aside from time spent working in record shops, he has spent his working life teaching at schools and universities and through his own company. For the last 40 years he has been delighted to be working with occupational health and safety, a subject which has its roots in both human behaviour and engineering.

## **Dr Luise Vassie**

Luise is a consultant and trustee/NED assisting organisations with governance, health and safety risk management, and assurance. Luise has extensive experience in developing the evidence base for health and safety practice and in assessment of health and safety management learning. Luise is a Chartered Fellow of the Institution of Occupational Safety and Health.

## **Tony Morriss**

Tony has devised and presented H&S training courses for more than 25 years, including provision of NEBOSH Certificate and Diploma courses for further education in colleges. He has also provided a H&S consultancy service during this time to private companies and national organisations such as the British Printing Industries Federation. His qualifications are BSc; MSc; CMIOSH(ret); MIIRSM(ret).

## **Dr Mark Cooper**

Mark has been a postgraduate Admissions Tutor at the Health and Safety Unit, Aston University, Birmingham. He also has extensive experience in providing foundation training for health and safety professionals from the UK and overseas.

## **Caroline Copson**

Caroline Copson is Head of Assessment Development at NEBOSH. She has been involved in both qualification and assessment development for over 10 years. She gained the NEBOSH National Diploma in Occupational Health and Safety in 2012 and has been a Chartered member of IOSH since 2015.

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David initially trained as a physical chemist (that's applying physics to chemical systems), working in the industrial chemical process sector for large multi-nationals. His current role is to make sure NEBOSH's products (including assessments, qualifications, courses and publications) are designed, developed and maintained to be fit for purpose.