

Chapter 9

Risk assessment

June 1996

High level think tank?

Is it always the case that major harm to people or the environment has to occur before sufficient political and scientific momentum can be generated to secure the prevention of such harm in the future? The inquiry reports into disasters such as Hillsborough, King's Cross, Clapham, Zeebrugge and Piper Alpha showed that most of these disasters could have been prevented (or their effects dramatically reduced) had effective action been taken early enough. The BSE/CJD story is only the latest in a series of safety and health problems where risk management failure has created worrying uncertainties and massive economic disruption.

If the UK were indeed a 'blue chip' PLC, such failures would not only have a dramatic effect on the share price but would lead directly to forced boardroom resignations. An effective and comprehensive risk management policy ('being wise before the event') is an essential prerequisite for any undertaking, be it a family business or a leading industrial economy.

Inevitably perhaps, the public, when faced with stark and disturbing news about hitherto inadequately assessed risks, tend to demand incontrovertible assurances that, henceforth, things will be made absolutely safe. Very low levels of occurrence still do not equate with 'safety' in the minds of most lay people, especially when consequences are severe or when potentially harmful effects are delayed in time. This is so despite the fact that, as individuals, we often take difficult risk based decisions on behalf of others for whom we have responsibility (for example: amniocentesis in pregnancy; vaccination; letting children play or stay on their own etc).

When, rightly or wrongly, powerful commercial and political interests are suspected of distorting or covering up valid scientific findings about risk, public confidence in today's assurances about 'safety' inevitably evaporates. People tend to remember that official risk estimates almost always get revised upwards and all too often scientific heretics, previously vilified for being unnecessarily alarmist, tend to be rehabilitated when new evidence shows they were right all along.

Of course safety science itself is not above suspicion since rarely can it insulate itself from the controversies, politics and prejudices of the society in which it is embedded. For example, when it comes to deciding how tightly a new hazard should be controlled, before acceding to the case for new safety measures, those anxious to safeguard industries or assets from unnecessary regulation (or to continue with a chosen pursuit) will tend to insist on very high levels of proof of harm ('beyond all reasonable doubt').

On the other hand, those who may be exposed to new or ill defined risks (or those anxious to win compensation) will often argue for stringent preventive action when risks are indicated simply 'on the balance of probabilities'.

When it comes to risk assessment, should potential victims always be given the benefit of the scientific doubt or should Society be protected from having to commit resources unnecessarily in response to public over reaction to as yet 'unproven' risks?

What both the eighties and nineties have made abundantly clear is that when large scale disasters do occur (viz Chernobyl) the massive resulting costs (both human and financial) invariably confirm, when it is too late, the folly of not adopting a precautionary approach. Yet every time a fresh disaster occurs, simply bemoaning that too little has been done and too late does nothing to point us to more effective risk management strategies for new risks in the future.

To use a rather clumsy Euro term, safety is inevitably a complex 'socio-technical' process - that is, a peculiar mixture of politics and science. Yet as we approach the millennium, can we say with confidence that either is sufficiently mature to be able to respond with other than a reactive (wise after the event) approach to previously inadequately assessed risks?

A particularly interesting initiative in this connection has been the publication by the Health and Safety Executive of the report, *Use of Risk Assessment within Government Departments* which was produced by the Interdepartmental Liaison Group on Risk Assessment (see article below from OS&H March 1996).

OS&H March 96 The use of risk assessment in Government

A REPORT on the use of risk assessment within Government departments provides a review of the principles and practices. It was prepared by a committee of risk assessment experts from major departments, the Interdepartmental Liaison Group on Risk Assessment (ILGRA).

The report finds that although departments have much in common in the way they use risk assessment, there are some variations in practice. It makes a number of broad recommendations for achieving greater coherence and consistency, facilitating inter-departmental co-operation on risk issues and improving the way Government communicates with the public on health and safety matters.

The Government has agreed that departments should provide ministers with a risk assessment to assist them in reaching their decision on any new regulatory proposals affecting business. Ministers will be required to personally sign off each risk assessment and satisfy themselves that the regulation strikes an appropriate balance between costs and benefits. New guidance on this is currently being prepared by the Cabinet Office's deregulation unit.

This report compares and contrasts the approach to risk assessment adopted by Government Departments which have responsibility for different areas of safety (MAFF is covered for example) and sets out the principles to be followed by Government in future risk policy decision making.

The fact that its launch was so low key is hardly surprising in present circumstances. If it was to truly have inspired public confidence, one is entitled to ask why it was not first published in draft form for public comment and discussion and why independent outside experts were not involved in the Liaison Group itself.

In practical terms what can be done to improve the chances of our being able to foresee and control future avoidable safety, health or environmental crises?

Firstly, from the point of view of risk assessment science there is an urgent need to establish a consortium of centres of risk assessment excellence across the UK and the European Union, charged with the task of thinking the previously unthinkable and advising policy makers and the wider public about the likelihood of avoidable disasters. We badly need a high level 'think tank' on these lines, as independent as possible of special interests, to provide early warnings and to advise on priorities for action.

Secondly, so far as politicians are concerned, it could be argued that what they need most is a competent understanding of the generic issues to be addressed when disasters do occur in order to create pressure for a proactive risk management approach. Without this the right questions will not be asked and proper debate will always be distorted in the search for narrow political advantage.

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Re-assessing risk assessment

Moving away from an outworn, prescriptive and rule based approach to safety and using risk assessment has provided a much needed way of helping to determine the right level of preventive action to be applied in specific circumstances. This has had many advantages. In occupational safety in particular it has required duty holders (like employers or manufacturers and designers) who were previously just 'rule followers' to now become 'rule writers'; it has provided a basis for involvement and consultation over making safety decisions (for example with workforce representatives), thus, encouraging greater 'ownership'; it has provided a basis for arriving at proportional responses to risk (based on cost/benefit analyses); and it has allowed for flexibility and innovation. It has also provided a basis, where appropriate, for developing 'permissioning' and licensing regimes based on the preparation of 'safety cases' for regulatory authorities.

Yet despite its many evident advantages, risk assessment is still poorly understood in many areas of safety and accident prevention. Almost daily I see examples of risk assessment work which show clearly that those involved are approaching the whole process mechanistically and without any clear understanding of its underlying purpose.

One of the most elementary problems in all risk assessment practice is a continuing failure to differentiate between hazard (the potential for harm) and risk (the likelihood that that potential will be realised). Too often people talk with an air of apparent authority about poor management systems being a hazard (and not a factor enhancing risk), or slipping being a hazard (when the hazard is in fact an obstruction or surface contamination). Some of the common failings in risk assessment practice are:

- failure to establish a clear sequence of risk assessment steps (classification of activities, identification of hazards and persons exposed, determination of probability and degree of harm etc);
- lack of clarity about the level of sophistication to be applied (from common sense at one extreme to full blown Quantified Risk Assessment at the other) and failure to prioritise risk assessment effort by focusing on significant problems;
- confusion about how to establish 'worst case' consequences (worst possible? worst credible? or 'worst recorded'?);
- confusion about how to establish probability of occurrence (for example, always assuming that things that are theoretically possible are also significantly probable);
- failure to make an assessment both with and without existing controls in place (and also to establish how, when and where controls can fail, for example, during abnormal conditions like maintenance);
- failure to give due weight to the need for high integrity controls and **defence-in-depth** when dealing with high consequence risks;
- also, when dealing with high consequence risks, failing to revisit the case for justification of the risk creating activity in the first place, as well as problems in understanding the idea of upper bounds of tolerable risk; and

- confusion about, and sometimes hostility towards, the whole idea of 'reasonable practicability' and risk/cost optimisation and the need to be able to decide the point at which further safety effort is no longer justified because a point of clearly diminishing returns has been reached.

In general, however, there is too much emphasis on going through the motions of an assessment procedure for purely legal reasons and not enough on using it as a way of structuring risk control decision making. In fact much risk assessment amounts to little more than hazard identification (not that this is not an absolutely vital first step) leading to the application of standard risk control solutions.

For example, when looking at control of Schedule 1 substances under Coshh, the question asked all too often is, 'are we within the Maximum Exposure Limit?' not 'have we gone far enough below it?' Or, when looking at working at height, the question invariably posed is 'are we above 2.0 metres?' (in which case toe boards and guard rails will be provided but nothing more) or 'are we below 2.0 metres?' (in which case nothing need be provided). In neither of these cases are the resulting decisions really risk based.

In its recent policy review, *Pathways to Prevention* RoSPA has argued strongly in favour of making risk assessment a central feature of safety regulation, standard setting and risk management - not just in occupational safety but in areas as diverse as road, home, water, leisure, and product safety.

In 1995 HSE took an important step by publishing 'Use of Risk Assessment by Government Departments' prepared by the Interdepartmental Liaison Group on Risk Assessment (ILGRA). It is clear from the ILGRA report that there are still wide variations in the development and application risk assessment in the safety regimes overseen by different Government Departments. (Internationally too, there is still resistance in some areas to the concept.)

In RoSPA's view, the achievement of a cohesive and consistent risk assessment approach to safety is a fundamental prerequisite for progress across all fields of accident prevention - whether in developing safety education, developing product standards or home safety guidelines or in the management of work related risks, from nursery schools to nuclear fuel reprocessing. Yet much remains to be done. For example, the fact that a requirement for risk assessment has only recently been included by the British Standards Institution in 'BS 0' (the 'Standard for Standards') - largely as a result of RoSPA pressure - is just one illustration of the continuing work which is still required if this essential principle is to be integrated effectively into all safety processes.



Testing times?

► **Last year**, Science Minister Lord Sainsbury asked the government advisory body, the Human Genetics Commission, to assess the current position on the prevalence of genetic testing in UK workplaces and report back. As part of this, the Commission asked a number of bodies, including those in the OS&H field, for their views on the issue. RoSPA's occupational safety adviser, **Roger Bibbings** is one of those who responded.

Recently, concern has arisen because of evidence that insurance companies and employers in the US and Australia have used information from genetic tests to make decisions about employment and job placement.

Genetic testing has also been very much in the news with concerns raised about retention of the genetic profiles of innocent suspects interviewed by the police.

Sir John Sulston, the vice-chair of the Human Genetics Commission (HGC), has said that new legislation is needed to stop workplace and insurance discrimination on genetic grounds (www.hgc.gov.uk).

Commenting on a submission to the all-party parliamentary disability group by a group of 45 charities, unions, lawyers and scientists, he said: "The essential thing is there should be no genetic judgment of whether somebody is appropriate for any job, with rare exceptions possibly."

Broadly speaking, occupational genetic testing involves analysing a person's DNA (the unique code which exists in the nucleus of every cell) by isolating genetic material from a blood or tissue sample to see if they possess a 'faulty' gene which might lead them to be more at risk of developing certain diseases or which might render them more susceptible to harm from toxic exposures, for example.

On the face of things this might seem quite sensible but in practice there are many complicating factors. The relationship between genetic profile and precise risk of disease is often far from straightforward and many other factors such as lifestyle and diet can affect whether genes will actually have an adverse impact on health.

Testing can be used, however, to detect genetic damage that occurs during a person's

lifetime. This has long been used, for example, as part of surveillance in radiological protection but again, exactly what the results mean in terms of risk of developing disease is often open to wide interpretation.

This sort of 'biomedical' monitoring application is much less contentious, however, than using tests of employees' genetic make-up to reveal whether they have genetic disorders where symptoms may not arise until later in life.

Genetic tests can be used, it is claimed, to assess whether there is an increased risk of workers developing conditions such as occupational asthma or cancer as a result of exposure to hazardous agents but again opinions vary about their reliability.

Firstly, the severity of symptoms, and when or whether they will affect a person's ability to do their job, are often far from predictable. In some respects, this mirrors the uncertainty which sometimes surrounds the use of pre-employment tests for atopy (hypersensitivity) which have long been used in industries such as metal refining, two pack paint spraying and the production of enzymes, to try to predict whether or not workers are more likely to develop sensitisation conditions such as asthma or dermatitis.

The second major point of concern, however, has less to do with science and more to do with ethics and specifically equality of opportunity.

As science enables us to know more about people's make up, to what extent should this be allowed to impact their chances of working and gaining access to the wealth and other benefits which industry and employment create? Having fought to eliminate discrimination at work on racial, gender, age, disability and sexual orientation grounds, are we going to have to go through a similar struggle all over again to combat

genetic discrimination?

This is very much the perspective of the organisation GeneWatch UK (www.genewatch.org) which believes that the government should legislate to prevent such discrimination in Britain. Trade unions are also concerned about people's rights to genetic privacy. But there are some groups that accept that such testing may be acceptable in a minority of safety significant jobs, for example, to assess risk of sudden heart attack.

The Information Commissioner's Employment Code (which gives clear guidance on genetic testing in the workplace) states that *employers should only seek information through genetic testing as a last resort*. The Code also contains a requirement for HGC to be informed whenever employers plan to use genetic testing (see: www.ico.gov.uk/eventual.aspx?id=437).

Fairness

Although all this might seem like quite a modern moral dilemma, the practical and ethical issues associated with testing employees (either before employment or in-service) have been with us for some time.

Most commonly, we have become used to testing to establish compliance with minimum health standards for workers in transport or those who have to perform faultlessly in controlling hazardous processes.

Here, the key principles in ensuring fairness when testing include: that criteria should be evidence-based (i.e. there is evidence that a given level of health impairment actually affects reliability); that diagnostic techniques should be reliable and objective; that workers should have full medical confidentiality and have the right to appeal; and that minimum job-related health standards should be agreed after extensive consultation with all stake-

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holders and are kept under review.

There are also other kinds of testing of individuals applied in a health and safety context:

- **Psychometric testing** which is now widely used in employee selection procedures is also being used more frequently than hitherto to assess employee's attitudes to safety, their ability to spot hazards or their tendency to violate rules and norms. This might seem sensible at one level but some critics see it as a resurrection of a trend associated with 'Taylorism' in the USA in the 1920s aimed at weeding out 'accident prone workers'.

Surprisingly, it took a long time to win acceptance in both the USA and Europe that accidents are best prevented by creating safe systems of work rather than selecting workers who can cope with inadequately controlled hazards. (It was one of the founders of UK occupational medicine, Sir Thomas Legge, who enjoined people to first ask if the job was fit for the worker before asking if the worker was fit for the job.)

In the same vein contemporary figures such as Professor James Reason continue to remind us that, to a large extent, human variability and fallibility have to be accepted as 'givens' and that the priority from a safety perspective has always to be adapting work to people rather the other way round.

In RoSPA's 'key safety points', for example, (www.rospa.com/aboutrospa/rospa_safetypoints.htm) we say: "...For high consequence risks, control measures and systems should always be selected which will be as forgiving of error as possible, fail to a safe condition... etc".

On the other hand, where the limits of assuring safety through technology and systems have been exhausted (or are very limited), enhancing human reliability becomes the only option. In such circumstances behavioural safety techniques can be applied and psychometric testing may help focus attention on workers who need help and support.

- **Drug testing** is another growing area of employee testing and involves looking for traces of illegal drugs both prior to employment and in-service. Such test regimes are being applied increasingly by employers who are concerned, not only about safety issues (e.g. in transport) but quality and service delivery failures.

HSE suggest that organisations need to have proactive drug and alcohol policies in place to help identify employees with sub-

stance abuse problems and offer confidential counselling and rehabilitation programmes.

What is less clear is when and how breath or blood alcohol (or other forms of substance related impairment) testing should be applied post accident or incident. We are all used (and in general accept) the case for breath tests administered by the police at the scene of road crashes but this is far from common practice following workplace accidents.

There are major practical and ethical issues here but equally absence of such testing means that there is very little good data on the contribution of alcohol and drug impairment to workplace accidents.

- **Criminal records checks** have become accepted as a normal procedure in many sectors in order to control abuse risks to vulnerable people such as the elderly or children.

Prospective employees are checked through the Criminal Records Bureau, although opinions vary about the impact which certain kinds of past conviction such as drink driving should have on a person's right to work with vulnerable people, particularly where they have undergone successful rehabilitation.

- **Driving assessments** – bringing work-related road safety into the health and safety mainstream has also meant that employees who drive in the course of their work must now accept that their licence points will be monitored and, where necessary they may have to undergo driving assessment to see if they need further training.

One interesting approach to tackling this challenge is RoSPA's online *Driver Profiler* (see: www.rospa.com/driver_training/managementinfo/driver_profiler.htm), which computes a number of variables to help identify at-work drivers who are likely to be 'high risk' and may thus need additional training.

Reliability

At one level it can be argued that the case for expanding each of these forms of testing (genetic, psychometric, health, competence etc) needs to be examined on its merits.

If each testing regime is reasonable, fair, and proportionate and actually adds health and safety value, then that case might seem pretty unassailable.

At the same time, the reliability of testing is very important. Tests which throw up too many false positives/negatives can pose obvious problems and it is important that test methods are validated, for example, by comparing results with those obtained from other test methods and epidemiological data.

Looked at from a civil liberties perspective however, the increased testing of employees for health and safety purposes will be seen by some as part of much wider social trend, not unconnected with greater citizen surveillance than ever before (e.g. CCTV, ID cards etc).

Such people may tend to view any growth of testing of individual employees with suspicion, especially if it is not balanced by an equivalent focus on testing of technology and management systems.

Enthusiasts for more employee testing in the name of safety are likely to include not only providers of specific kinds of testing services (who understandably have a vested interest in extolling the safety value of screening employees) but insurers who will feel obliged to require clients to do everything possible to reduce risk. (Insurers in particular have a responsibility to ensure that they are not contributing to what the government see as a major problem of 'over-the-top safety' and 'excessive risk aversion'.)

Testing can also, of course, produce lots of data. This may be useful and there is considerable merit in the adage "you can't manage what you don't measure". Equally, because simple software can now be used so readily to turn test data into bar and pie charts, this can all too easily create the illusion that a problem is being managed simply because it is being measured. What is important is whether the data actually enable managers to identify and tackle real issues.

All this might seem to be coming down too hard against the case for more employee-focused testing. Testing carefully applied can add health and safety value but it also raises many other issues.

In my opinion, it is important that practitioners resist the temptation to spend scarce resources on more testing of employees in the pursuit of improved health and safety performance – just for the sake of it.

- It is important that they satisfy themselves:
 - (a) that the tests are both ethically justified and reliable;
 - (b) that they can actually help to deliver added safety; and
 - (c) that the same resources might not be better used to achieve the same or greater improvement by being spent in other ways.

Those with views on genetic testing should write to the Human Genetics Commission at: hgc@dh.gsi.gov.uk

Readers' comments are welcome – email: rbibbings@rospa.com

Parting Shots

Ban or manage?

► **Making effective safety decisions is never easy**, no matter how much the casual observer might suggest it is just a matter of using common sense. Taking care to ensure that those safety measures you eventually choose are neither excessive nor insufficient is a difficult path to tread. RoSPA's occupational safety adviser, **Roger Bibbings**, asks do we need some general ground rules as to when a hazard should be banned as opposed to managed?

The ban on smoking in enclosed public places is now in force across the UK. The ban is not a ban on smoking, merely smoking in environments where non-smokers may be exposed. It has been hailed as an historic health move and a significant worker protection measure.

Yet arguments about the precise level of health risks associated with inhaling secondhand smoke continue, with some claiming that, from a quantitative perspective, risk levels are actually quite low.

It is perhaps worth taking this opportunity to reflect in general terms on the case for banning things in the name of health and safety. So often as health and safety professionals we find ourselves facing a dilemma; should the option of banning something hazardous be a first response or a last resort?

Some newspapers are still battening onto any case of apparently over-the-top action taken in the name of safety to reinforce those negative stereotypes about this subject which their editors feel will help to sell their particular newspaper (or should it be 'viewspaper' to borrow a recent Tony Blair phrase). And no amount of evidence that many of these stories are in fact urban myths (see HSE's *Myth Busters* at: www.hse.gov.uk/myth) seems to persuade those editors to change this approach.

It is not surprising therefore that we in RoSPA tend to be bracketed by some journalists with the hopelessly overcautious and risk averse – those supposed zealots who would have anything banned that might pose a danger to their fellow citizens.

Quite recently, for example, I was kept on the phone by a journalist for a good twenty minutes who wanted me to say that RoSPA favoured banning employees from using motorcycles as a means of travel in working hours. He just could not accept my argument that it all depended on risk assessment. (I suspect he had already written his copy and wanted a convenient quote from RoSPA to be able to finish the piece off.)

Precaution

So we end up spending quite a lot of time explaining to certain people that, contrary to what they might like to imagine, we in RoSPA are not safety 'anoraks'. But we are committed to the idea of putting 'safety first'. This means, for example: trying to follow what is called 'the precautionary principle' (for example, giving potential victims the benefit of any scientific doubt about levels of risk); when hazards are severe and risk levels high, opting for 'defence in depth' ('belt and braces'); and giving preference wherever possible to approaches to risk control which will be as forgiving of error as possible, fail to a safe

condition and protect especially vulnerable groups, for example older people or young children (see '*Eighteen points which guide RoSPA's approach to safety*' at: www.rospa.com/aboutrospa/rospa_safetypoints.htm).

The key point which we seek to emphasise however, is that we see safety as a matter of judgement and balance.

Where possible, of course, we do prefer to tackle risks at source by removing hazards, but we do not favour banning things simply because they could cause injury. And provided risk levels are not 'intolerable' or totally unjustified, we see no merit in continuing to spend further time and money to reduce them once a point of diminishing safety returns has been reached.

For example, we have welcomed and not condemned the recent European Court ruling in the UK's favour on the question of whether 'reasonable practicability' (RP) is compatible with the EC Health and Safety Framework Directive. It is blindingly obvious that safety precautions have to be balanced against costs – although not, it has to be remembered, any particular duty holder's ability to pay! (Far from watering down the Directive, RP standards in the UK actually deliver a very high level of legal protection – and unlike the Directive, which only applies to workers, they extend that protection to the public as well.)



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So there is always a tension between pure safety theory and practical realities, for example, whether to prohibit something hazardous or just to manage it.

Over the last two decades however, there has been a succession of legislative initiatives aimed at tackling various risks by banning the source of harm. Such bans have included: asbestos, CFCs, dangerous dogs, privately owned handguns, beef on the bone (during the BSE outbreak etc), and sale of fireworks to children. Other bans, some of which have aroused public controversy, have included: use of hand held mobile phones while driving; flammable foam in furniture; and use of certain chemicals in industry and elsewhere.

There are calls for many other sources of danger to be banned, from mini-motorbikes to nuclear power. And then there are all those alleged administrative bans by the 'elf and safety people' – use of ladders, door-mats in social housing, conkers in schools, hanging baskets, swimming in lakes and rivers, school trips and so on.

Liability

The latter bans are for the most part either mythical or they are totally misconceived judgements by so-called safety professionals who should know better. Although apparently driven by the duty to follow the hierarchy of control in the *Management of Health and Safety at Work Regulations 1999*, which demand tackling risk at source (see *Regulation 4 and Schedule 1, 'Principles of Prevention to be Applied'*), many of these cases seem to be the result of exaggerated fears about potential liability for damages should an accident occur. And in other cases health and safety is used just as an excuse to shut things down which are deemed too expensive to maintain or are just inconvenient.

Clearly where legal bans on hazards are introduced, each case is very different, including things like the nature and extent of harm, the strength of evidence, public concern, the effectiveness of a ban and its enforcement, whether safer alternatives are available, the impact on business and society and so on. Which perhaps ought to prompt the question, 'Do we need some general ground rules as to when a hazard should be banned as opposed to seeking to control the risks which it presents by applying appropriate measures or simply providing information to citizens so they can make informed choices?'

For example, how much evidence do we need about the risks to which the hazard

allegedly gives rise? Or when can we justifiably make decisions based simply on conjecture about what might happen? And do risk levels have to be intolerable before something is banned or can we ban things when risk levels are low but there is no real justification for the activity?

Back in the 1960s fluoroscopy in shoe shops was banned because, although it only gave quite a small radiation dose to children, it was clearly both possible and preferable to measure their feet with a tape measure to ensure new shoes fitted properly. The fluoroscope (which showed the outline of the shoe and the bones in the feet) was fascinating but was really only being employed as a sales gimmick.

At the other end of the risk spectrum there are many high hazard (and high risk) leisure activities (such as winter climbing, micro-light flying) which some people engage in voluntarily but which to others appear to have no justification at all. Even though a large part of the costs of accidents in these activities may have to be borne by society at large, we refrain from imposing severe restrictions – such as bans or partial bans – because of the effect these might have on personal liberty. In looking at the costs of banning things we have always to consider the opportunity costs (what is being lost?).

So making effective safety decisions is never easy, no matter how much the casual observer might suggest it is just a matter of using common sense. Faced with a safety choice, whether you are a politician or a parent, you invariably find yourself treading a difficult path, taking care to ensure that those safety measures you eventually choose are neither excessive (leading to wasted resources and opportunities or unnecessary restrictions) nor insufficient (leading to unnecessary risk).

You know you cannot allow yourself to be driven simply by emotion. Safety needs to be evidence based. But equally you have to accept that it is not a precise science. For example, how unsafe activities or products need to be before they should be banned – or conversely, how safe they need to be before risks can be deemed 'tolerable' – are issues on which people will nearly always have differing points of view. You have to look at the data but you also have to take into account people's safety ambitions and perceptions.

From a political standpoint especially, it is important to recognise that decisions about whether or not to ban things for safety reasons are often driven by people's per-

ceptions of particular risks. Perceptions can be influenced not just by factors such as the nature of the harm involved or how likely it is to occur but whether it is likely to be ordinary or catastrophic, whether effects are likely to be immediate or delayed or affect individuals or society generally and whether the hazards involved are: natural or man-made; familiar or unfamiliar; controllable or uncontrollable; and whether exposure to them is voluntary or involuntary or involves benefit. A further key issue in risk perception is whether people trust those who are managing risk on their behalf.

And of course the 'thresholds' at which risks are deemed to become 'intolerable' will continue to change as society's demands for safety increase.

Regulation

Recently Jonathan Rees, HSE's deputy chief executive (policy), has said rather neatly 'We are about saving lives, not stopping people living'. Regulators like Jonathan have to ensure that any legislative proposal for improving health and safety (and certainly any proposal for introducing a safety ban) is subject not just to public consultation but to a full regulatory impact assessment – following disciplines overseen by the Better Regulation Executive. Perhaps similar disciplines need to be followed by health and safety practitioners.

If you are going to go for a ban then you need to have developed a sound safety case and involved your key stakeholders. Or you need to have developed a smart, alternative solution that removes the hazard, improves safety, reduces costs and creates new opportunities. Otherwise the presumption has to be that people will have to live with hazards but be protected from them through the adoption of appropriate and proportionate risk control measures.

Readers' views welcome.
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Reassessing risk assessment

► This year's European H&S week is the start of a two-year focus on risk assessment across the EU. But why is there a need to re-visit this subject now? Surely everyone understands what risk assessment is all about. RoSPA's occupational safety adviser, **Roger Bibbings**, examines the issues.

The aim of the two-year European risk assessment (RA) campaign is '...to convey clearly that risk assessment is a systematic examination of all aspects of the work undertaken to consider what can cause injury or harm, whether the hazards can be eliminated and, if not, what preventive or protective measures are, or should be, in place to control the risks'.

RoSPA fully supports the RA theme but it has been asked by some that, given that requirement for risk assessment has been with us for over 16 years (since the implementation of the EC Framework Directive for H&S), why is there a need to re-visit this subject now? Surely everyone understands what RA is all about. What's the problem? Are there not more pressing issues that need attention?

Well according to the latest report from the government's Better Regulation Executive (BRE) on 'Improving Outcomes from Health and Safety' (www.berr.gov.uk/files/file47324.pdf), the term 'risk assessment' itself may still be a major cause of confusion, especially for those in small and medium

size enterprises (SMEs) who lack training and/or access to professional advice.

The BRE report suggests that many small firms, especially those without access to competent advice (whether internal or external), find the language around health and safety confusing. Terms like 'risk assessment' may have no meaning for them or sound highly technical when what is actually required is a quite 'common sense' approach.

Judgement

Indeed one of the key messages that we need to get across in any new RA campaign is that there is nothing special about 'risk assessment'. It is actually something all of us practise every day, spotting dangers, weighing things up and altering our behaviour accordingly.

At this level it's all fairly automatic whether we're handling hot liquids with care in the kitchen, holding the handrail while going down stairs or travelling on the road. We assess risks and make safety judgement calls all the time without knowing we're doing it. It is often the process of formalisation that can lead many businesses to become over-anxious about the whole RA process, and

where they employ more than five people and have by law to write the results of RA down, the process can seem extremely legalistic. Safety measures may seem obvious but there can still be doubts about whether enough is being done to comply with the law. So all too often, rather than making a start at assessing risks themselves, many businesses choose simply to engage consultants to carry out assessments for them.

The good consultant will work with the business to help them carry out the work themselves, giving special support on technically complex issues which may be beyond their competence. In contrast, the unscrupulous consultant will over-complicate things and produce voluminous documentation and records which are beyond the comprehension of the firm and of no practical use in actually helping people at the sharp end to work safely and without risks to their health.

Then there are numerous software products (of varying degrees of usefulness) on the market which encourage businesses to 'comply' with health and safety law by entering data about hazards, risks and controls. Again, unless these actually help



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people working at ground level to adopt the appropriate measures, one can question their value.

In an attempt to demystify RA, the Health and Safety Executive (HSE) is continuing to add to its range of online sample assessments which are aimed particularly at SMEs (www.hse.gov.uk/risk/casestudies/index.htm), building on advice in the free leaflet 'Five Steps to Risk Assessment' (INDG 163). There are now 29 of these on the HSE website (and a further five sets are in preparation). They have been developed for SMEs in areas such as shops and offices, motor vehicle retail and repair, warehouses and so on and are designed to be used in conjunction with HSE's downloadable blank risk assessment form (www.hse.gov.uk/risk/template.pdf).

HSE stresses, however, that they are not generic risk assessments and firms cannot just put their company name on and adopt them wholesale without any thought, since doing that would not satisfy the law and would not protect their employees effectively. The main aim of these sample assessments is to provide a reminder of the key steps to be taken and what actually needs to be written down. They serve to illustrate what a 'good enough' record of a risk assessment might look like.

The leaflet INDG163 is a useful guide but it tends to focus on hazards in fixed workplaces, whereas for many jobs workers are highly mobile, for example, working in public spaces or on other people's premises. So there is a need to cover risks outside the employer's premises as well, especially occupational road risk (three to four times more workers are killed while on the road during working time than in all other accidents put together). As RoSPA has shown, the risks which people face (and create for others) when on the road as part of their job should be managed as a mainstream H&S issue.

Action

HSE say risk assessments should be about identifying practical actions that protect people from harm and injury, not a bureaucratic exercise and that, for the majority of risk assessments, short bullet points work well.

A perhaps more important message to get across is that while there is a legal requirement to carry out 'suitable and sufficient' RA, it is actually only a means to an end not an end itself. What is of primary importance is ensuring that people (whether employees or the public) are properly protected. You may be prosecuted if you fail to take reason-

ably practicable measures. You will not be prosecuted if your risk assessment is not word perfect.

Similarly it needs to be stressed that RA is not just a way of helping you make judgements about what is needed to ensure safe and healthy working; it is also a way of helping people at work to *prioritise* their efforts so they can focus on the most significant risks and not worry about trivia. Again, people can sometimes get too hung up using risk matrices and so on to ascribe values to various risks but good risk assessment should always be able to help people to keep their eyes on the issues which are most likely to cause serious harm, while keeping less serious ones under review. And it should also help them to understand when risk levels have become intolerable and unacceptable activities should cease.

Good RA also needs to help guide people to adopt specific measures needed for their particular work. Generic assessments are often a good starting point but they nearly always need fine-tuning to fit day-to-day operations, so point-of-work risk assessments using techniques such as 'take 2s', 'seconds out for safety', toolbox briefings etc need to be employed – not only to get key messages across, but to allow those on the job to identify things that are different on the day and may need additional/different measures to be taken.

An essential point here is that in any setting, change is ever present. Nothing stays the same for very long. So it is important in conducting RAs to identify things that can exacerbate risks, conflict with or even defeat essential H&S measures. It is often when there are variations from standard operations, for example, during maintenance or repair activities, that standard precautions prove inadequate.

A further key message therefore is that risk assessments need to be kept 'live,' especially by incorporating lessons learned from 'near misses' and/or from accidents and incidents in similar businesses. A strong reporting culture, in which staff are thanked for highlighting problems and are encouraged to help in finding remedies, is essential if assessments are to reflect what is really going on in the workplace. Every accident/incident investigation should consider the RA(s) for the activity concerned, whether they were suitable and sufficient, and whether they need amendment.

In practice, RAs can only be kept live and relevant if they are 'owned' by managers and staff – so senior leadership and workforce involvement are key.

Both the HSE/IoD guidance on the senior leadership role of directors and new HSE guidance (expected shortly) on workforce consultation, make it very clear that risk assessments should not be left to experts but should be the subject of ongoing dialogue at a number of levels. The outputs from RAs in this sense are not purely technical but reflect social as well as technical judgements.

Views on exactly how much needs to be done to tackle particular problems will vary according to the interests, perceptions and agendas of various parties. Some safety professionals resent this. The competent professional on the other hand can help to facilitate debate and consensus, for example, by providing essential information and benchmarking with other organisations with similar problems.

Training

Which brings us back to a further dilemma. Although much RA is 'common sense' and we need everyone at work to participate in RA to get their 'buy-in', often, as non-experts, they are not aware of their limitations, especially the limits of their own knowledge and expertise. People tend not to recognise what they don't know, so helping them to know when to stop and ask for professional advice is important but never easy.

Part of the solution is to ensure that everyone in the workplace has some kind of training or briefing on risk assessment and that those with particular responsibilities, including line and operational managers as well as key decision makers, have extra training in managing risk and not just health and safety risks.

Often, without proper RA, decisions taken far away from operations, (such in design or reorganisation of work) can conflict with safety or can create 'pathogens' or problems which lurk undetected until circumstances are ripe for them to express themselves as accidents or health damage.

What is positive, however, is that 'risk management' is now a key business discipline in most organisations, although approaches to tackling speculative (financial) as opposed to operational risks (like H&S) often seem quite different. That said, to the extent that 'risk literacy' can become part of the DNA of every organisation, the less difficulty we in H&S will have in enabling those we serve to embrace risk assessment as a basis for safe and healthy working.

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