# PREVENTING WORK INJURY THROUGH RISK MANAGEMENT

**AIM:** To provide a basic understanding of risk management requirements, particularly as they relate to improving occupational health and safety.

## THE RISK MANAGEMENT PROCESS

Risk management is a logical and systematic method of identifying and reducing risks associated with any activity. The method involves identifying, analysing, assessing, treating, monitoring and communicating risks associated with an activity, function or process in a way that will enable an organization to minimize its losses and maximise its opportunities. It begins with the establishment of the strategic, organisational and risk management context in which work will take place. The next step is to identify and analyse the risks which are present in the environment and work process in order to assess, prioritise and treat them appropriately. The final step is to monitor and review the performance of work in order to provide a new baseline for future action.

Risk management can be used continuously to improve organisational administration and outcomes. It is required in all Australian workplaces by state occupational health and safety (OHS) acts. It can also be used more broadly in any workplace, as an integrated approach to continuously reducing the health risks not only to workers, but also to clients, the community and the environment. The process of risk management is consistent with the practice of health promotion which, according to the National Health and Medical Research Council (NHMRC) involves activity to improve population health by identifying and preventing the causes of illness, evidence-based practice, and community participation in decisions which affect health. The process of health promotion is discussed in the subject Health Policy and Service Delivery.

## THE IMPORTANCE OF MANAGING OHS EFFECTIVELY

In Australia the requirements of state OHS acts should form the basis of a risk management culture which is consistent with the implementation of quality management, which is discussed in the next lecture. An effective means of preventing work related injuries is essential so that workers and their families avoid the experience of death or injury, its related pain and suffering, loss of income, and associated medical, rehabilitation and related costs. An employer who cannot prevent injuries may not only experience great distress, but also economic problems related to loss of productivity, the cost of training new workers, damage to materials, and industrial resentment and distrust. The community of taxpayers may also bear the cost of injury through the provision of medical and rehabilitation benefits and other social welfare payments to people whose injuries have made them unable to work again. Good risk management practices are also good business because they ideally promote better data gathering and a more thoughtful, cooperative, evidence based and therefore more productive approach to doing work.

Men are much more likely to be killed or badly injured at work than women because the work they do is inherently more dangerous. National OHS Commission (NOHSC) statistics indicate that each year around 430 men and 20 women are killed at work and men appear to be injured at work at two and a half times the rate that women are. Australian studies have suggested that death from cancer as a result of workplace exposure to hazardous materials could add to these fatalities by over 2000 people each year, but that such injuries are not recognised as work related because illness and death may occur many years after exposure. Annually, about one in every twelve workers in Australia has a work related injury, with almost two thirds of the total group taking some time off work. Industries with the highest fatality and injury frequency rates are transport and storage, mining, construction, agriculture, forestry, fishing and hunting. Sales,

communication, finance and business, community services and recreation and personal services industries have lower than average injury and disease frequency rates.

Sprains and strains account for over 40% of all work related injuries. Injuries are most frequently reported by plant and machine operators, labourers and tradespeople. Open wounds, fractures, crush injuries and deafness are common injuries which are more likely to be experienced by men than women. Although musculoskeletal injuries are a major problem for both sexes, they appear particularly problematic for women, who in some large occupational groups report up to three times the proportion of musculoskeletal and connective tissue diseases that men do. This may reflect their concentration in jobs such as process worker, keyboard operator, sales worker, or in health or community services. Women tend to remain away from work as a result of injury longer than men. There is little data on the experience of migrant workers, but they bear greater risk of injury if their lack of facility with English means concentration in jobs where low comprehension of written safety signs or oral instructions is a problem. Migrants may also be particularly fearful of questioning supervisors in case of job loss and difficulty in finding another.

**BACKGROUND AND REQUIREMENTS OF AUSTRALIAN OHS ACTS**

Before Australian states passed OHS acts during the 1980s, OHS was regulated by prescriptive and very detailed state legislation, such as factories shops and industries acts, construction safety acts, rural workers' acts and various mines safety acts. Some legislation was over three quarters of a century old. Many provisions were outdated and contained specific directions regarding obsolete technologies and work processes. Others reflected the application of industrial or political pressure, rather than genuine safety requirements. The acts ignored many health and safety problems arising from the use of modern technology or chemicals, and their provisions did not generally apply to the services sector. The legislation was not in plain English and was full of inconsistencies, overlap and gaps in spite of its great volume and complexity. The need to follow the exact requirements of prescriptive legislation may retard the demand for newer, safer production technologies. State OHS acts introduced a new approach to legislation generally.

The philosophy of Australian state OHS Acts was based on the Robens committee report, which resulted from OHS investigations in the UK in 1972. The Robens report concluded that the existing regulatory regime tended to encourage people to think and behave as if safety and health was the responsibility of external agencies applying a proliferation of detailed, complex, uncoordinated and outdated regulations. It argued this had led to an apathetic attitude to the management of health and safety at the workplace. The report proposed the establishment of a single national authority to preside over a more effectively self regulating system operating under a single act which would lay down the duties of employers, workers and suppliers of materials, establish basic rights for workers and their representatives, and create new structures through which standards could be developed and effectively administered and enforced.

As a result of adopting the Robens direction, state OHS acts were introduced throughout Australia during the 1980s. The Council of Australian Governments (COAG) has made a commitment to gaining national uniformity. The acts provide all employers with a duty of care to ensure the health, safety and welfare of their employees and other persons at the workplace such as visitors or subcontractors. The employer must demonstrate that everything 'reasonably practicable' has been done to ensure health and safety. Workers must co-operate with employers and work safely. Requirements are placed on manufacturers and suppliers to ensure that their products are safe when properly used. They must provide information on correct product use and potential associated hazards. OHS committees may be established in workplaces over twenty and

where a majority of employees request it. They are comprised of employer and elected worker representatives. Committees must be trained.

Employers must undertake risk identification and control in consultation with workers who have been provided with relevant information and training. The legislation provides that workers shall not be dismissed or treated detrimentally as a result of making a health complaint or being a member of a workplace committee. Workers' representatives have the right to accompany inspections of the workplace and have access to all information related to health and safety. OHS inspectors may issue prohibition and improvement notices and on the spot fines. Prosecutions may be taken by an inspector, or on behalf of the secretary of a trade union, or by other persons approved by the relevant minister.

## STRUCTURE OF WORKERS' COMPENSATION INSURANCE

Key features of the NSW regulatory model have been adopted in other states. The NSW WorkCover Authority is primarily responsible for implementing the OHS act and the workers' compensation act. The government fixes the appropriate level for premiums and benefits. All employers are required to take out workers' compensation insurance. The employer's premium level depends on the level of risk identified for a particular industry and also for the individual organization. Except in the case of small employers who are not individually risk rated, employers may reduce their premium costs through an effective injury prevention and rehabilitation performance. Twelve insurance companies, which WorkCover has approved to undertake the task competitively, carry out the collection of premiums, management of claims, collection of workers' compensation statistics, and investment of the premium fund.

To the extent that insurers can no longer compete on premium price for market share, they must compete by offering employers effective risk management and rehabilitation related services. By integrating OHS and workers' compensation, this system provides for a data driven management approach to prevention and rehabilitation of injury at the workplace and beyond. The design also provides the benefits of government regulation and private sector competition by insurers, whilst maintaining public ownership of the premium fund. (Investment returns then belong to government and industry, not insurance companies.) Insurers provide workers compensation data to WorkCover and it is also sent to the National OHS Commission, which uses it to assist the national and industry based OHS planning, research and development process.

If a work related injury occurs, a person should report it to their employer and see a doctor, to get a WorkCover medical certificate. The employer should contact their insurance company and, if the person is going to be off work for more than a few days, a rehabilitation plan should be developed. If a person cannot do all their normal duties, the employer should provide suitable duties. The injured person should keep in touch with their employer and the employer's insurance company to ensure that payments commence within seven days of the injury being notified to the insurer. More information about rehabilitation and compensation requirements under workers' compensation legislation and motor accident legislation is provided in the subject Health Policy and Service Delivery.

## HAZARDS

In 1989 in NSW the Subordinate Legislation Act was passed and similar legislation occurred in other states. All government departments and statutory authorities were required to update or repeal their regulations. Work began to update the Factories Shops and Industries Act, the Construction Safety Act and associated legislation for inclusion as a single regulation under state

OHS Acts. This has now been completed. It is clear to read, informative and easy to obtain from WorkCover websites. Hazards are anything with the potential to harm life, health or property. Requirements relating to their control may be divided into:

- Physical hazards (including noise, vibration, heat, cold, radiation)
- Mechanical/electrical hazards (including plant safety)
- Chemical hazards (including substances, dusts and fumes from processes such as welding)
- Biological hazards (including blood, bacteria, viruses, mould, insects and vermin)
- Psychosocial problems (including violence, addiction and excessive stress)

Hazards can cause injury or illness. The former are sudden events and the latter occur over a longer time period. Those responsible for work must undertake hazard identification and risk assessment and minimisation in consultation with workers who have been provided with information and training. They identify potential hazards, and estimate the likely level of severity and frequency of any adverse occurrence, in order to prioritise and treat the risks. Continuous monitoring, evaluation and improvement of the way work is done are also required. The adequacy of the risk management process depends partly on keeping good workplace data on injury and illness, including an effective accident and incident reporting procedure, first aid registers, environment monitoring records, and plant and production information.

The use of personal protective equipment is often the most common response to the control of workplace hazards. However, if hazards can be eliminated or controlled at their source, this is often safer and more productive than recourse to personal protection. A hierarchy of hazard control should be applied, which requires examination of a range of potential risk control methods, to fix the problem at source if possible. This focuses the minds of managers and workers on possible ways of making work more efficient as well as safer. In the first instance people should think about whether the plant, substance or system of work that causes a risk can be eliminated. If this is not feasible, consideration should be given to substituting the offending plant or substance with a less hazardous alternative. Another option is its isolation from the place where work is normally carried out. The possibility that risk can be controlled by an engineering solution that reduces workers' exposure to the hazard should always be considered. In addition, thought could be given to whether work practices can be changed to reduce risk. If discussing all these possible options does not provide a safe and cost effective solution to the problem, personal protective equipment should be used.

When legislation calls up a standard developed by the NOHSC or the Australian Standards Association, it must be followed. A prescriptive approach may be appropriate in order to ensure that standards are not reduced in regard to load bearing or similar engineering safety issues. In other cases, a prescriptive approach may retard improvements in technology and work practices, because people are discouraged from acting differently from legislative requirements, even if they have developed safer and more efficient technologies or processes. Work practices are therefore increasingly guided by a variety of specific codes of practice rather than prescriptive legislation. Codes are comprehensive guidelines for the achievement of OHS standards, which are approved by government as a result of industry consultation. They can be used in court as evidence of implementation of the duty of care. Managers are expected to follow them unless they can show that an alternative method of work is just as safe or safer.

Codes have many advantages over legislation. Laws generally take a long time to develop or amend. The litany of prescriptions in them quickly becomes obsolete and inflexible. The frequent amendments which result from individual court judgements, or industrial and political

struggles, begin to overlap or contradict each other over time. The attempts to make legislation comprehensive and exact as well as politically acceptable may simply make it voluminous and incomprehensible. In contrast, codes for use in specific situations may be developed comparatively quickly by approved experts. They can be written in clear, simple English and disseminated widely. A law which most people know little or nothing about has much less impact on changing behaviour than information which is not law but which is widely circulated and understood. The development of codes and their continuous revision in the light of the outcomes of their application should be an integral aspect of the industry research and development process which ought to accompany risk management at the enterprise level.

## MANAGEMENT STRUCTURES TO MINIMISE RISK

The six-point approach for effective OHS systems can be coordinated with other key management requirements. It begins with developing an OHS policy and related management responsibilities, including purchasing and contracting. It is vital for its effectiveness that the policy and related program budgets are clearly authorised from top management of the organization. Secondly, clear and effective consultation mechanisms must be established. As a result of their specific experience, workers often know more about the hazards of a particular workplace than the supposed OHS experts. Their knowledge needs to be built upon, not diminished or ignored. A training strategy and related data gathering procedures must also be set up. OHS training should be included in induction training, supervisor and management training, on-the-job training, emergency procedures training, first aid training and specific hazards training. Fast and effective problem solving and dispute resolution procedures, which workers have the confidence to use, need to be established at the workplace. This also provides a valuable source of information, which can be used in preventing future problems.

It is important for OHS management, data gathering and budgeting systems to be established at all workplaces in a manner which is coordinated effectively with the management of risks for clients, members of the public, and the environment. This is part of a general quality management approach to doing business. Procedures for identifying hazards to workers include perusal of accident/incident records for first aid and workers' compensation. (Near-miss incidents should be recorded, as these are indications of disaster being avoided through good luck rather than good management.) The level of hazards at a workplace may depend upon the relationship between the requirements of any specific task and the characteristics of the worker who is carrying it out. Procedures for identifying workplace hazards include constant attention to consultation and fixing problems and complaints, OHS management and safety audits, workplace inspections, accident/incident investigations, health and environment monitoring, and wide reading about the kind of problems and controls which have been experienced at other, similar workplaces. After hazards have been prioritised in terms of their likely severity and frequency, controls must be established, and all such undertakings need to be monitored and their outcomes evaluated as an integral part of an effective management process.

## EXAMPLES OF HOW COMMON WORKPLACE HAZARDS CAN BE TREATED

**Sprains and strains:** These account for over 40% of all new workers compensation claims and back injury accounts for over 25%. Injury may be the result of a single incident or repetitive strain. Under state factories shops and industries act women and young people were limited to lifting sixteen kilograms at work, whereas there was no legal limit on the amount men could lift. However, lifting is not the only cause of strain injury. Any task that involves manual handling, such as carrying, pushing, pulling, loading, unloading, operating levers, etc. can cause problems. Manual handling injury may be prevented by identifying the risks of the manual handling task,

assessing the importance of different risk factors and controlling them through redesign of the work, or the equipment, or using mechanical aids. To assist prevention of occupational overuse syndrome, people should be encouraged to report symptoms, such as pain, tingling and numbness. Supervisors should not be dismissive of complaints as this may later result in severe injury and a workers' compensation claim. Equipment and work areas should be designed or adjusted so that people do their work as comfortably as possible. Job rotation and rest and exercise breaks should be frequent so that tasks are varied and people are using different muscle groups, interspersed with rest and exercise during their day.

An ergonomic task force or the OHS committee should deal with problems in productivity or safety, which are identified as a result of perusal of workplace data, inspection and consultation. Solutions to lifting, pushing, and pulling related injuries might be to use powered conveyors, or slides and chutes to move materials. It might be easier to lower the weight of loads by breaking up big boxes or asking suppliers to provide smaller ones. It might be better to move loads using ball caster tables or four-wheel hand trucks. Treated surfaces might reduce friction so that moving the load is easier, or the distance objects are to be moved could be reduced. Lifting table heights or using adjustable height worktables might be used in order to stabilise a worker's back to prevent injury. The person might be lowered so that all material is at waist level and straight in front of them. Conveyors, chutes, slides or turntables might be used to change the direction of material flow towards the worker. All objects should be kept close to the body to eliminate horizontal reaches. It may be wise to depend upon consultation and common sense rather than relying upon expensive equipment which may or may not be designed for best ergonomic effect.

**Deafness:** This is a major problem which mainly affects plant and machine operators, construction and mining labourers and metal fitting and machining tradespersons. The national standard for occupational noise indicates the permitted noise limit when measurement is taken at the employee's ear position without taking into account any effect on the worker from personal hearing protectors. A general rule of thumb is that if a noise seems too loud to a person unused to working in an area it is likely to be damaging to concentration and hearing. Wearing hearing protection can expose people to other dangers, so controlling the noise at source or removing it from where people are working is best. Whether plant and machinery is noisy should be a major consideration when new equipment is being purchased. When the employer conducts an overall workplace-testing program to ensure no areas breach noise requirements, the hearing of all workers should be tested. Then pre-employment testing can also be introduced. Pre-employment hearing testing should be done after completion of the employment selection process, and the notification of the successful applicant. To deny somebody work because of a physical handicap, such as a hearing impairment, is discriminatory, and could be the subject of complaint to the Anti-Discrimination Board. Only when a particular characteristic is a necessary attribute for performance of the job may somebody legally be denied access to work on account of not possessing that attribute. That is, if acute hearing is a prerequisite for effectively undertaking the work, deciding not to employ a person who is hard of hearing is not discriminatory.

**Stress:** Stress is a painful state of mind or body produced by environmental forces, not a medical diagnosis. There is often a close relationship between health, discrimination and industrial issues. Stress can be caused by noisy, dusty or other poor work conditions. It may occur as a result of lack of control over work, workloads or deadlines. Boring, repetitive work or change to technology or work organization may produce it. Lack of understanding of the job, fear of job loss, or poor personal relations with co-workers, supervisors or clients, may also cause stress. Mental stress claims are around 8% of the total of new workers compensation cases reported each year and are a growing problem. White-collar workers generally make them. If stress becomes the subject of a workers' compensation claim this suggests that early intervention to manage a

problem has either not occurred or has failed. This general problem can be reduced by providing open, consultative work environments and a fair and effective match of tasks to workers, with the provision of support training, rest breaks and task variation.

Effective grievance and dispute resolution procedures are essential for recognizing stress and dealing with it. Mental stress should be treated in the same way as other slow onset injuries, through encouraging early reporting and trying to find out about the problem, to resolve it. The provision of information and support, and the necessity for counselling managers, or co-workers, as well as providing opportunities for job rotation or change, should be considered. Trauma counselling should be available to workers such as police, rescue workers, or other employees who, after being faced with violent or horrifying situations, say they would like to access it. The heads of workers' compensation authorities have recommended that stress claims should not be compensable where they concern reasonable action by an employer relating to discipline, non-promotion, termination and similar matters and where action was taken in a reasonable manner by an employer or as a result of the application of workers compensation legislation.

Allegations of discrimination on the basis of sex account for around half of the total number of work related complaints made to the NSW Anti-Discrimination Board. Other major claims relate to ethnic discrimination and physical impairment. A smaller number of complaints is made about intellectual impairment, homosexuality, age related compulsory retirement, and victimization. It is likely that such complaints reflect the tip of the iceberg of workplace productivity problems that will increase if there are ineffective workplace based risk management and dispute resolution mechanisms. Claims of discrimination are often more likely to be made by confident and articulate workers, rather than by those whose situation may necessarily be the most difficult. Whether they erupt in complaints, or remain unseen, however, these problems cause pain, injustice, and cost for individuals, industry and the community. Every workplace needs clear information about the meaning and unacceptability of discrimination and the grievance procedures for dealing with it. Effective worker representation should assist the prevention of injury and illness at work, reduce workers compensation claims and increase productivity.

**Plant and machinery:** Drivers account for around one third of all work related fatalities and over 50% of these occur in the road and rail transport drivers occupational grouping. The plant related aspects of the regulation under OHS acts specifies requirements for the design, manufacture, testing, installation, commissioning, use, repair, alteration, dismantling, storage and disposal of plant. It requires the registration of certain plant designs and items of plant with the relevant government authority. The regulation deals with requirements for plant which may affect public as well as occupational safety. For example, requirements related to amusement devices, boilers and pressure vessels, elevating work platforms, cranes of all types, building maintenance equipment, hoists, scaffolds, conveyors, earth moving equipment, and electrical installations are addressed. International and Australian Standards which prescribe requirements for certain kinds of plant are also called up. Many different kinds of plant must have their design approved and their manufacture and operation inspected by relevant government experts.

A range of considerations may be necessary in order to identify plant hazards. For example, the suitability of the plant for the particular task, the environmental conditions and terrain on which it is used, and any variability relating to its operating conditions should be noted. Consideration must be given to any potential for injury due to entanglement, crushing, trapping, cutting, stabbing, puncturing, shearing, abrasion, tearing and stretching. Hazardous conditions due to pressurised content, electricity, noise, and a wide range of other considerations must also be thought about, along with guarding and communications systems. The plant provisions outline the obligations on designers, manufacturers, suppliers, importer, erectors and installers of plant,

thus providing a possible framework, in tandem with hazardous substances requirements, for a consistent approach to product liability standards and insurance. Designers and other identified groups are required to undertake risk assessment and control in a way which assesses the likely impact of their product on the end user.

The employer's responsibility for ensuring safe systems of work includes care for the safety of people maintaining plant. This is crucial because maintenance work is often subcontracted to people who are unfamiliar with the workplace and its hazards. Explicit reference is made to the fact that tractors must not be sold, leased or hired unless fitted with protective devices to eliminate the risk of injury to the operator. This is to address the toll of death and injury which is prevalent in the rural industry through tractor roll over, but which often does not appear in workers' compensation statistics, because the driver was self employed or was not covered by insurance for other reasons. The design of safe machinery with effective guarding systems is crucial. The identification and control of such hazards should guide the allocation of industry research and development funds.

For many years, construction safety acts and factories, shops and industries acts outlined required standards and competencies for people doing scaffolding, dogging, rigging, operating boilers, or driving various kinds of load shifting equipment such as fork lift trucks, backhoes, and front end loaders. The national OHS certification standard for users and operators of industrial equipment which people training or assessing competency must use is called up in certification requirements under state OHS Acts. The employer of a trainee who wishes to carry out work for which a certificate of competency is required must ensure that the trainee has a supervisor who is an appropriately trained person. The trainee who has gained practical experience at the workplace under their supervisor, makes an application to WorkCover to gain a permit, which is provided after examination has been successful.

**Slips, trips and falls:** These account for approximately six percent of fatalities and for one in five cases of occupational injury. Sixty percent of such injuries result from falls on the same level, and this can partly be guarded against by the use of appropriate footwear, attention to flooring to ensure that it is non-slip, and the institution of proper housekeeping so that substances which are spilt are immediately cleaned, passageways are clear, and floors are generally kept free from grease, food or other matter. In the construction industry approximately one in four claims involve falls, including slips or trips, with nearly half of these related to falls from a height. An employer must ensure that the risk of falls from working at height are controlled by a stable and securely fenced work platform, secure perimeter screens, fencing, handrails, catch platforms, safety nets or other appropriate platforms or fall arrest devices. The regulation also covers other issues of major concern in the construction industry, including falling objects, structural collapse and site security; excavation and demolition work; asbestos removal and diving work. Many codes of practice related to various aspects of construction have already been developed for this industry which is especially dangerous because of the high level of hazards inherent in much of the work, the transient nature of the activity, changing weather conditions, and the rapid turnover of various subcontractors involved in specialised tasks during the life of a project.

**Chemicals (Hazardous substances):** Early OHS legislation mainly addressed safety. The concerns of the future will predominantly be related to the health effects on workers, the public and the environment of the increasing range of chemicals which flood the markets. An estimated 30,000 chemicals are currently used in a range of industrial processing in Australia. Hazardous substances may be divided into gases, liquids, solids, fumes, dusts, fibres or vapours and they generally enter the body via the mouth, eyes, nostrils or skin. Inhalation may mean substances remain in the lungs and cause lasting damage. They can also have effects on health ranging from

skin and eye irritations, to diseases of organs, the blood or nervous system. Disease or injury may be direct and obvious, such as poisoning, or delayed due to long latency period, such as in cases of respiratory disease, lung cancer or mesothelioma. Diseases caused by hazardous substances may not show up in workers compensation statistics because the symptoms may take years to develop. People may not realise that their illnesses have anything to do with their current or past work practices. New chemicals are being introduced into workplaces at an increasing rate, while many existing chemicals in use also pose significant threats to health. There is a need to identify and control risks arising from their use much more efficiently than occurs at present. The most obvious control measures are to substitute the use of less hazardous substances wherever this is possible, and to take all measures possible which reduce workers' exposure to harmful substances.

Dangerous goods are hazardous substances which are characterised by their immediate harmful effects due to explosion, fire, poisoning or corrosion. They are covered by state based dangerous goods acts. The classification and requirements for packaging and labelling of dangerous goods follows recommendations by United Nations (UN) expert committees. Every dangerous good has a UN number. International air/sea transport rules and Australia wide surface transport rules follow the UN recommendations closely. There are nine classes of dangerous goods, including explosives, flammable and non-flammable gases and liquids, flammable solids, oxidising substances, poisonous and infections substances, radioactive substances, corrosive, and miscellaneous dangerous substances. Each has its own symbol which must be displayed, and there are requirements for safe handling which must be followed.

Manufacturers and importers are required to submit an assessment of the health and safety effects of new chemicals introduced into Australia to the National Industrial Chemicals Notification and Assessment Scheme (NICNAS) Committee. The duty of care required of employers using chemicals in production also applies to manufacturers, importers and suppliers of hazardous substances. The employer must undertake risk assessment and control. Other workplace requirements which must be followed include labels on all hazardous substances. As a minimum, labels must clearly identify the chemical product and indicate its general properties. In order to obtain more detailed information regarding the properties and safe use of chemical products the user must be provided with, or can otherwise request, a relevant material safety data sheet (MSDS). The purpose of an MSDS is to provide the information needed to allow the safe handling of hazardous substances/dangerous goods used at work.

There are currently a number of MSDS data bases available in Australia which provide information based on Canadian, US or British expectations regarding chemical hazards and safe use of chemicals. An MSDS register must be kept of the hazardous substances used at the workplace. An MSDS includes the name of the product and its manufacturer or supplier and the product ingredients and their chemical identity, uses, and health effects. Information about first aid and precautions for product use relating to exposure standards, engineering controls, personal protection, and product flammability, are normally included, along with relevant information on safe handling. A contact point for more advice should also be provided. Under this regulation manufacturers and importers are required not only to produce MSDS for all hazardous substances which they supply, but also to review and revise them to keep them up to date.

Under the hazardous substances regulation health surveillance by a doctor must be carried out at specified periods on people who produce asbestos products, who undertake abrasive blasting, or who work with crystalline silica, vinyl chloride, in pest control and other specified industries or occupations. Placarding of the workplace must be carried out in accordance with regulations, to provide people with warnings about hazards associated with specified substances. Provisions of

the carcinogenic substances regulation are additional to all other provisions of the hazardous substances regulation. The former provides for the prohibition of certain substances; requires stringent health surveillance of employees working with other substances; and requires employers and suppliers to notify WorkCover in order to gain a licence for the use of scheduled carcinogenic substances. This will be provided on the basis of satisfactory evidence of appropriate assessment, control, monitoring and health surveillance procedures.

## CONCLUSION

The risk management process involves the identification, prioritisation, and treatment of work related hazards in order to continuously improve work outcomes. Risk management is required by state OHS acts which also provide all employers and workers with a duty of care when undertaking work. A similar risk management approach should be used more generally, to identify and control of risks to clients, the community and the environment, using an integrated process. Effective OHS management systems commence with the development of an OHS policy and related management and consultation systems, with clearly identified accountabilities. This should be supported by a range of OHS training strategies and an effective dispute resolution system. The hazard identification and workplace assessment process depends centrally on effective consultation and data keeping practices related to the workplace and its hazards. When risks have been identified and prioritised according to their potential severity and frequency, they should be treated through application of the hierarchy of hazard control, which seeks to treat hazards at source wherever possible. Constant monitoring and evaluation of work performance is vital to its continuous improvement.

## FURTHER READING:

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