What is occupational health and safety (OH&S)?

Occupational health and safety is a discipline with a broad scope involving many specialized fields. In its broadest sense, it should aim at:

Promotion and maintenance of the highest degree of physical, mental and social well-being of workers in all occupations;

Prevention among workers of adverse effects on health caused by their working conditions;

Protection of workers in their employment from risks resulting from factors adverse to health;

Placing and maintenance of workers in an occupational environment adapted to physical and mental needs;

Adaptation of work to humans.

In other words, occupational health and safety encompasses the **social, mental and physical well-being of workers,** that is the “whole person”.

Occupational Health and Safety has more recently become known as Work Health and Safety (WHS), although the term OH&S is still commonly used.

Successful occupational health and safety practice requires the collaboration and participation of both employers and workers in health and safety programmes, and involves the consideration of issues relating to occupational medicine, industrial hygiene, toxicology, education, engineering safety, ergonomics, psychology, etc.

Occupational health issues are often given less attention than occupational safety issues because the former are generally more difficult to confront. However, when health is addressed, so is safety, because a healthy workplace is by definition also a safe work place. The converse, though, may not be true - a so-called safe workplace is not necessarily also a healthy workplace.

The important point is that issues of both health and safety must be addressed in every workplace. By and large, the definition of occupational health and safety given above encompasses both health and safety in their broadest contexts.

The cost of workplace safety

Work-related accidents or diseases are very costly and can have many serious direct and indirect effects on the lives of workers and their families. For workers some of the direct costs of an injury or illness are:

Pain and suffering of the injury or illness; Loss of income; Possible loss of a job; Health-care costs.

It has been estimated that the indirect costs of an accident or illness can be four to ten times greater than the direct costs, or even more. An occupational illness or accident can have so many indirect costs to workers that it is often difficult to measure them. One of the most obvious indirect costs is the human suffering caused to workers' families, which cannot be compensated with money.

The costs to employers of occupational accidents or illnesses are also estimated to be enormous. For a small business, the cost of even one accident can be a financial disaster. For employers, some of the direct costs are:

Payment for work not performed; Medical and compensation payments; Repair or replacement of damaged machinery and equipment; Reduction or a temporary halt in production; Increased training expenses and administration costs; Possible reduction in the quality of work; Negative effect on morale in other workers.

Some of the indirect costs for employers are:

Injured/ill worker has to be replaced; New worker has to be trained and given time to adjust; Time before the new worker is producing at the rate of the original worker; Time must be devoted to obligatory investigations, to the writing of reports and filling out of forms; Accidents often arouse the concern of fellow workers and influence workplace elations in a negative way; Poor health and safety conditions in the workplace can also result in poor public relations.

Overall, the costs of most work-related accidents or illnesses to workers and their families and to employers are very high.

The cost of workplace safety (cont)

On a national scale, the estimated costs of occupational accidents and illnesses can be as high as three to four per cent of a country's gross national product. In reality, no one really knows the total costs of work-related accidents or diseases because there are a multitude of indirect costs which are difficult to measure besides the more obvious direct costs.

Health and safety programmes

It is crucial that employers and all employees are committed to health and safety and that:

Workplace hazards are controlled - at the source whenever possible; Records of any exposure are maintained for many years; Both workers and employers are informed about health and safety risks in the workplace; Active and effective health and safety committee that includes both workers and management; Health and safety efforts are ongoing.

Effective workplace health and safety programmes can help to save the lives of employee by reducing hazards and their consequences. Health and safety programmes also have positive effects on both employee morale and productivity, which are important benefits. At the same time, effective programmes can save employers a great deal of money.

Relevant Laws, Guideline and Codes

There are many relevant laws, guidelines and codes that relate to OHS in the workplace, some at the federal government level and others at the state government level.

Under the Australian Work Health and Safety Act 2011 (WHS Act) and the Work Health and Safety Regulations 2011 (WHS Regulations) all workplaces are required to manage risks to health and safety by eliminating them as much as reasonably practicable. Codes of Practice offer practical guidance to achieve the standards of health, safety and welfare required by the WHS Act and WHS Regulations. An approved code of practice would comply with the legal obligations to provide a safe work place.

Codes of Practice that may be relevant to radiation therapy include:

Relevant Laws, Guideline and Codes (cont)

Hazardous Manual Tasks – lifting and transferring patients, or bulky equipment.; Managing risks of falls; Preparation of safety data sheets for hazardous Chemicals – eg: Chemotherapy drugs.; Managing risks of hazardous chemicals in the workplace – eg: Chemotherapy spills; First Aid in the workplace – having a first aid officer and management plan.

The 5 key elements for efficiently managing health and safety risks within the workplace are:

1) Governance – is the organisational framework procedures, policies and processes at a strategic level.

2) Prevention – this includes training and education, inspections & testing, hazard reporting arrangements and auditing.

3) Response – the steps to remove the hazard and implement changes to prevent it happening again

4) Managing hazards – not all hazards can be removed, so management needs to be in place to identify hazards and minimise them before they cause an injury or illness.

5) Recovery When a worker is injured the employer has responsibilities under the Safety Rehabilitation and Compensation Act 1988 (SRC Act) to manage this injury or illness.

OH&S in the healthcare environment

In the healthcare environment, specifically in a radiation therapy department, the following are major risks for OH&S.

a) Manual Handling

Manual handling is the use of your body to exert force through jobs that include lifting, pushing, bending, reaching or carrying things.

OH&S in the healthcare environment (cont)

Manual handling can result in musculoskeletal injuries at work. Musculoskeletal injuries can also occur due to slips, trips and falls. These musculoskeletal injuries describe a range of conditions that include: Back pain, muscle sprains, fractures and dislocations, abdominal hernias, carpal tunnel syndrome and tendonitis. Musculoskeletal injuries can occur suddenly (such as an injury caused by a patient pulling on your arm to help themselves from falling) or develop over time (repetitive manual work that causes wear and tear on the body – also known as occupational overuse syndrome, OOS, or repetitive strain injury, RSI).

Some strategies to reduce your risk of injury include:

Adjust the working height of the patient table to suit your height. Do not lean over the patient or table, use your partner on the other side to assist you or move around the table. Work as a team – get assistance Do not carry more than you should because you are in a hurry Use the correct transfer of patient procedures. You should never transfer a patient until you have been trained in your hospital's policies and procedures. Wear appropriate clothing and shoes Assess your patient's mobility status – are they able to assist or are they dependent? Assess the weight of the patient / object. Many hospitals have specific procedures for obese/bariatric (>150kg) patients. Assess your environment – check for space, hazards (wet floor, patient with socks but not shoes on, sheets or equipment on the floor) Explain the transfer process to the patient, make sure that they know what they need to do and watch to make sure that they cooperate with your instructions. If you have to lift something – bend your knees, keep your back straight, keep the movement smooth, Use equipment where possible – many hospitals have a no-lift policy, so use things like pivot stands, slide sheets, pat slides, hover-mats or lifting hoists.

b) Infection control

OH&S in the healthcare environment (cont)

Infection control is important for patients and healthcare workers. Infections can be classified into 4 categories of microorganisms: Bacteria, Fungus, Viruses and Parasites. Infection can be caused by immune suppression (important for cancer patients during treatment), diabetes, external temperature, unhealthy diet, inadequate exercise, illicit drugs, wound or trauma.

To avoid the spread of infection hospitals utilise standard/universal precautions.

Hand washing / antiseptic rub for at least 15 seconds Personal protective equipment (gloves, gowns if open wounds)

Other strategies to minimise infections for both patients and staff include:

Management of sharps Immunisation of health care workers Use of masks during resuscitation Cleaning of equipment

Needle stick injuries occur when you are exposed to blood, body fluids, excretions or secretions from a needle stick or sharp instrument. Every hospital has processes in place to deal with needle stick injuries, but prevent should be a priority.

Never walk up behind someone whilst they are handling a needle Dispose of sharps immediately - always make sure you have a sharps disposal container close by to limit the need to walk with a needle in your hand. Do not recap a needle after use

c) Radiation Safety

Occupational exposure to radiation is obviously a risk within a radiation therapy department.

This national standard has many requirements, but some of the more recognisable of these in a radiation therapy department include:

a) Radiation monitoring: This is the reason why you are all required to wear a personal dosimeter whilst on clinical placement. This is one method to monitor individual occupational exposure – but it cannot record any exposure if you forget to wear it! ARPANSA runs a Personal Radiation Monitoring Service (PRMS) that supplies TLDs and maintains lifetime radiation dose histories.

OH&S in the healthcare environment (cont)

b) Control of exposure – through the use of shielding (bunker design, interlocks on doors and gates), safe work practices (time, distance and shielding)

c) Responsibilities – appointment of radiation safety officers, appropriate training, induction and supervision.

Within ARPANSA there is also the Australian Clinical Dosimetry Service (ACDS). The role of ACDS is to provide an integrated national approach to safety and quality in radiation therapy. They complete independent checks of equipment and the doses being delivered by this equipment. This has obvious advantages for not only radiation therapists but for our patients too.