

ENVIRONMENTAL HEALTH AND SAFETY

Lecturer: Dr. Carol O'Donnell

Aim: To provide a broad framework for understanding occupational health and to teach the skills necessary for managing related risks.

Objectives: Students will learn:

- a. Basic principles of work organisation in Australia and the related patterns of injury and illness
- b. Basic management requirements of occupational health and safety (OHS) and related legislation in Australia
- c. How to establish management systems and identify and control risks related to a particular workplace

Week 1: History and international context of key requirements in the Australian workplace. Self-employed or employee? (The former quotes a price to produce a finished product using tools and materials which they normally supply themselves. The latter are paid for the working hours completed under the direction of a person who owns the business.

Week 2: Quality management principles: Beyond bureaucratic and professional interests.

Week 3: Elements of the duty of care legislative approach and consultative structures for identification and control of risk. (NSW OHS Act and Regs. 2001).

Week 4: Hazards in industries and occupations. Pattern of work related injury and illness in Australia and its broader relationships to traumatic and chronic injury, gender and socio-economic status.

Week 5: Work related rehabilitation requirements under state workers' compensation acts. The no-fault approach.

Week 6: Psychological and social issues in the workplace. Their relationship to health. Grievance procedures.

Week 7: Workplace emergency systems; noise; lighting; temperature; falls

Week 8: Plant and equipment; Manual handling; hearing loss

Week 9: Hazardous substances; biological hazards; dangerous goods

Week 10: Principles of corporate and strategic planning. Program budgeting for OHS.

Week 11: The relationship of OHS management systems to sustainable development and environment protection.

Week 12: The relationship of OHS management systems to community health management and community based rehabilitation.

Week 13: Subject overview.

Assessment: Risk identification and control project (week 10) – 1000 words; 50%
Short answer/Essay exam (90 mins.)

TUTORIALS:

Week 2. Similarities between quality management; health promotion; risk management; program management and action research.

Week 3. Video: The Occupational Health and Safety Act 2001 (344.9440465 OCC)

Week 4: Discuss how you would go about developing an OHS policy at your workplace and what you would do with it.

Week 5: Use the SafetyMAP management checklist to discuss what kind of information an auditor might accept as evidence of effective safety management.

Week 6: Use the Hazpak work sheet to discuss how you would go about identifying the risks to health in a workplace with which you are familiar.

Week 7: Discuss the videos: 'Rehabilitation: Everyone plays a role' and 'The Effective Approach'

Week 8: Discuss the videos: 'Bitter Harvest' and 'The Trouble With Backs';

Week 9: Discuss and gain feedback on your draft OHS management project before handing it in for assessment in week 10.

ASSESSMENT EXERCISE:

Develop a risk management program for a particular workplace with which you are familiar as a result of the identification and prioritization of hazards found at the workplace. The program should describe the organization, the work it undertakes and the hazards involved in production. It should also refer to the health management systems which exist at the workplace.

In the light of the above discussion the injury prevention (risk control) program you develop should outline the program aims; targets; strategies; costs; milestones and performance indicators. The WorkCover Hazpak pamphlet can be used to assist development of your program. (**1000 words**).

SUGGESTED BIBLIOGRAPHY:

- P. Butrej and G. Douglas (1995), Hazards at Work: A Guide to Health and Safety in Australian Workplaces, Open Training and Education Network, Sydney.
- Ellis, N. (2001) Work and Health: Management in Australia and NZ, Oxford University Press, Melbourne.

- M. Quinlan and P Bohle (2000), *Managing OHS in Australia: A Multidisciplinary Approach*, Macmillan, Melbourne.
- J. Mathews (1993) *Health and Safety at Work*, Allen and Unwin, 2nd ed., Sydney.
- Standards Australia (1999) *Risk Management (AS/NZS 4360)*, Strathfield.
- Victorian WorkCover Authority (1997), *SafetyMAP - A Self Assessment User Guide*, Melbourne.
- WorkCover NSW (1997) *Hazpak: A Practical Guide to Basic Risk Management*, Dept. of Safety Science, University of NSW, Sydney.
- CCH Australia Ltd. (1994) *Planning OHS*, Sydney, 3rd ed.
- SJ Isernhagen (1995) 'The Comprehensive Guide to Work Injury Management', Aspen publications, Maryland.
- Worksafe or NSW WorkCover Statistical Bulletins.
- Issues of WorkCover News
- The Health Sciences Library also has an OSHROM CD

Useful Internet Addresses:

WorkCover NSW - <http://www.workcover.nsw.gov.au>

Victorian WorkCover Authority <http://www.vic-workcover.com.au>

Northern Territory Work Health Authority - <http://www.nt.gov.au/wha>

Worksafe Australia (Nat. OHS Commission) <http://www.allette.com.au/~wsa1>

Worksafe Western Australia <http://www.wt.com.au/~dohswa/index.html>.

The general search engine <http://www.google.com> is very useful. (If you use it you must be very conscious of the likely degree of reliability of your sources.)

www.nsw.gov.au/ Access to all NSW government information

www.commonwealth.gov.au/ Access to all Commonwealth government information

www.austlii.edu.au Access all Australian legislation in full, up to date text

www.arbitration.co.nz/ Asia Pacific Economic Cooperation (APEC) Guide to arbitration and ADR in APEC member nations. (Commercial dispute handling principles)

www.nadrac.gov.au The National Alternative Dispute Resolution Advisory Council provides information to assist the development of high quality, economic and efficient ways of resolving disputes without the need for a judicial decision.

SUPPORTING ASSESSMENT INFORMATION

Develop a risk management program for a particular workplace with which you are familiar as a result of the prior identification and prioritization of hazards found at the workplace, in order to control them better through your project. To understand and apply risk management principles the Australian and New Zealand Risk Management Standard (AS/NZS 4360: 1999) Risk Management approach is taken. The main elements of this approach are described below:

THIS RISK MANAGEMENT APPROACH FIRST DESCRIBES THE WORK CONTEXT IN ORDER TO CONSULT AND COMMUNICATE WITH ALL RELEVANT PEOPLE ABOUT HOW TO PRODUCE WORK IMPROVEMENT THROUGH THE PROCESS OF IDENTIFYING, ANALYSING AND EVALUATING RISKS IN ORDER TO TREAT AND SO REDUCE THEM.

The work environment may produce risks to workers, customers or clients, the surrounding community or natural environment. This project deals with risks produced for workers, but think as broadly as possible to ensure the business flourishes.

You should first meet with the most highly relevant work manager for permission to describe the organization and the work process it undertakes very clearly, so as to understand and prioritize the hazards involved in production later. Your analysis should address the health management systems which exist at the workplace. If there are none, you should make recommendations in your later project to set up some appropriate ones. The major task of the exercise is to develop a project with the aim of controlling key risks. This must be done cost-effectively or your project is not realistic.

1. Establish the context in which work takes place. What is produced and how? How many workers are involved in the production? What do they do? (Describe the product development chain and the materials and processes used in production in order to identify the most dangerous operations and the groups of workers engaged in them.)

2. Identify the risks of production: As a result of examining data related to the production process in your workplace – (eg. workers compensation claims, sick leave records) and as a result of talking to managers, workers and walking around the establishment to understand it, you should list all the hazards you have found, prior to prioritizing them for treatment. You should also understand the hazards of the particular workplace by reading widely about hazards which are common in organizations and industries similar to the workplace you are examining. (For example, do risks which you have read are normally found on construction sites occur on the one you are examining?)

3. Analyse the risks of production: Find out about any existing risk controls (risk management systems) and analyse the risks of production in terms of their consequences and the likelihood of their occurrence. The analysis should consider the range of potential consequences and how likely those consequences are to occur. The consequences of injury (on a scale of 1-5) and their likelihood (on a scale of 1-5) may be combined to produce an estimated level of risk on a scale of 1-5.

4. Evaluate the risks in order to treat them:

List all the hazards you have found in order to prioritize the risks according to their severity and likely frequency on a 5 point scale. A very severe risk is a risk of death or permanent disability and ill health. A mild risk is where injury would necessitate first aid. Ask also whether the risk is very likely, likely, unlikely or very unlikely to cause injury.

A frequent risk (such as repetitive lifting) may appear to be a comparatively low level risk, but because it is frequent it may eventually result in chronic injury for many people. As you list hazards and evaluate them according to their severity (1-5), and their likelihood of injuring someone (1-5) write down what could be done to lessen the risk.

5. Treating the risks

Beware of being unrealistic in regard to your recommendations about how to fix problems. There are four key ways to eliminate a hazard and the business must be able to afford to undertake the treatment. Think creatively about whether a hazard may be removed by **eliminating** it. (For example, putting in exhaust fans or lifting equipment to deal with fumes on one hand and back strain on the other). Perhaps a hazard may be reduced by **substituting** a less hazardous production material for the one currently in use. (For example, use a less dangerous chemical than the current one which is being used.) If you cannot eliminate the hazard or change the equipment or materials think about better ways the work could be done. (For example, change daily routines so keyboard operators have breaks from their keyboards to do other duties). If you cannot **change the work methods** to reduce the hazard, you may use **personal protective equipment**.

WRITE THE RISK MANAGEMENT PROJECT AS A RESULT OF HAVING CLEARLY UNDERTAKEN 1-4 OF THE STEPS BELOW:

1. Establish the context
2. Identify the risks
3. Analyse the risks
4. Evaluate the risks
5. Treat the risks

If the workplace has no clear systems for identifying and treating risks you should recommend some workable ones as part of your project to treat risks (Step 5 above).

Your written project asking for funds to implement a risk management program should incorporate description of all the above steps under clear headings so the report and recommendation for related expenditure is clear.

1. Describe the ORGANIZATION, the WORK it undertakes, the WORKERS and the OHS management systems
2. Outline the HAZARDS involved in production and identify, analyze and evaluate the related risks, as discussed earlier
3. Describe your risk management program AIMS (supported where necessary by OBJECTIVES and/or targets)
4. Describe the STRATEGIES WHICH YOU PROPOSE TO IMPLEMENT in order to control the risks you have identified. (Think practically about what to do to fix problems and describe you propose should be done.)
5. (Describe any MILESTONES, (expected time frames for completion) related to the implementation of the strategies you suggest.
6. Describe the PERFORMANCE INDICATORS you will use to evaluate the outcome of your program
7. Estimate the COST of your program to the organization.

Communication and consultation are also essential, especially throughout the establishment stages of the process. Monitoring and review are also vital, especially during the procedural stage and after completion of the project.

A RELATED NOTE ON BROAD PROGRAM AND PROJECT PLANNING AND EVALUATION

The way I taught health risk management in communities and at work for eleven years is consistent with requirements of health promotion, as outlined in key publications such as 'Better Health Outcomes for Australians' (Commonwealth Department of Human Services and Health, 1994) and also with those of state Occupational Health and Safety (OHS) acts. The baseline data for health promotion is usually derived from hospital stays and death statistics, from which community health problems (heart and respiratory diseases, cancers, accidents, mental health problems such as suicide, etc.), are identified before setting goals, targets and strategies to reduce them throughout communities.

Supplemented by workers compensation claims, such health statistics currently make the main contribution to the Australian analysis of acute and chronic health problems in community and workplace settings, but their limitations must also be recognized.

Work may explain the health problems in communities and in related natural environments. Since the 1960's, the development of the Australian national reserve system has been based on the biodiversity related principles of comprehensiveness, adequateness and representativeness (CAR). These international

scientific principles are directly related to the development of the Interim Biogeographic Regionalisation of Australia (IBRA) system which divides Australia into 85 distinct biogeographic regions and 403 sub-regions. IBRA provides a scientific land planning framework and tool which should aid development proposal evaluation and the realization of the CAR principles in the related development of all national and regional planning for more sustainable development.

Those engaged in trade are ideally defined simply, consistently and clearly, in related industry and community contexts, unless another course of action is appropriate for good reason. The Australian and New Zealand Standard Industrial Classification (ANZSIC) and related occupation classifications are based on international classifications designed to assist the process of more scientific management. Ideally, ANZSIC classifications should be incorporated into all industry management and related scientific practices unless there appears to be good reason to do otherwise.

The United Nations (UN) and its key agencies, the World Health Organization (WHO), the International Labor Organization (ILO) and the UN Education, Scientific and Cultural Organization (UNESCO) define a community as:

- a. a group of people with common interests who interact with each other on a regular basis; and/or
- b. a geographical, social or government administrative unit

The types of categorization outlined above ideally create a regional and organizational planning framework in which all economic, social and related environmental goals may be more rationally and openly pursued and their processes and outcomes compared through the balanced application of clear key legislative aims and the evaluation of all related regional and organizational practices.

Broad program and project planning and evaluation should be primarily undertaken from regional and related industry and community perspectives which seek economic, social and environmental goals. The aims and key requirements of related legislation should be openly and flexibly applied and evaluated in such regional industry and community contexts to obtain the best balance of outcomes, not be driven prescriptively in their own right. To do otherwise is bureaucratic madness because the broad reach and complexity of Victoria's framework of environmental regulation alone, indicates 43 environmental acts and over 9000 pages of related legislation. This cannot be rationally addressed in isolation from the related geographical, industry and community contexts in which it is ideally applied as openly, flexibly and scientifically as possible, along with other legislation relevant to the context, to achieve all key goals competitively. The lawyer's perspective pursues a single piece of legislation made increasingly stupid over time, which is often far from sensible.