

Worker Education: The Real Challenge of WHMIS

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Education in the workplace has begun. And the first round of courses is to be completed by February 1, 1989. The curriculum? A program that "results in a worker being able to apply information (about hazardous materials) as needed to protect the worker's health and safety."

This simple statement — from the model regulation developed jointly by the federal and provincial governments to ensure the consistent implementation of WHMIS across the country — is deceiving. Its implications are staggering. Why? Because meeting the worker education requirements of WHMIS — the Workplace Hazardous Materials Information System, which came into effect at the beginning of this month — will be a monumental task.

In fact, complying fully is most likely beyond the resources and capabilities of both employers and employees. But an examination of this situation leads to a very practical recommendation: the development of standard workplace procedures should be the highest priority for complying with the requirements of WHMIS.

WHMIS is built on three pillars in regards to hazardous materials: providing Material Safety Data Sheets (MSDSs), labelling containers, and conducting worker education. The nation-wide system is governed by both federal and provincial legislation. The federal Hazardous Products Act and Controlled Products Regulations govern those who manufacture or import hazardous products, i.e. suppliers. These pieces of legislation spell out the criteria for classifying hazardous products, as well as

the labelling and MSDS requirements for those products that meet the criteria (called controlled products).

Provincial legislation governs those who use hazardous products, i.e. employers. All provinces and territories are amending their respective OH&S acts and regulations to include the employer MSDS, labelling and worker education requirements spelled out in the joint model regulation.

The model occupational safety and health regulation, commonly referred to as the model OSH, sets performance standards for workplace training. In summary, workers must be taught the following:

- the content required on material safety data sheets (MSDSs) and the purpose and significance of the information;
- the content required on container labels and the purpose and significance of the information;
- all hazard information about controlled products received from the suppliers of these products, as well as any further information of which the employer is aware or ought to be aware;
- procedures for the safe use, storage, handling, production and disposal of controlled products, procedures for working in areas where fugitive emissions are present, and
- procedures for emergency situations.

The above requirements are consistent from province to province. However, additional provincial regulations may have an impact upon the WHMIS concept. For example, legislation in Manitoba has extended the WHMIS concept to hazardous wastes and fugitive emissions.

The performance-oriented training standards required under WHMIS are comprehensive. If they become a reality, then truly massive changes in Canadian workplaces will have occurred. But the standards of WHMIS training represent an end-point. Change begins with the status quo in our workplaces. We have to ask ourselves whether the average workplace in Canada can meet the requirements of WHMIS.

Resources Unavailable to Most

One stumbling block is the depth of background knowledge needed by both employers and employees to satisfy the performance standards. MSDSs contain highly technical information covering many subject areas, including toxicology, reactivity, flammability, and physical properties. Few of these subjects are covered in high school science courses. Little of the remainder is taught in general university science programs; it is available only in specialized programs.

Supplier and workplace labels are severely condensed MSDSs. Thus, the background knowledge needed to interpret labels follows logically from the knowledge needed for MSDSs. Hazard information, also mentioned as a training requirement, is consistent with information found on an MSDS and label. It demands the same background knowledge to interpret the information.

The resources needed to deliver such technical information are not currently available in the vast majority of Canadian organizations and are unlikely to be available for some time to come. Most organizations — including public and private companies, crown corporations, educational and medical institutions, and government agencies — lack the internal resources needed. Most of them don't have an in-house occupational hygienist, physician or nurse. And organizations located away from the centre of the country don't have ready access to outside help either.

Most external resources, such as accident prevention associations, university health and safety centres, occupational health and hygiene consultants, and union oh&s resource centres, are located in central Canada.

How well prepared for delivering WHMIS training are even those organizations that hold formal classroom sessions carried out by training departments? The training currently provided tends to concentrate on the development of management, supervisory, interpersonal, sales, clerical, computer and other such skills. WHMIS training covers vastly different areas. Trainers lacking appropriate backgrounds will experience extreme difficulty in responding to the technical and emotionally charged questions that will arise.

The difficulties facing employers in delivering technical information are matched by those among the employees receiving it. WHMIS training to the extent specified by law is likely to be stressful for employees for two reasons. First, many members of the workforce are 'doers.' Considerable time and effort will be needed to acquire the background information needed for

interpreting and understanding the information contained on MSDSs and labels; sitting for long periods in training sessions could be difficult.

Second, the training may be stressful because much of the information in occupational health is 'grey.' That is, there are few yes-no answers. There are usually more unknowns about the properties of chemicals than knowns, more questions than answers. With knowledge will come uncertainty, even regarding those chemicals with which workers have been working confidently for years.

Another employee factor affecting the ability to assimilate technical information is the level of education among workers. It is not uniform; a workplace may have employees with elementary schooling as well as those with several advanced degrees. The different levels of schooling complicate the training process.

As well, there is the problem of literacy. For many immigrant Canadians, English or French is an incompletely understood second language. For some, whether they're originally from Canada or not, reading and writing skills have never been learned adequately.

Standard Procedures a Start

Despite these problems, employers have a legal responsibility under WHMIS to train their workers to meet standards of performance. The relevant question is: what must an employer do to meet these standards? How should employers approach the training question? Because resources are likely to be limited, relying on the 80/20 rule may provide the necessary guidance.

Briefly stated, the 80/20 rule predicts that 80

per cent of a goal can be achieved for 20 per cent of the total effort. Using this strategy, the question becomes: what action will achieve 80 per cent of the requirements of WHMIS training? That is, which requirement is the highest on the scale of priorities?

We feel that the answer is 'something' that tells a person how to handle controlled products on a daily basis in a manner that protects his or her health and safety. That 'something' is the written standard procedure.

What is the highest training priority? It's 'something' that tells a person how to safely handle controlled products on a daily basis. That 'something' is the standard procedure.

Standard procedures, step-by-step directions for carrying out tasks correctly, are already used in almost every workplace. They are, however, often passed along verbally from supervisor to worker. Fully developed, written standard procedures reflect workplace experience and preventive measures contained in MSDSs. They also reflect the actual operating conditions and environment in which hazardous products are used; procedures for handling and using products are customized for the location and equipment. For these reasons, standard procedures provide an efficient, and potentially the safest, method for carrying out any activity and are therefore an important worker training tool.

A well-designed standard procedure includes:

- the most efficient sequence of steps necessary to do the task;
- the measures for controlling the hazards of the task; and,

- the engineering controls and protective equipment required to carry out the task safely.

Producing standard procedures is time consuming. For this reason, an organization must set priorities based on need. This process starts with an inventory. To be most useful, the inventory should identify:

- all controlled products used or stored in the workplace;
- the jobs associated with each controlled product;
- the number of people affected by each controlled product; and,
- how each controlled product is used.

Priorities for establishing standard procedures should be based upon the degree of hazard posed by a product, the amount of the product used in the workplace, and the number of people affected by (i.e. who work with or near) the product. The information gathered from the inventory and found on MSDSs will provide this information.

Organizations that use products known as 'bad actors' may wish to consider these as a starting point. Bad actors are substances known by experience to cause trouble for workers.

The standard procedure is prepared using a combination of experience and the technical information found on the MSDS, label and transportation documents. Depending on the context, a standard procedure covers: use, storage, handling, disposal, and emergency measures. The procedure organizes the task into a series of steps. It identifies required protective equipment and control devices and directs the person doing the task to use them when required. In effect, the standard procedure interprets technical information

and turns it into instructions for the proper use of a product. Persons preparing standard procedures will need training in interpreting technical information.

Many organizations already use written standard procedures. In order to comply with WHMIS, they should compare existing procedures with technical information contained in the MSDS to ensure consistency.

Standard procedures should be produced in written form. However, other media offer exciting possibilities. For example, video cameras and video-cassette recorders can be afforded by most workplaces and can produce valuable visual supplements to written material. This is especially important for training people who have problems understanding the language of instruction. Showing a person how to perform a task, followed by actual practice, is an extremely effective learning tool. Resources for producing videotapes include persons within the organization, amateur groups affiliated with cable television studios, student groups and professional production studios.

Records of training in standard procedures should be kept. These should include written acknowledgement by the person being trained, witnessed by the supervisor. These records can be used for scheduling retraining and for performance evaluations. Although evaluations have a negative connotation, deviating from a safe procedure can cause fatal consequences.

The preparation of standard procedures should provide maximum benefit to an organization and its workers for a reasonable outlay of time and effort. Consider the following benefits:

- the organization has evaluated all relevant information concerning a

- product and its hazards;
- the hazards have been addressed through the specification and use of control devices and protective equipment;
- workers can be trained to protect their health and safety on a daily basis;
- the procedure is readily available;
- the language in the procedure can be readily understood; and,
- people affected by the procedure can participate in designing it.

Organizations Need Outside Help

Procedural training is only one part of the overall WHMIS training requirements. Employers must also explain the purpose and significance of information contained on the MSDS and label . But at this time, relatively few resources are available to assist in this task.

Some of the information contained on MSDSs involves highly emotional subjects such as carcinogenicity, teratogenicity, and mutagenicity, among others. These concepts must be put into context and explained with sensitivity. In addition, lack of toxicological information about controlled products is likely to become a major issue during WHMIS training. People are frightened about the unknown. Lack of knowledge kindles this fear. Very few of the available resources have approached this challenge. Relating risks of use and misuse of household products provides a starting point.

Organizations across Canada will be turning to outside help in order to comply with WHMIS and external resources should be gearing up to meet the challenge.

Progressive manufacturers and suppliers of hazardous materials already offer technical assistance to their customers. Some even offer training in the use of their products, in the form of classroom sessions and/or videos. These services should be promoted and broadened; customer

WHMIS is a product of government action. It is therefore appropriate to suggest that governments offer financial aid to ensure organizations can comply. Requests for such services will encourage this.

Trade associations can offer similar training packages. Providing video training is not as extravagant as it may first appear. Many products are used in similar ways and possess similar hazards. Training packages produced through trade associations permit the pooling of resources and would address the needs of many industries.

Many jobs in industry are similar even though they occur in organizations carrying out entirely unrelated functions. This is true, for example, of spray painting and welding. This situation provides a window of opportunity for educational institutions that provide Job-specific training. Training in WHMIS concepts could be added to existing programs and short courses emphasizing hazards and preventive measures could be used to upgrade existing skills.

Finally, WHMIS is a product of government action. It is therefore appropriate to suggest that governments offer financial aid to ensure organizations can comply. The appropriate place to allocate funds is to educational and vocational training institutions, which can provide the specialized training required.

The training requirements of WHMIS apply to thousands of workplaces in Canada. The internal and external resources needed to

teach workers accurately and sensitively about the hazardous products found in their workplaces are almost completely lacking at this time. This lack of resources will receive increasing attention as WHMIS training proceeds across the country. In the meantime, workplaces can at least concentrate on developing safe working procedures that can be used as a starting point for WHMIS education.