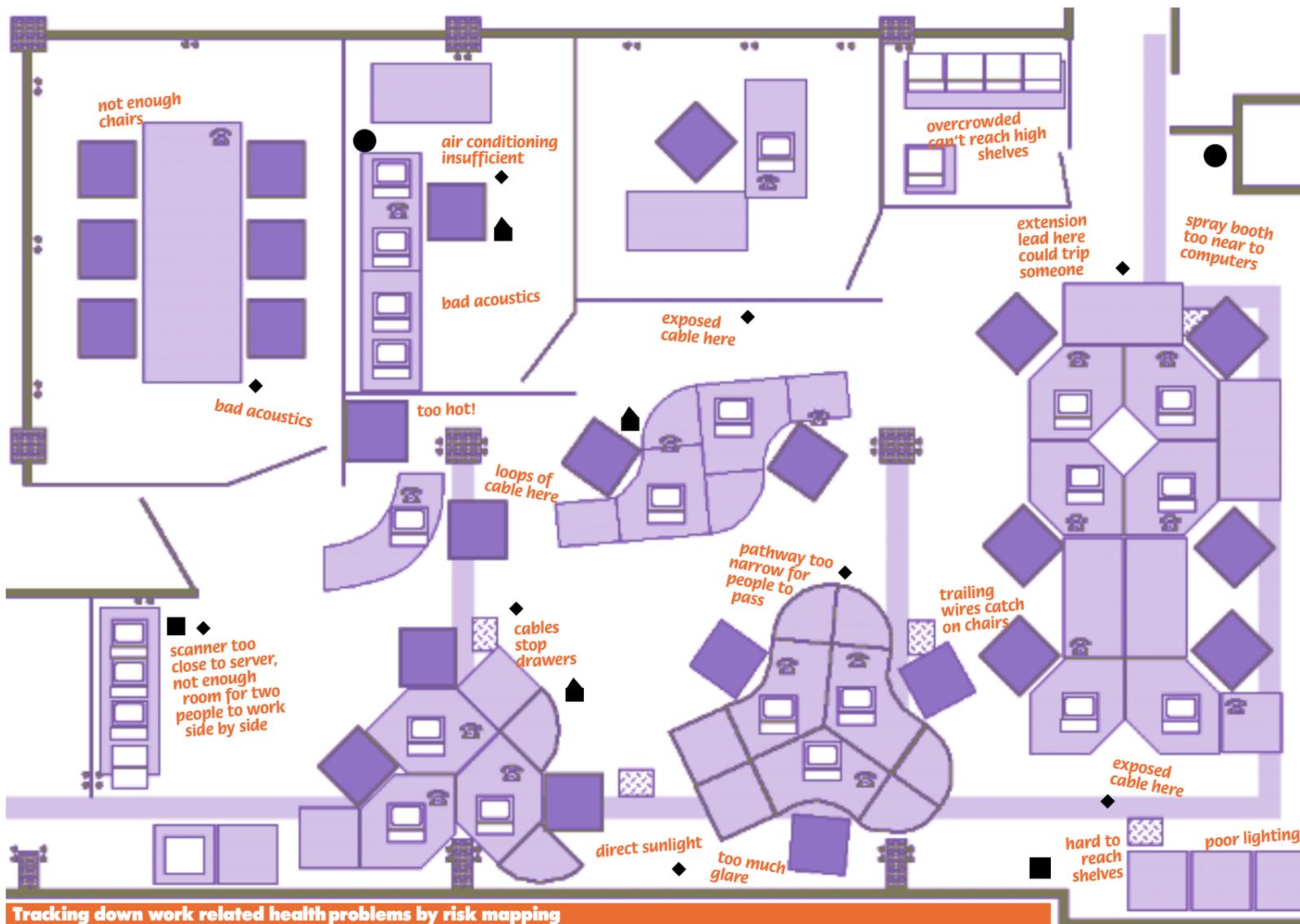


Mapping out work hazards

Down in the packing department just about everyone moans about tired legs, aching backs and sore wrists.

In the office, it's headaches, sore eyes and wrist problems again. And when the drivers come in they grumble about being over-tired, or about their lower back problem or their dodgy guts.

Sometimes it's easy to produce a mental picture of how our jobs affect our health. Workplace risk mapping is a technique where workers can get together to get these concerns down on paper.



Tracking down work related health problems by risk mapping

Risk mapping has been used by trade unions, environmental groups and other organisations in the United States, Mexico, Canada, Brazil and Italy to assess occupational and environmental pollution risks in workplaces, communities and at state level.

Risk maps differ from other approaches by avoiding "expert" assessments. Workers look at where they work, what they work with and any physical, chemical, biological or "psychosocial" problems that might arise when doing the job.

A US guide to risk mapping prepared by the University of California's Labor Occupational Health Program (LOHP), says the technique takes the control away from occupational health professionals "by drawing upon the knowledge of workers and acknowledging the vital contribution they make. Risk maps are developed from everyday, on-the-job experiences."

It also means the results are based on workers' genuine concerns and symptoms, and not somebody else's perception of what is an "acceptable" risk or a "significant" problem.

In the case of official chemical standards, LOHP says: "Worker symptoms may be ignored in setting these limits, and interactions with other chemical and physical

conditions are not adequately addressed."

Getting started

The basic approach involves drawing up a map - it might be anything from a rough sketch of the workplace to a blueprint - and, with the help of a group of workers from the area mapped, highlighting where hazards are found, where toxins are used, where jobs cause stress and strain, where there is too much to do and too few to do it... Don't make the map too small - there will usually be a lot of information to squeeze in.

Risk maps can be done very informally. This can be useful where workers are not confident or have literacy or language difficulties. However, the more effort involved, the more the maps are likely to reveal. A more thorough approach, according to LOHP, involves seven key steps:

Step 1. Form a risk mapping planning committee. This should involve union safety reps and shop stewards, but should also look to involve shopfloor workers from a range of jobs.

Step 2. Select or develop a workplace health and safety questionnaire. Most unions will have examples they can supply. A questionnaire may be unnecessary if relatively few workers are employed in the area under investigation - they can pass on their concerns directly.

Step 3. Where applicable, distribute the questionnaire

among workers in a given workplace or work area, all who tend to face similar hazards. Make sure all problems affecting all workers are covered - workers on different shift patterns, non-routine work like maintenance or deliveries, changes in work pace to meet deadlines.

Step 4. Transfer the findings from the questionnaire onto the risk map. If a questionnaire has not been used, bring workers together and allow them to add a note of their problems directly onto the risk map.

Step 5. Bring together workers from the mapped area to review the risk map and add to it.

Step 6. With all the workers, review the completed risk map.

Step 7. Take action to improve conditions and revise the risk map to show where these improvements have occurred.

Hazard type

A clearer picture emerges if hazards are coded using colours or symbols, for example:

- ◆ **Red: Physical hazards.** Noise, heat/cold, leaks, slippery floors, no guards on equipment, radiation, accidents.
- **Blue: Chemical hazards.** Dusts, vapours, fumes, gases, mists.
- **Brown: Ergonomic hazards.** Fast paced, repetitive work; work which requires physical stress or pressure on the body; work which

requires an awkward posture, or any part of the body to stay still, for long periods of time; exposure to local or whole body vibration; poorly designed work procedures.

▼ **Yellow: Infection hazards.** Viruses, bloodborne diseases, body fluids, moulds, bacteria.

▲ **Purple: Stressors.** Not enough training, forced overtime, speed-up, monotony, machine-paced work, piece rates, harassment, discrimination, fear of violence.

Filling in the gaps

Add on to the risk map what you know about the risks and what is being done about them.

- **Statistics:** Is one job or process associated with a lot of complaints, compensation claims, injuries or sick leave?
- **Reports:** Have management risk assessments, health surveillance or technical reports identified any existing or potential problems?
- **Surveys:** Has the union conducted any surveys that have identified problem areas?
- **Consultation:** What problems have management informed workers of?
- **Information:** Do product labels, datasheets or warning signs give any clues?

Once completed the risk map should contain details of:

- The main task performed in the workplace;
- The main hazards and their severity;
- The number of exposed and/or affected workers;
- The sources of the occupational hazards;
- Health effects these hazards can cause, based on workers' experiences and information from other sources; and
- Possible measures to reduce exposures and possible adverse health effects.

Drawing conclusions

Soon a picture of all the workplace's problem areas

will emerge, an at-a-glance guide to the risks management should be doing all that is "reasonably practicable" to minimise. Risk maps allow workers to keep track of management's activities to remedy the hazards the map identifies.

Risk mapping does work. In the US, risk maps have been used to influence public policy, including land use planning, goal setting for toxics use reduction (see page 4), and to initiate "toxics watch" surveillance programmes.

Risk mapping has another value - it frequently turns up unexpected results. One worker might think their bad back, sore wrists or blistered skin is their own personal misfortune. When they

discover everyone working with a particular process or substance has similar problems, they know the problem is bad conditions not bad luck.

Information

A group method for improving risk mapping. 1996. Details from: University of California (LA) Labor Occupational Safety and Health Program, Institute of Industrial Relations, 1001 Gayley Avenue, Los Angeles, California 90024-1478, USA. Tel: 00 1 310 794 0369.

Gaming workers' health and safety research project: A guide. 1997. Details from: WOHIS, 547 Victoria Avenue, Windsor, Ontario, N9A 4N1, Canada. Tel: 00 1 519 254 5157. Fax: 00 1 519 354 4192.

Mobilising for survival. Papers of the Canadian Union of Public Employees (CUPE) 7th National Health and Safety Conference. Details from: CUPE Health and Safety Dept, 21 Florence Street, Ottawa, K2P 0W6, Canada. Tel: 00 1 613 237 1590. Fax: 00 1 613 233 3438.

It's just the job

Casino workers expressed concern about the health risks of their work. A team of eight of the Casino Windsor workers, members of the Canadian Autoworkers' Union (CAW) and most on the health and safety committee, were selected to form a risk mapping research team. The union also drafted in workers from a local occupational health advice centre to assist the team.

The workforce was divided into mapping groups, each involving about half a dozen workers. Their initial maps revealed some hazards were universal, others were very job specific:

- The dealers highlighted RSI and noise from slot machines. They also feared reprisal from patrons who were angered by losing.
- The porters (cleaners) were concerned about ergonomic issues (pushing, pulling and carrying equipment), use of certain cleaning agents, overcrowding and noise, and biological hazards from body fluids and bacteria. They mentioned "filthy" bathrooms and spills of blood, urine and vomit.
- Slot machine department staff reported the problems of noise and patron abuse.
- Security department workers reported that prolonged standing and fear of patron violence were important issues for them. They told of patrons who had tried to assault them or hit them with beer bottles or run them over with cars.
- Office workers were concerned about over-crowding, stress and noise.

Solutions suggested by the participants to reduce stress and noise levels were taken up by the union. Other issues are still being investigated by the team.