

Body mapping for workplace health

By drawing simple maps of their body or their workplace, workers can record, in a visual form, their health problems, work hazards and overall work environment. This helps them to share their knowledge of problems and solutions – and it gives unions some very useful information.

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A British training project launched in 2001 is aimed at helping workers and union representatives to:

- use body mapping to identify problems that were causing work-related ill health
- help workers and their union health safety representatives to tackle the problems causing work-related ill health

Run by the British Trades Union Congress (TUC), with some financial support from the government's enforcement authority, the Health and Safety Executive, the pilot training project began by developing a draft workbook on body mapping. This was used for two TUC tutor training workshops. The TUC course developers were grateful to the Canadian Union of Public Employees and Hazards Publications for sharing mapping materials that they had previously developed. TUC tutor feedback on the draft materials was taken into account and a body mapping course workbook for union safety representatives was produced.

The activities and resources in the workbook were used selectively by over 200 safety representatives and a total of eighteen TUC tutors on core TUC health and safety courses. Structured feedback on the materials was gathered from the participants and tutors using standard evaluation forms. Amendments were made to the body mapping workbook in light of the feedback.

Why use mapping?

As well as a picture's being "worth a thousand words", there are a number of reasons why mapping is useful for workers and their trade union safety representatives.

Mapping:

- involves workers, is participatory and develops a collective approach.
- encourages discussion and analysis.
- uses workers' experience and knowledge to paint detailed pictures of their working conditions.
- is more easily and widely understood than most other forms of information.
- helps to overcome problems of literacy and language differences.
- is simple and fun to use!

Who can organize mapping?

A trained worker facilitator, a trade union educator, or a trade union health and safety representative can carry out mapping using:

- small group discussions
- larger groups to record and display large amounts of information.

How many participants should be in a mapping group?

It is better if workers interact with each other and their trade union facilitator, so groups of six to ten are best. It is also better to organize groups by department, job, or some other common characteristic.

Confidentiality and security

Mapping works best when workers feel safe and comfortable that the information they are about to reveal cannot be used against them in any way. Workers will be more open in

discussing issues when they are in groups consisting only of other workers, and with a facilitator that they can trust, such as a trade union representative/educator.

Types of map

The types of maps to be created will depend on the type of information to be collected. This article concentrates upon two of them – *body mapping and hazard mapping*.

What can body mapping be used for?

Trade unions can use body mapping to collect information about workers' health, such as:

- diseases
- illnesses
- injuries
- aches and pains
- stress symptoms
- reproductive problems
- other related problems

Body mapping is a way of identifying common patterns of health problems amongst workers in a particular workplace, normally doing the same or a similar job. Identifying common health complaints does not mean for certain that the causes are all work-related. Body mapping is an excellent tool to help highlight areas for action or for further investigation.

Body mapping:

- provides an easy and effective way to encourage workers to speak out and report symptoms of ill health that they suffer
- identifies common patterns of health problems amongst workers in a particular workplace or doing the same job
- highlights areas for further investigation and trade union action.

Conducting a body mapping session

Two large outlines of the human body are drawn on a flip chart or kraft paper.

The separate images are labelled “Front” and “Back” and tape is used to stick the images to the wall. Marker pens are provided so that workers can mark any symptoms that they have on to the body map.

The facilitator explains what they are proposing to do, and makes it very clear to everyone that information from individuals is confidential. Workers are asked to make a mark (X) on the body map to show any areas of the body which they believe are affected by their work. Different coloured marker pens will help to identify different symptoms, but this is not essential.

Examples of different symptoms

- X —————> Aches and pains
- X —————> Allergies
- X —————> Reproductive problems in men or women
- X —————> Stress-related disorders

After the workers have finished marking the front and back of the bodies, they are asked to describe, one at a time, what health problems their marks represent. The facilitator can make a note of the nature of the health problems, beside the relevant marks. Workers are then asked for any observations they have regarding common patterns of health problems and to discuss these.

Action

The trade union facilitator and workers can collectively draw some initial conclusions and action points from the body mapping activity. Detailed notes of workers’ comments and conclusions are kept and used with the workers for action planning.

Hazard Mapping

What can hazard mapping be used for?

Hazard mapping can be used to identify workplace hazards, such as:

- noise and vibration
- sexual harassment
- poor scaffolding
- chemicals
- needlesticks
- working alone
- unguarded machinery.

In addition, workers will have the chance to think about hazards which may be “hidden”, for example:

- the impact of precarious contracts upon working conditions
- the way work is organized and scheduled.

Like body mapping, hazard mapping gives a visual picture and will often follow on from a body mapping session. Through the use of drawings, hazard mapping helps workers and their union representatives to visualize their workplace and the hazards that exist (or existed years ago). It also provides information that they can present to:

- an employer
- a government inspector
- a joint labour-management health and safety committee
- a supervisor
- a workers' compensation representative.

Conducting a hazard mapping session

The words “HAZARD MAP” are written on large blank sheets of paper. Sticky tape and marker pens are made available. It can be helpful to have a blank sheet of paper for each different occupational or departmental group. The trade union facilitator explains what they are proposing to do.

The group of workers who have a common work area or similar work environment are asked to sketch out their hazard map collectively. It is important to encourage workers to be creative and not to worry about their drawing abilities. The drawings can be very rough, and should include:

- a sketch or outline of the physical layout of the work area(s) and any equipment, machinery or other characteristics, such as doors, loading bays, and windows
- figures representing workers (these can be simple stick figures)
- any hazards which exist and labels or descriptions for each of the hazards, such as chemicals, dusts, extreme temperatures, unguarded machinery, repetitive work, violence from clients, and any other hazards
- a title for the map identifying the area(s) being represented.

Workers are then asked to:

- describe their maps
- add any further details to their maps that they think of as they are describing what they have drawn
- make observations about what they see in each of the maps
- make comments regarding patterns, or common hazards
- comment on the causes and effects .

Action

The trade union facilitator and workers can collectively draw some initial conclusions and action points from the hazard mapping activity. Detailed notes of workers’ comments and conclusions should be kept and used with the workers for action planning.

Evaluation of the TUC training project

Course materials

The course materials and mapping techniques were evaluated using:

- collective feedback from the safety representatives to the tutors
- evaluation forms filled in by tutors and safety reps
- a follow-up of a sample of safety representatives three months after their course

Participants were asked to grade the body mapping course materials. The results were as follows:

- **Excellent** = 46%
- **Very good** = 24%
- **Good** = 30%

There were no responses grading the materials as “average” or “poor.”

Analysis of body mapping by participants and tutors

Body mapping has been an overwhelming success during the pilot project. As described by one tutor, “it is an extremely fruitful way of uncovering health problems.” And by another tutor “a useful additional tool for safety reps.” A participant stated “the format can be adapted locally to differentiate between the wide range of literacy skills that may be present in the workplace, therefore making the strategy available to all members without fear of intimidation.”

During the courses: action taken by trade union safety reps

All participants tried body mapping in their workplaces. Many safety representatives identified health problems using the maps with their members. Some examples of the actions that safety representatives took as a result of body mapping included:

- raising the findings at the safety committee
- findings used as a negotiating tool for improvements
- new chairs now ordered to deal with the back pain that had been identified

- change in procedures and new risk assessments requested
- body maps used with display screen equipment and other risk assessments, and the findings placed on the agenda of the safety committee
- working area redesigned
- body mapping analysis used in order to show management the underlying problems that had previously been unnoticed.

During the courses – action and a selection of tutors’ views

- “I feel that the techniques may provide an extremely fruitful way of uncovering health problems. For example, one rep who I have known for 6 months and had many fascinating discussions with, mentioned something that had never come out before. She said that in her workplace (a care home), it was commonly accepted that if you worked there for about 5 years you would need a hysterectomy because manual handling was so bad. I think that body mapping has the double benefit of enabling reps to spot themes and at the same time stopping members taking such things for granted.”
- Several reps used it as a tool for making improvements. Eight out of ten said that they will use body mapping as a result of the course. Three reps are trying to get it implemented council/plant wide.
- It encouraged reps to speak to members and pick up issues.
- The pilot project has now turned into workplace body mapping with other groups of workers.
- All the reps on the course tried it out and reported back. Some are planning to use it as an ongoing method of obtaining members’ views
- In several cases, body mapping led to further action by reps and employers. Some examples were, training programmes established, new equipment purchased, and general dialogue initiated

During the course: examples of body mapping action

Stress at work

A representative did a body mapping exercise as an assignment on the TUC Certificate in Occupational Health and Safety. She called an informal meeting which all members attended, except one person who was on sick leave. Body maps and felt pens were provided. The information gathered from the body mapping session was converted into bar charts and displayed on the union notice board.

The findings will be taken to management at the next Health and Safety Committee meeting. The representative wants management to look into high stress levels that have been highlighted by the body mapping exercise. She thinks that stress is contributing to the high levels of headaches, stomach upsets and neck/shoulder tension. She is also of the view that lighting, display screen equipment and ventilation are contributing to the problem.

Upper limb disorders

A safety representative working in manufacturing and packing toiletries, did a body mapping exercise as a project on a TUC Health and Safety Stage 2 course. A production line was chosen with 5 workers where the same job is done and rarely changes. The representative met with the workers and gave them three different coloured stickers for each of the three main jobs on the line, and also constructed a hazard map of the line.

The results included:

- upper back and neck problems with stacking
- upper back, arms and wrist aches with traying off

Short-term preventive measures have now been introduced, e.g. job rotation, whilst more permanent preventive measures are pursued. Since the project, far more workers have come to see the safety rep and have raised issues that need tackling.

Follow-up of the impact of body mapping in the workplace

Action – what did the safety representatives find out from body mapping?

Respondents were asked what they found out as a result of using body mapping techniques.

The responses from the safety representatives were overwhelmingly positive. The quotes

below give an impression of some of the findings from the body mapping exercises:

- Many women suffered the same aches and pains in the packing hall due to repetitive jobs.
- Men suffered with back and neck problems due to repetitive lifting of weights.
- Most had problems caused by the same equipment i.e. back problems as the office chairs do not adjust.
- Most workers were suffering the same aches and strains.
- Problems are occurring and this was a method of identifying them, easily and in a systematic way.
- Staff were very good at letting me know what parts of their body hurt or what they were suffering from, so diseases were highlighted.
- Back pain and stress-related illness were identified.

Action taken by safety representatives and management

80% of the safety reps in the impact sample had taken action as a result of what they had found out as a result of body mapping.

60% of managers in the impact sample had taken action as a result of the representations made by the safety representatives. In addition, some of the safety representatives expected management to take some action even though they had not done so yet.

80% of the safety representatives in the sample said that they would be using body mapping with their members in the future.

Examples of action taken in the months since the courses concluded

20% of the safety reps who completed the impact questionnaire were interviewed by telephone, so that further information could be gathered. Examples of workplace action since the courses concluded are given below.

Body mapping stimulates changes in the way the job is done

A safety representative at a bakery introduced body mapping following a pilot TUC course. The body mapping exercise revealed back injuries and strains. In the safety representative's opinion, it was not until the workers body-mapped together that they realized that other workers were getting similar aches and strains.

After the course had finished, the safety representative took the findings to management. As a result, the way that the job is done has been changed with the introduction of:

- new, smaller baskets that do not hold as much of the product
- job rotation and task variety

The safety representative says that the members are much happier as a result of the changes.

Action plans following body mapping

A safety representative compared two groups of members' responses to body mapping. One group was doing a lot of manual handwriting, and the other group was using display screen equipment. Both groups suffered from similar aches and pains in the back, head and hands.

The safety representative used these examples at the health and safety committee meeting. The response from management was not particularly positive, but the occupational health and safety adviser supported the findings. As a result, an action plan has been agreed to prioritize the improvement of the risk assessment procedures. Body mapping will be used as part of this wider process.

The safety representative has also run a one-day body mapping briefing for 8 other safety representatives at the workplace, and feels that body mapping is a really useful tool that members find very easy to use.

Conclusions from the pilot TUC mapping project

The use of mapping in this TUC pilot exercise has proved to be an overwhelming success.

During and after the pilot courses:

- it is clear that body mapping works best when it is facilitated by the union safety rep as a collective exercise with a small group of members/workers
- there has been a positive response from both safety reps and workers
- the response from management has not always been positive
- there has been action taken in the workplace by both safety reps and management
- improvements have been made to work processes and tasks
- procedures have been developed to incorporate body mapping and hazard mapping
- body mapping has sometimes been integrated into risk assessment procedures so that safety reps can identify ill health symptoms that need to be addressed

As a result, the amended body mapping workbook has now been posted on the TUC tutors' web site TUC learnOnline, for use on other courses.

In practice, it seems clear that body mapping is a very helpful tool for trade union representatives to effectively represent and articulate the health and safety interests of workers.