

DEVELOPMENT OF A NEW PREVENTION GUIDELINE FOR MUSCULOSKELETAL DISORDERS FOR ONTARIO (CANADA)

Type of initiative: Research and guidance

Time frame: 2016-2018

1 Background

Musculoskeletal disorders (MSDs) are the number one type of lost-time work injury reported to the Workplace Safety and Insurance Board (WSIB) in Ontario. MSDs account for 42 % of all work-related injuries, 42 % of all lost-time claim costs and around 50 % of all lost-time days¹.

It is estimated that, between 2003 and 2007, MSD claims resulted in 2.5 million days off work and, during this period, Ontario employers paid more than CAD 1 billion in direct and indirect costs (overtime, equipment modifications, administration, retraining and lost productivity) related to MSDs.

According to the 2017 WSIB Statistical Report, over the 10 years from 2008-2017, sprains and strains continued to be the leading nature of injury. In 2017, they represented 44 % of allowed lost-time claims. Overexertion was the leading injury event, accounting for 19 % of allowed lost-time claims.

However, in a study examining the combined data from three different sources, Mustard et al (2015)² conclude that there was a substantial decline in the incidence of work-related musculoskeletal disorders in Ontario over the 8-year period from 2004 to 2011. The data sources included emergency department encounter records, lost-time workers' compensation claims and data from consecutive waves of a national health interview survey.

The risks associated with MSDs are covered by the general provisions of the Occupational Health and Safety Act 1990. Various clauses of this Act are presented as relevant to the prevention of MSDs, including the following:

- the employer shall take every precaution reasonable in the circumstances for the protection of a worker;
- the employer shall ensure that the equipment and protective devices provided are in good condition and are used as prescribed;
- the employer is obliged to provide information, instruction and supervision;

2 Description of the initiative

2.1 Introduction

The MSD Prevention Guideline for Ontario, including a resource manual and a prevention toolbox, was developed in 2005-06 under the auspices of the Occupational Health and Safety Council of Ontario, and proved to be an important resource for workplaces. In 2016, a multi-stakeholder initiative led by the Centre of Research Expertise for the Prevention of Musculoskeletal Disorders (CRE-MSD) at the University of Waterloo was launched to develop a new MSD Prevention Guideline for Ontario. The initiative was funded through a grant from the Ontario Ministry of Labour (MOL).

¹ Prevent workplace pains & strains! It's time to take action! <http://govdocs.ourontario.ca/node/24276>

² <https://oem.bmj.com/content/oemed/72/4/252.full.pdf>

2.2 Aim of the initiative

The project aimed to develop a new MSD Prevention Guideline for Ontario, with the overall objective of preventing the development of MSDs of non-traumatic origin that results in major costs for businesses and society as a whole.

2.3 Organisations involved

University of Waterloo – Centre of Research Expertise for the Prevention of Musculoskeletal Disorders (CRE-MSD), Prevention Office of the Ontario Ministry of Labour (MOL), and the Ergonomics Integrated Planning Advisory Committee (EIPAC).

2.4 What was done and how

The project had four phases, implemented over a 2-year period from March 2016 to March 2018.

- Phase 1 — Evaluation and identification of needs;
- Phase 2 — Development of content;
- Phase 3 — Evaluation of the new content and user trials;
- Phase 4 — Preparation of the final content for the Guideline.

As part of the first phase of the project, CRE-MSD conducted an environmental scan of workplace best practices and experiences in MSD prevention, a multi-stakeholder survey on the existing and future MSD Prevention Guidelines, a survey of small business awareness of MSD and prevention needs (approximately 4,000 small businesses were examined during the evaluation stage), and multiple interviews. At this initial stage, a project-planning group was formed, comprising a number of stakeholders and user groups. The existing guideline and toolkit were evaluated, followed by an investigation of workplace needs in Ontario. This phase also saw several academic reviews published as part of the initiative. The evaluation provided several key insights:

- SMEs are underserved and have specific needs.
- The standards are too complex and are accessible only to large organisations,
- MSD prevention is not well integrated into standard business processes.

The evaluation also pointed to the potential value of ‘teachable moments’ — i.e. the sharing of new information — that could facilitate significant improvements in the effectiveness of MSD prevention activities. The evaluation findings provided a basis to develop the new Ontario Prevention Guide, which was assessed in a multi-stakeholder workshop. A prototype of new materials was subsequently developed and tested in a sample of workplaces. As a final step, a website was developed to gather together all of the materials, with the slogan ‘Work shouldn’t hurt’. The online MSD Prevention Guideline for Ontario was launched in October 2018 (available at: <https://www.msdpreservation.com/>).

An innovative element is that three versions of the guideline were developed, tailored to the size of the organisation, each of which is compatible with OHSMS standards:

- Quick Start Guideline (for microenterprises and very small businesses, featuring a toolbox talk format and seven mini-posters to use in the workplace);
- Basic Guideline (for medium-sized businesses);
- Comprehensive Guideline (for larger businesses).

Equally innovative was the approach applied to the Quick Start Guideline tailored to the needs of microenterprises and very small businesses. This version of the Guideline addresses a subset of key workplace MSD hazards that are common across different sectors and workplaces and have a major influence on the development of MSDs affecting major body regions. These are presented in the form of six ‘workplace fixes’ that each describe a hazard and its control:

- Store it off the Floor (Lifting height) – Back;
- Keep it Close (Twisting and far from body) – Back and shoulders;
- Hands below Head (Overhead work) – Shoulders and neck;
- Look Straight Ahead - Neck;
- Get a (Good) Grip – Upper limbs;
- Change it Up (Work organisation) – All.

The intention was not to simplify the multifactorial nature of MSD risk factors, but to extract a small number of hazards from the peer-reviewed literature and suggest general controls that could, if widely applied, contribute to a substantial reduction of MSDs. Based upon a study of approximately 4,000 businesses, the researchers concluded that this is the scale and type of information that small businesses need. Other hazards are, as far as possible, addressed within the six key hazards. Work organization and psychosocial factors are addressed in the 'Change it up' module. The Quick Start Guideline is meant to be interpreted as a starting point for MSD hazard identification and prevention.

The Basic Guideline is tailored to medium-sized companies that have policies and procedures for health and safety but want to improve their MSD prevention activities. They have a Joint Health and Safety Committee (JHSC) and have a person or persons with knowledge and experience of, and responsibility for, health and safety,

The Comprehensive Guideline was developed for large companies that have a formal or informal management system for health and safety and a department (or several persons) with special knowledge and experience of, and responsibility for, health and safety.

The new MSD Prevention Guideline also contains information on MSD hazards and risk assessment, as well as a Tool Picker to select appropriate methods for risk assessment.

2.5 What was achieved

The guidelines were positively received during the testing stage and were further modified, based on the feedback received. The stakeholder workshop yielded 19 comments on the concepts and framework, along with 37 comments on messages and content, and 26 other suggestions.

2.6 Success factors and challenges

The main success factor was the multi-stakeholder approach to evaluating the previous guideline and developing an updated version. Stakeholders and user groups (including employer associations, ergonomists, health and safety consultants, and researchers) provided input into the development process and commented on the draft tools. At the beginning of the second phase of the project, a 1-day workshop sought feedback and guidance on the overall approach, the technical content related to risk assessment and control strategies, roll-out and the proposed website. Subsequent testing of the new guidelines' content in selected workplaces was another success factor.

Different types of businesses raised various challenges during the development process. Larger businesses pointed to the issue of multiple micro-environments within a single company and the need for communication with employees if the Guideline was to be used successfully. Smaller businesses and microenterprises pointed to the low level of awareness of the issue, as well as low levels of familiarity with the terminology. The survey revealed that their preferred source of information about MSD prevention was more traditional media, such as posters and checklists, with only a small number opting for online sources as their primary resource. These businesses also voiced the need to simplify the messages and terminology.

2.7 Transferability

The collaborative approach and multi-stakeholder involvement applied in the development of the guidelines is highly transferable. Other aspects of the development process — such as evaluation of the previous MSD Prevention Guideline, assessing needs, synthesis of best practices, tailoring the guide to different target groups and testing the guidelines in selected workplaces — are all applicable in any other country.

References and resources

- (1) CRE-MSD website. Available at: <https://uwaterloo.ca/centre-of-research-expertise-for-the-prevention-of-musculoskeletal-disorders/development-new-msd-prevention-guide-ontario>
- (2) New MSD Prevention Guideline. Available at: <https://www.msdpreservation.com/>

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