Prevention of MSDs due to Manual Materials Handling

A CRE-MSD Discussion Forum

*A Report on the Day*

June 27th, 2011

89 Chestnut Conference Centre,
University of Toronto
Prevention of MSDs due to Manual Materials Handling: A CRE-MSD Discussion Forum

Summary

On June 27th, 2011, one hundred people came together in Toronto to learn, discuss, and to offer suggestions on taking Ontario’s musculoskeletal disorders (MSDs) strategy one-step further. The focus of the Discussion Forum was on the reduction of MSDs caused by Manual Materials Handling (MMH) at work: lifting, lowering, pushing, pulling and carrying.

The day-long event was hosted by the Center of Research Expertise for the Prevention of Musculoskeletal Disorders (CRE-MSD). Those who attended the discussion forum came from organized labour (five different unions), business (transportation, electrical utilities, high tech, retail, steel, and energy), the health and safety associations, occupational health clinics and training centres, the Ministry of Labour, the Workplace Safety and Insurance Board (WSIB), researchers, injured workers, and occupational health and safety consultants.

The day was very positive. It brought together some of the best minds to examine, discuss, and explore ways of moving forward and building upon the MSD Prevention Guideline for Ontario. The presence of such a large diverse group, representing many workplace stakeholders, gives many perspectives on needs and wants for future work being done by Ontario’s health and safety system on this topic.

The Discussion Forum was organized around six themes: jurisdictional approaches (e.g. specific or general legislation, codes of practice or guidelines); manual materials handling risk assessment; resources for workplace parties/stakeholders/inspectors (such as training, tools, guidance, case studies, information, consultation, website content); strategies that are sector specific or for small businesses; communication strategies; and evaluation.

The morning consisted of presentations from four jurisdictions and workplace health and safety systems outside Ontario. Invited speakers from British Columbia, the United States, Australia and the United Kingdom related their experiences with creating and implementing policies and procedures on manual materials handling at work.

Key lessons learnt from the morning:

- The drop in MSDs is a general trend across multiple jurisdictions, but the proportion of MSDs in relation to all lost time injuries has remained consistent. It remains difficult to make any direct link between the decrease in MSDs to prevention or legislative activities.
- Worker-management collaboration is essential for workplace manual materials handling prevention activities.
- Different approaches to enforcement are possible. Even if a regulation is in place, it does not necessarily mean that orders will be written or prosecutions will take place.
- Inspector training is critical. Inspectors need to have a basic understanding of the underlying risk factors and strategies for risk reduction in order to feel
competent to write orders on manual materials handling hazards.

- Workplaces need guidance to help them make ergonomic improvements to manual materials handling activities.

The afternoon of the Forum was dedicated to participant discussion on what a made-in-Ontario solution would look like. The main ideas can be summarized as:

**Jurisdictional Approach**
- There was general agreement that there was a need for a province-wide approach and programs.
- Consultation on the development of approaches to address manual materials handling hazards has to be as broad as possible. The group agreed on the importance of bi-lateral involvement in both the creation of an Ontario approach and in its implementation at the workplace level.
- Any form of guideline or regulation needs to be simple and easy to apply and some support for a code of practice as a supplement was heard.

**Compliance**
- More guidance material and regular, consistent, transparent enforcement emerged as possibly being more important than whether or not there is a specific regulation (as opposed to the reliance on the General Duty clause) regarding ergonomics and manual materials handling issues.
- Compliance would be enhanced if examples of solutions were included with the guidelines. A strong consensus was that people need to know not only what not to do, but also how to do what they need to do.

**Hazard Assessment and Resources**
- There was general agreement that people wanted an Ontario-specific and sector-specific manual materials handling tool box.
- Tools need to be short, simple, straightforward, and include examples. There was also a call for tools to be site, job and task-specific.

**Communication, Training and Education**
- The need for communication emerged as a major theme from the discussions. There is a need to create greater awareness about the high costs and consequences of MSDs due to manual materials handling.
- Any guidance/training material should be matched to the enforcement approach.

**Evaluation**
- Many of the participants noted the low level of evaluation of the various jurisdictional programs. They thought that a simple analysis which merely demonstrates a decrease in claims was not enough, since decreases in claims may be the result of many factors and may not be the result of an effective regulation. This was thought to be a major deficiency.
- One suggestion was to create an evaluation approach at the same time as any new manual materials handling strategy. This would ensure a strong evaluation and continuous-improvement component.

Next steps were suggested: Participants identified the need to have future workshops to work on specific elements of a future strategy. These workshops would be smaller and more focused. They would identify key short and long term goals and the key principles that would guide any future policy and program development in Ontario around manual materials handling.
Introduction

Ontario’s “Occupational Health and Safety System” (which includes the Ontario Ministry of Labour (MOL), the Workplace Safety and Insurance Board (WSIB), the four health and safety associations, occupational health clinic, training centre and the four occupational research centres) is in a state of transition as it moves from the WSIB to the MOL. This reorganization is the result of the recommendations from the review of Ontario’s occupational health and safety system, the “Expert Advisory Panel on Occupational Health and Safety” chaired by Tony Dean. The MSD Prevention Guideline for Ontario created by Ontario’s system partners is now five years old. Stakeholders had voiced their opinion that there is a need to evaluate the success of the Guideline and arrive at some recommendations on what to do next in a province-wide strategy to reduce workplace-based musculoskeletal disorders (MSDs). The stakeholders wished to present Ontario’s newly formed Prevention organization with new ideas generated in a collaborative environment. This goal fits into the spirit of the Tony Dean report when it called for a collaborative process that engages the System as a whole.

Building on this momentum, on June 27th, 2011, one hundred people came together in Toronto to learn, discuss, and recommend how to take Ontario’s musculoskeletal disorders (MSDs) strategy one-step further.

In order to maintain a clearer focus, the Forum was organized around prevention of disorders related to Manual Materials Handling (MMH) at work, that is; lifting, lowering, pushing, pulling and carrying of materials (not people). These activities occur in all sectors and almost all workplaces, as well as being the leading cause of injury and disability.

The day-long event was hosted by the Center of Research Expertise for the Prevention of Musculoskeletal Disorders (CRE-MSD). CRE-MSD is a research centre hosted by the University of Waterloo. The Centre is made up of a network of 37 researchers across 12 different universities and institutions. The Centre receives funding through a grant provided by the WSIB. The Centre’s network of researchers spans the field of MSD-prevention research from intensive, lab-based studies, to the creation, implementation and evaluation of workplace prevention programs. The Centre supports collaborative research with organized labour and employers, health and safety associations, the WSIB and the MOL. The Forum was a concrete expression of the

“We need to build on what we know from workplace interventions and programs that were successful, and strive for what is politically achievable – not just some “pie-in-the-sky” model.”
(Workers and worker representatives)
values that are held strongly by the CRE-MSD network: conducting collaborative, workplace-partnered and stakeholder-focused research into the prevention of MSDs.

Those who attended the discussion forum came from organized labour (five different unions), business (transportation, electrical utilities, high tech, retail, steel, and energy), the health and safety associations, occupational health clinics and training centres, the MOL, the WSIB, researchers, injured workers, and occupational health and safety consultants.

Sophie Dennis, the Assistant Deputy Minister from the Ministry of Labour, and Richard Wells, the Director of CRE-MSD, opened the Forum. They focused on the personal and financial burden of MSDs and the importance of finding an effective strategy to reduce the injuries and disabilities caused by MSDs in general, and manual materials handling in particular. Richard Wells contended that to make a difference, workplaces need to know what they should do and how to do it.

Inter-Jurisdictional Review

The Discussion Forum was organized around six themes:

- jurisdictional approaches (e.g. specific or general legislation, codes of practice or guidelines);
- Manual material handling hazard identification and risk assessment;
- resources for workplace parties/stakeholders/inspectors (such as training, tools, guidance, case studies, information, consultation, website content);
- strategies that are sector specific or for small businesses;
- communication strategies and;
- evaluation

The morning consisted of presentations from four jurisdictions and occupational health and safety systems outside Ontario. Invited speakers from British Columbia, the United States, Australia and the United Kingdom related their jurisdictions’ experiences with creating and implementing policies, procedures and regulations on...
ergonomics and manual materials handling specifically.

Although it was not a part of the day’s activities, a synopsis of activities in Ontario has been included at the end of this document for those not familiar with the current Ontario approach.

**Manual Materials Handling in British Columbia**

**Presentations by Ed McCloskey and Peter Goyert, WorkSafeBC**

In 1998 the government of British Columbia passed the first ergonomic regulation in Canada in the midst of significant controversy. The original draft of the regulation referred to a detailed Code of Practice but strong opposition led to it being removed from the Regulation. Key elements included consultation, risk identification, risk assessment, risk control, education/training and evaluation. Assessment considers 18 workplace factors in five groups. The Regulation is performance based with identified risk factors. To help in the challenging task of enforcement, Regulatory Guidelines were issued in 2006. Ed McCloskey noted that the Regulation had raised the profile of Musculoskeletal Injuries (MSI) amongst employers and noted that it was still controversial in some areas. MSI rates were down but it was difficult to link the decrease to the regulation, since total occupational injuries have decreased to a similar extent.

The regulation had been criticized for being threatening and too invasive, yet few orders have been written (in 2010, 188 orders were written under the Ergonomic Regulation). There are three ergonomists employed by WorkSafeBC who give support to employers, workers and inspectors. Among WorkSafeBC inspectors, there appears to be a reluctance to write orders related to MSIs because of the complexity of the issue and their lack of expertise. All new inspectors receive a two-day training session related to MSI issues.

Peter Goyert then gave some details about the implementation. Considerable officer field experience has been gained and WorkSafeBC ergonomists provided support to employers and other inspection officers. Peter Goyert said that a very common question from stakeholders concerned the types of risk assessment that were acceptable. Important elements of the regulatory process were the publication of guidelines. These put the regulatory requirements into context and helped ensure consistency in the application of the regulation. Resources tailored to construction, manufacturing, healthcare are available. It was

“A multipronged approach as discussed by presenters this morning.”

(Government)

“[We need] simple, easy to use resources that are accessible to a wide variety of audiences, workplaces and system partners.”

(H&S System partner)
noted that there were no specific manual materials handling guidelines.

**Manual Materials Handling in the United States**

**Presentation by Dr. Tom Armstrong, University of Michigan**

The United States has had a complicated history with respect to Ergonomic Regulations and Guidelines. Its system, as described by Dr. Tom Armstrong, is minimalist with respect to detailed regulations. The ergonomic regulations that were planned during President Clinton’s administration were one of the first things that President George Bush’s administration terminated.

Two of the Occupational Safety and Health Administration (OSHA’s) 27 state occupational safety and health programs - California and Washington - have adopted or attempted to adopt state ergonomics standards. Employers in California are required to comply with the specific provisions of the California Ergonomics standard ([http://www.dir.ca.gov/title8/5110.html](http://www.dir.ca.gov/title8/5110.html)). The Washington Ergonomics standard was not completely enacted before it was rescinded (See [www.lni.wa.gov/wisha/ergo/ErgoFAQsFinal.pdf](http://www.lni.wa.gov/wisha/ergo/ErgoFAQsFinal.pdf)). The impact of putting the regulation in place was evaluated.

(Note: In Washington State, from 1998 to 2003, there was a reduction in reported exposures among workplaces in the highest hazard industries. Following the rule’s repeal, however, hazard exposures increased. While more workplaces reported taking steps to reduce exposures between 1998 and 2001, this gain was reversed in 2003 and 2005. Employers who took steps reported positive results in injury and absenteeism reduction. Large workplaces in the high hazard industries were more active in taking steps and used a wide variety of resources to address ergonomics issues. Small employers relied more on trade associations and the State.1)

Other states with approved occupational safety and health programs may choose to follow OSHA's 2002 four-pronged approach to ergonomics:

- Industry-specific and task specific guidelines; developed with stakeholders including retail grocery, poultry processing, shipyards, nursing homes
- Outreach: 15-member National Advisory Committee on Ergonomics (NACE) with representation from industry, academia, labour, and the legal and medical professions, strategic partnerships, website, training, memorandums of understanding
- Enforcement; General Duty Clause violations, inspections, hazard alert letters
- Research

“Ergonomics should be an integral part of the provincial/national strategy to maintain a competitive edge across all sectors, both public and private.”

(Researcher)
When OSHA uses the General Duty Clause to cite an employer, they must demonstrate that:

- The employer failed to keep the workplace free of a hazard to which employees were exposed
- The hazard was causing or likely to cause death or serious physical harm
- The hazard was recognized
- A feasible means of abatement for that hazard exists

Much of the enforcement of ergonomic requirements in the U.S. seemed to have focussed on record keeping. The emphasis on record keeping stems from a structured problem-solving methodology which requires an employer to: define; measure; analyze; improve; and control.

Dr. Armstrong finished by providing several examples of negotiated settlements, noting that experience shows that agencies have a lot of latitude in how they interpret and apply existing regulations. He believes that although new regulations will be difficult in the present economic and political climate to execute, future regulatory actions could clarify record keeping and general duty requirements. He suggested that guidelines from professional groups, e.g., the American Conference of Industrial Hygienists (ACGIH), could be helpful.

Manual Materials Handling in Western Australia (WA)
Presentation by Ms. Jean Mangharam, Worksafe WA, Australia

The Forum heard that as a part of the 1996 Australian OSH regulations, manual handling risk assessments have to be performed. In 2010 the Western Australia (WA) codes of practice for manual handling and the National Code for Prevention of Occupational Overuse Syndrome were merged into a WA Manual Task Code of Practice. The duty holders under the OSH Act and Regulations are employers and self-employed workers; body corporate; contractors and labour hire; persons in control of workplaces; manufacturers, designers, importers, suppliers and workers. Of interest were the designers’, manufacturers’ and suppliers’ legal obligations relevant to MSDs.

The starting point for WA WorkSafe operations is education and it is through this approach that the organization aims to influence the behaviour of industry and workers toward the delivery of safer workplaces. Traditional enforcement techniques are applied to deal with noncompliance where clear breaches of the law occur. Jean Mangharam noted that enforcement actions include verbal direction, improvement notices, prohibition notices and prosecution.

“Supervisors should take note of ergonomic principles and practices.”
(Workers and worker representatives)

“I would like to see limits for lifting, pushing and pulling for various levels. This is what I need when I develop policies and procedures in my workplace.”
(Employer)
WA Worksafe also performs a range of proactive activities. They have recently coordinated campaigns that include those in the manufacturing, health and community, construction and retail industries. Educational resources made available to the public include the Code of Practice, a regularly updated website, industry specific publications, videos, and public forums and workshops.

New initiatives include developing in-house capacity with new and existing inspectors, forming partnerships with other institutions and stakeholders, harmonization of laws within Australia, and sharing of resources from other Australian jurisdictions. Finally, Jean Mangharam reminded the Forum that there are gaps that challenge their strategies to tackle work-related musculoskeletal disorders including gaps between science and policy, between legislation and enforcement, between extensive technical detail and employers’ capacity to understand and benefit from it, and between best practice and practicability.

Mike Gray described the “risk filter” and the Manual Handling Assessment Charts (MAC) which are screening tools to identify high-risk manual handling activities. These incorporate a numerical scoring system to assist with prioritizing interventions and use a “traffic light” colour scheme which indicates which element of the task is high-risk.

Enforcement Management Model provides guidance to ensure consistent, proportionate and transparent enforcement. Strong enforcement is supported by MAC as both workplaces and inspectors can use MAC. Enforcement outcomes are: Verbal advice, Letter, Improvement Notice, Prohibition Notice and Prosecution. In the UK there are 16 specialized ergonomic inspectors who provide advice, as well as enforce the regulation.

Mike Gray also gave an overview of the range of proactive work being done by HSE, which included raising awareness through media campaigns, one of which included a humorous poster using a fictitious rock group, BÄACKPAIN. Other approaches included supply chain initiatives; Inspection campaigns; Tools, Stakeholder signup, Training events-by sector- with employers and unions and; Specialist support.

“What I heard this morning is that enacting legislation will probably not work. A living document needs to be created which can evolve into a set of guidelines.”
(Researcher)
Evaluation of the program showed that 33% of organizations had taken no action but of those that had, 77% had done risk assessment, 71% training, 58% reduced significant risks, 16% had taken action to avoid, assess and reduce. Larger companies were more likely to have done something. 48% of employers thought the benefits of addressing manual materials handling hazards outweighed costs; 11% thought the reverse.

Key lessons learnt from the morning:

• The drop in MSDs is a general trend across multiple jurisdictions; this is in parallel with the drop of all lost-time claims. It remains difficult to make any direct link between the decrease in MSDs to specific prevention or legislative activities.

• Worker-management collaboration is essential for any process that may lead to major changes in MSD prevention in the workplace.

• Different kinds of jurisdictional approaches are possible. Even if a regulation is in place, it does not necessarily mean that orders will be written or prosecutions will take place. It is very feasible for inspectors to write orders without a specific ergonomic regulation using a general duty clause.

• Inspector training is critical. Inspectors need to have a basic understanding of the underlying risk factors and strategies for risk reduction in order to feel competent to write orders on MSD hazards.

• Workplaces need resources to help them make ergonomic improvements. It is important to create workplace tools that are appropriate for the different workplace parties. Workplace tools need to be simple otherwise they will not be used – but not too simple otherwise the guide for correction, remedy or assessment will not be effective.

“Political will – secure commitment from the politicians to tackle the issue in a comprehensive way.”

(H&S System partner)
A Made-in-Ontario Solution

John Vander Doelen from the Ministry of Labour got the afternoon going by noting that Ontario is very well positioned to improve MSD prevention since it already has a very active occupational health and safety structure and a well-developed prevention system. He stressed the importance of using the knowledge gained from the morning’s cross-jurisdictional review to create a made-in-Ontario strategy. The participants then individually filled out a form that asked two questions.

The questions were:

- What would success in Ontario look like?
- How can we adapt what we heard this morning to achieve that success in Ontario?

All the answers have been collated and posted on the CRE-MSD website; a select few have been profiled as pull-quotes in this report.

The vision for success was a province where MSDs attributed to manual materials handling would be significantly reduced or eliminated. It included the development of a simple, flexible, effective approach using ergonomics (e.g. regulation or code of practice or guideline) to address the elimination and control of manual material handling hazards. This approach would be an integral part of the overall provincial strategy to help Ontario maintain its competitive edge. The approach would come about as a collaborative process with all stakeholders involved and engaged, including equipment designers and manufacturers. There was widespread support for increasing awareness and guidance material that offers a consistent approach to hazard identification, risk assessment and control. The approach would be initiated and sustained through a broad-based information campaign that included social marketing and education.

The participants at the Forum learned significant lessons from the morning’s presentations. These included the importance of having:
- political buy-in to any future approaches developed to address manual material handling hazards
- a wide-spread communications campaign to increase the

“It is important to “keep it real”. Any guidance on how to eliminate hazards must be consistent with the business objectives of increased speed and productivity. The steps must be an enhancement, not a barrier.”

(Employer)
awareness of manual material handling hazards
• an enforcement component and support and compliance assistance by enforcement organizations
• a transparent process where workplaces will know what to do and how to do it

This multi-pronged approach would not only include legislation and enforcement but also communications, workplace-appropriate hazard identification and assessment tools, and resources to help workplaces make change.

Subsequently, the participants engaged in small-group discussions. Ten groups discussed the two questions in relation to the six Forum themes. The discussions were lively, engaging and fully collaborative. Participants were given large (8.5” X 5.5”) sticky notes to write key ideas and thoughts down. At the end of the hour a professional facilitator brought the ideas together under six major themes. The ideas that emerged from the groups were creative, innovative, and thoughtful.

The six themes were identified as: jurisdictional; manual material handling risk assessment; resources for workplace parties; strategies that are sector specific or for small businesses; communication strategies; and evaluation. Three of the themes were covered extensively by the groups: jurisdictional approaches and compliance, communication strategies; and hazard identification and risk assessment.

Jurisdictional Approach
The discussions that emerged from the participants on the need for more stringent codes of practice or regulations were not as strong as the organizers had expected. The participants from organized labour and injured-workers groups were solidly committed to the need for prescriptive regulations enforced by a government inspectorate. They voiced their support for a legislated regulation in order to identify best practices, and saw regulations as an important long-term goal.

However, most of the union representatives recognized that stringent enforcement would be difficult to achieve. Regular, consistent, transparent enforcement emerged as possibly being more important than whether or not there is a specific regulation (as opposed to the reliance on a general duty clause) regarding ergonomics, MSDs and manual materials handling issues.

“Transparency – workplaces must know how to achieve compliance by having information on this made available through codes of practice, etc.” (Government)
At the opposite end of this call for regulations was the comment from Tom Armstrong in the morning, that some US states, like Michigan, have recently banned any potential ergonomic regulation now or at any time in the future. While not nearly so definitive, some representatives from industry who participated in the Forum, argued that there was a need for more personal responsibility on the part of workers to take responsibility for reducing their exposure to MSDs by taking more care when lifting and insuring their own physical fitness.

The majority of participants that fell between these two ends were not committed to the need for regulations since they had learnt from the morning presentations that regulations did not necessarily lead to increased enforcement or higher standards.

There was general agreement that there was a need for a standard approach to manual materials handling hazard identification and elimination and risk assessment and prevention programs. These would offer significant status and weight to ergonomic changes and improvements. Some people thought it might also be appropriate to have continent-wide standards, or at least Canada-wide standards, because many organizations carry on business simultaneously in both multiple provinces and territories in Canada and in the US. A common and consistent approach across many jurisdictions lends more credence to the standard being used to recognize and assess the workplace hazards. This idea was sparked by the UK guidelines which were developed in compliance with European Union (EU) programs.

In the discussion there was nearly unanimous agreement that any form of guideline, code or regulation needed to be simple and easy to apply, with some support for a detailed code of practice as a supplement. Simplicity and specificity would allow for simple guidelines that could be easily understood and explicit enough to provide real help. There was some support for resources that were sector and task-specific. There was some opposition to the strong call for simplicity. This emerged from practitioners and researchers who felt that if simplicity was the major goal, there might be a risk that the approach to addressing manual materials handling hazards (e.g. regulation, code, guideline) would either have to be so general or so specific that its applicability or reliability and usefulness might be minimal.

Some of the employer representatives thought that specific guidelines would be helpful to business, especially for small businesses that need help and would value specific thresholds. Such thresholds would be valuable.”

“Success would involve the development of a simple ergonomic regulation that includes a code of practice as well as clearly defined enforcement procedures.”

(Workers and worker representatives)
because people would then know when they had to act to reduce risk.

The group agreed that consultation on the development of an approach to addressing manual materials handling hazards had to be as broad as possible. The group agreed on the importance of bi-lateral involvement in both the creation of the approach and in its implementation at the workplace level; moreover, that any intervention needed to be designed as a collaborative process between workers and employers, and that any process that did not consult with all the workplace parties was doomed to failure or, at a minimum, would receive a lot of opposition. Equally, there was also general acceptance that MSD-interventions should not adversely affect productivity. If the overall approach did result in a reduction in productivity, that would be a real barrier to acceptance and adoption.

**Compliance**

There was unanimity that any jurisdictional approach to prevention would not be effective if there was no form of enforcement. But reciprocally, enforcement cannot be effective if the workplace parties are unable to understand and act on the guidelines, regulations or codes of practice. Hence, there was agreement that compliance would be enhanced if specific solutions were included with the guidelines. A strong consensus was that people need to know not only what not to do, but also how to do what they need to do.

The participants recognized that the avoidance of all hazards is not possible, but they were concerned that companies did not have enough guidance to recognize situations that clearly contained high risk. As this discussion developed, the participants asked whether the inspectors who write orders for compliance could also be the ones to give companies advice on how to comply with any guidelines or regulations, much like their activities in the UK.

**Hazard Assessment and Resources**

There was general agreement that people wanted an Ontario-specific and sector-specific tool box for manual materials handling. The consensus was also that tools need to be short, simple, straightforward, and include examples. There was also a call for tools to be site, job and task-specific. There was also general agreement that such tools should build on those that have already been designed.

Building on the ideas that emerged from the UK presentation in the morning, there was a very positive response to the UK MAC tool

**“Enforce penalties but use the money that was generated from the infraction in the same workplace where the infraction occurred to engineer a solution i.e. install hoists/pallet lifters, etc.”**

(Employer)

**“[We need to] remove experience ratings and incentive programs that only encourage employers to hide work-related MSDs and cause adversarial relationships.”**

(Workers and worker representatives)
(Manual Handling Assessment Chart). This is a tool that can be downloaded from the Health and Safety Executive’s website [http://www.hse.gov.uk/msd/mac/introduction.htm](http://www.hse.gov.uk/msd/mac/introduction.htm), or bought at [www.hsebooks.co.uk](http://www.hsebooks.co.uk). This is a risk assessment tool that uses numeric scores and a traffic light approach to indicate the level of risk. It provides comprehensive guidance on manual handling. It was produced to help employers, managers, safety representatives and employees across all industries reduce the risk of injury from manual handling. The tool was originally created for health and safety inspectors, but it is written in a way that it is meaningful to all workplace parties. This facilitates the transparency of criteria upon which companies and workers are judged and allows for easier compliance.

There were numerous comments supporting the need to engage equipment and tool designers and manufacturers to make them more aware of the costs of MSDs and to encourage them to design facilities, tools and equipment to avoid creating hazards in the workplace as was described in Australia. This was thought to be an important step in prevention.

Many respondents also highlighted the value of researchers to the system in this area. They can contribute their ability to collect data on all the available risk assessment and hazard avoidance tools, and assess the validity and effectiveness of them.

Communication, Training and Education

The need to create greater awareness about the effect of manual materials handling and the consequent MSDs emerged as a major theme from the discussions. From an employers’ perspective, also echoed by government representatives, there is a need to communicate more information about the direct compensation costs of MSDs and manual materials handling specifically, as well as the indirect costs, which include the impact on productivity, human-resource management costs and additional health care costs.

Several respondents thought that there was a need to provide a business case for risk assessment programs and that this kind of information would facilitate the adoption of new ideas and programs. Several respondents reported that they did not have an adequate understanding of these costs and that this information should form part of any public information campaign. Several people indicated that there was a need to provide basic information on the hazards associated with manual materials handling that pervade all economic sectors. Some respondents specifically referred to the communication blitz carried out in the United Kingdom which raised awareness about risks and the widespread occurrence of MSDs.

“Ontario may have perhaps some of the best expertise in the world on MSDs and we need to look to our local experts to champion this effort.”
(Researcher)
In conjunction with the discussion of alternative forms of interventions, several people indicated that supervisors and workers need training on the identification of risks and hazards, as well as the methods that could be used to eliminate or prevent them. The training had to be easy to understand and have a hands-on component; the use of videos and written material only was not recommended.

Many participants suggested that any training material should be matched to the enforcement approach. In other words, following a training session, the guidelines or regulations should make sense since both the training and the regulations would be aligned along similar themes and information. The MAC charts from the UK were cited as an example of this approach.

A suggestion was made to engage occupational health and safety practitioners (both in the public and the private spheres) more actively and effectively in any prevention strategy. The argument for engaging these practitioners included their large numbers (relative to the consultants within the health and safety associations), their "boots on the ground" positions, and their potential ability to act as change agents and promoters of innovation adoption at the local workplace level.

Several workplace parties identified the need to expand the communication and training network beyond the workplace. Specifically they thought there should be training about hazards and risk and ways to avoid them in the public school systems. There should be an attempt to reach people earlier (e.g., high school/universities) to increase health and safety awareness in general.

Some people raised the value of using social media communication tools. Some thought that electronic communities of practice could be created. Those communities could provide ongoing support and information about new innovations which could minimize risk.

The role of researchers came up again in this context. Some respondents indicated that researchers could play a critical part by creating knowledge-transfer programmes that help companies...

“[We need] a broad-based campaign that includes social marketing, education and enforcement with a view to implementing an MSD prevention program in all workplaces that includes auditing work activities and transforming the work and culture.”

(H&S System partner)
and workplace parties identify risks and their possible solutions. If researchers took on the role of communicating this information, it would provide added credibility for evidence-based practice to workers and employers.

**Evaluation**

Many of the participants noted the low level of evaluation in some of the jurisdictional approaches. They thought that a simple analysis which merely demonstrates a decrease in claims was not enough, since decreases in claims could be the result of many factors and may not be the result of effective interventions such as awareness programs, guidance materials or regulations or codes of practice.

Incomplete evaluation was seen as a major barrier to identifying the most effective approaches utilized by other jurisdictions. The role of researchers in helping to build an effective evaluation framework for future Ontario initiatives was supported.

Other ideas on evaluation also emerged, and those included using good leading indicators to help with evaluation – and not just lost-time injuries; ensuring that data was specific enough to understand the cause and develop specific solutions and ensuring that the cost of changing the system was not significantly higher than having the present system.

**Questions Emerging from the Discussions**

Despite the broad-ranging and in-depth description of the jurisdictions and the afternoon discussions, a number of questions remained largely unanswered:

- **Evaluation:** While overall claims have trended lower in the past decade in all the featured jurisdictions, the proportion of MSD claims has remained relatively constant – and the costs for individual MSD claims has increased. This is despite very different MSD prevention/intervention strategies in the various jurisdictions. What would be the explanation for this, and could a careful evaluation of the jurisdictional programs help enlighten us?

- **Specific needs:** What kind of support can be provided to small business?

- **Workplace risk assessment:** Should all tasks be subject to risk assessment? Who should be responsible for conducting these assessments?

- **What is the role of inspectors:** At the moment in Ontario, the Ministry of Labour inspectors inspect companies and write orders for non-compliance. Advice may be discussed but it is the responsibility of the employer to develop effective control measures for hazards in their workplace.

“We need increased employer assessments to pay for actual innovations in health and safety to reduce MSDs.”

(Workers and worker representatives)

“Ergonomics should be integrated at the design stage of workplace, equipment, job/work organization.”

(Government)
• Resources: How can inspection be effective with limited resources and thousands of workplaces?
• Importance of design: Would it be possible to create guidelines or regulations to apply to the design of equipment and tools as was described in the Australian system?

Some issues were not covered in the group discussion, although they did emerge in the small groups:
• The effectiveness of participatory ergonomic initiatives and how to encourage the widespread use of participative ergonomics.
• How to set standards and address both one-time maximum loads and repetitive loads.
• How to evaluate any change in the system in order to assess the impact of that change.

Although the focus of the day was on manual materials handling, many of the ideas that emerged from the discussion are not necessarily limited to lower back pain and manual materials handling. Many of the topics that were discussed are relevant to MSDs in general. Interestingly, and in this vein, the six themes were not out of line with the general issues facing occupational health and safety.

Closing

The Forum closed with a rousing call to arms from Elizabeth Mills, the CEO of the Workplace Safety and Prevention Services. Although Ms. Mills iterated that this conversation should be sustained, she warned that we had embarked on a difficult quest – (“We need a cultural change”), and that any future meetings and decision-making may be filled with “tension-based conversation”. Despite that, she emphasized the need for any future process to be participative and inclusive of all the workplace stakeholders. She called for a process that would be easy to understand, accessible, adaptable, and actionable (“Workplaces need to know what they should do and how to do it”), yet warned that keeping it simple is very hard and therefore it may take more time.

Ms. Mills outlined some issues that were missing from the Forum and would need to be tackled in future meetings. She saw the need to create an aligned and integrated system with common messages that will specify what we mean by risk, identify what are the high-risk sectors, define high volume vs. low risk, and define the difference between initial, medium and long-term measures.

She highlighted that the Forum had not really tackled the difficult issue of how we can help small

“Without awareness any regulation will fail.”
(Researcher)
businesses. We need to acknowledge that there will be a spike in reporting if we increase awareness of MSDs, but that can be seen as a positive indicator if the long-term outcome is a cultural change. She also noted that occupational physicians were not present at the Forum and since they are important stakeholders who help injured workers back to work, they should be included in any future discussions.

**Next Steps**

The day was very positive. It brought together some of the best minds to examine, discuss, and explore ways of moving Ontario forward, building upon the MSD Prevention Guideline, and hopefully generating ideas of how to reduce the pain and suffering of those with MSDs associated with manual materials handling. The presence of such a large diverse group, representing many workplace stakeholders, has allowed for an opportunity to provide their insight on the issue of manual materials handling and how they would like to see Ontario’s health and safety system address this issue.

The feedback that organizers have received since the Forum has emphasized that the day has generated a lot of discussion amongst the participants and their networks. The process generated innovative ideas that will help the OHS System move forward on MSD, and specifically manual materials handling prevention and can be seen as the beginning of a very positive process that can feed into the priority setting of the new Chief Prevention Officer.

Some next steps were suggested. A number of participants identified the need to have future workshops to work on details. These workshops would be smaller and more focused. They would identify key goals and principles that would guide any future policy and programs in Ontario, and discuss how, in both the short and long term, it would be possible to realize these goals.

**For More Information**


“We want] a system in which all H&S stakeholders (e.g. MOL, WSIB, CSA, Healthcare, unions, employers) work together to prevent MMH injuries while using newly formed MMH guidelines which see all of the aforementioned stakeholders coupled with equipment manufacturers and designers using these guidelines to help prevent injury. The guidelines need to be flexible yet still effective.”

(Researcher)
can be accessed from the CRE-MSD website at the link above. It is a living document, and if you are aware of other resources, you can post their links to the CRE-MSD public forum: r2P (Research to Practice), (http://www.cre-msd.uwaterloo.ca/public_forums.aspx?g=posts&m=52&#post52) or email them to Betina Butler (bbutler@uwaterloo.ca).

An overview of Canada’s different provincial approaches to ergonomics and some interesting resources can be found on the CRE-MSD website at: http://www.cre-msd.uwaterloo.ca/Legislation_Regulations.aspx.

The Ontario System

The enforcement of ergonomics by Ontario’s Ministry of Labour field staff is carried out by over 400 inspectors and nine ergonomists. Orders for assessments, worker training, controlling risks such as adapting workstations or providing mechanical equipment, etc. are issued under several sections such as 25(2)(a), 25(2)(h) of the Occupational Health and Safety Act (OHSA). In addition, orders are issued under various related regulations, such as safe handling of materials under the Industrial Establishments, Healthcare, Construction and Mining regulations,

The inspectors go to workplaces proactively and reactively in response to work refusals, injuries, incidents and complaints. The nine MOL ergonomists provide professional support to the inspectorate. In addition to supporting the inspectorate, they also undertake proactive inspections and provide advice to workplace parties. MOL health and safety programs (Industrial, Healthcare, Construction and Mining) consider ergonomics in their sector planning, and ergonomists assist each program. Inspectors focus mostly on enforcement and provide limited advice, but employers are referred to the MOL’s partners, the health and safety associations who consult with the workplaces on prevention and control strategies.

The four Ontario health and safety associations, under the banner of Health and Safety Ontario, have a common website on musculoskeletal disorders that provides resources to workplace parties, and links to their sector-specific ergonomic websites at: http://healthandsafetyontario.ca/Resources/Topics/MSDs.aspx. The Occupational Health Clinics for Ontario Workers (OHCOW) and the Workers Health and Safety Centre (WHSC) are active in consultation with workplaces,

“[We need] a collaborative process where labour and management work together on a process that has workers’ health and full employment as the goal.”
(Researcher)
education and training: [http://www.ohcow.on.ca](http://www.ohcow.on.ca) and [http://www.whsc.on.ca](http://www.whsc.on.ca).


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