

Prevention of MSD in the Transportation Sector: A Collaborative Research Approach

Richard Wells

University of Waterloo, and
Centre of Research Expertise for the Prevention of Musculoskeletal
Disorders, Ontario, Canada



CRE-MSD receives support from
the Workplace Safety and
Insurance Board of Ontario,
Research Advisory Council



Occupational Health and Safety Prevention Research

The Ontario Context

- Labour falls with the Provincial jurisdiction with a relatively small Federal presence in occupational health (no “NIOSH”).
- Recognition of the need to harness the research capability of universities and apply it to occupational health
- Small amount of funding from provincial workplace compensation agency to create Centre of Research Expertise for the Prevention of Musculoskeletal Disorders (CRE-MSD), a network of researchers, workplaces and workplace stakeholders

www.cre-msd.uwaterloo.ca



CRE-MSD
Centre of Research
Expertise for the
Prevention of
Musculoskeletal Disorders

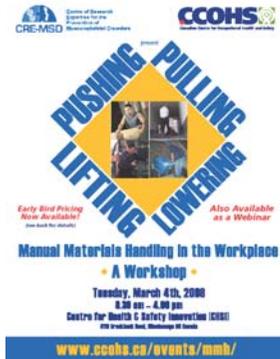
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Centre of Research Expertise for the Prevention of Musculoskeletal Disorders

Activities

Workshops and Conferences:



Starter Grants:

Stakeholder Interactions:



Build Research Capacity:



Internships:

Web Site:



Why Transportation?

Pull...

- **New Provincial and Federal emphasis on MSD prevention**
- **Transportation sector had a high lost time injury rates (incl MSDs)**
- **Sectoral Health & Safety Association wanted answers for clients**
- **Questions about the relevance of existing knowledge on and practice of MSD prevention**
- **Few efforts in North America to develop knowledge and practice on MSD prevention in the transportation sector**



University of Waterloo

McMaster University

Western

YORK UNIVERSITY

UNIVERSITY OF WINDSOR

UNIVERSITY OF GUELPH

Queens

UNIVERSITY OF TORONTO

UNIVERSITY OF OTTAWA

UNIVERSITY OF REGINA

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Transportation Sector and MSDs?

Their questions...

- What are MSDs?
- Are MSDs really connected with work?
- Although our MSD lost time claims are high, we don't think much can be done about them
- Motor vehicle accidents and load safety are key issues
- We have an aging workforce; how can we keep them at work
- How can we return people to work?
- How can we increase the pool of good applicants?
- Our sector is different and solutions from other sectors don't apply



Evaluation, the key step

E.g. Do different tarping methods offer advantages?

Fall from heights ✓

Slips and Trips ✓

Manual

Cardio-vascular demand ✓



Rack and Tarp

Productivity ✓

Spinal loads ✓



Strength required ✓



Muscle activity ✓

Slider

Driver's assessments ✓

Posture ✓/0



Deliverables

Structure of Recommended Countermeasures:

- **Provincial/Federal Regulations + Compensation Policies and Practices**
 - *E.g., working hours and breaks, compensation policies*
- **Sectoral Transportation Association + Health and Safety Associations**
 - *E.g., dissemination of MSD awareness, recommended practices*
- **Manufacturers of trucks and equipment**
 - *E.g., cab and seat design, entry and egress systems, tarping and loading systems*
- **Customers**
 - *E.g., provision of adequate docks and facilities*
- **Transportation Companies**
 - *E.g., equipment purchasing, yard equipment and condition, maintenance*
- **Drivers**
 - *E.g., footwear, loading and unloading strategies, equipment choices, cab equipment adjustment*

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Implications for Prevention

- Awareness and legitimacy of MSDs
 - *Awareness and understanding needed*
- MSD risk factors in multiple body areas. High force activities, MMH, seating and WBV common
 - *Congruent with reviews presented here*
- Adaptation of general principles to sectors and sub-sectors is important
 - *Demonstration projects and detailed support materials*
- The collaborative process addressing MSD prevention uncovered many system level factors that are likely key to change
 - *System level analysis and solutions indicated:*
 - +ve: potential for larger effects with multi-component approaches?*
 - ve: more complex analysis and solutions?*
- MSD prevention is intimately connected to other key business and health issues
- *(Positive) effects on multiple business and health issues?*

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