

Musculoskeletal Injuries/Disorders (MSIs/MSDs) Mapping Harmonization in Canada

***Submitted to the Canadian Association of Administrators of Labour Legislation
Occupational Health and Safety Committee (CAALL-OHS)
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1.0 Executive Summary

A committee led by the Ontario Ministry of Labour and the Newfoundland & Labrador OHS Division of ServiceNL was struck to help harmonize how jurisdictions map injury data for ergonomics-related MSIs/MSDs. The goal is to have consistency in mapping practices where these types of injuries are concerned. A majority of the country's jurisdictions participated on the committee, and the resulting proposed data set is supported by the majority of participants. A proposed set of injury codes for ergonomics related MSIs/MSDs is submitted by the committee in this document. Future use of the codes by the Association of Workers' Compensation Boards of Canada (AWCBC) and other jurisdictions is recommended.

2.0 Background

In 2016, a concern was brought forward to CAALL-OSH from Ontario and Newfoundland regarding the fact that there was no consistent approach across jurisdictions with respect to how MSIs/MSDs are being mapped from compensation boards' and commissions' injury data.

The MSIs/MSDs in question refer to the types of injuries which are caused by specific ergonomics-related hazards, such as force, awkward or sustained postures, repetition, vibration, and contact stress. They do not refer to injuries of the musculoskeletal system that were the result of a slip, trip or fall, contact with or struck by, violence, vehicle collision, etc. Therefore, not all MSIs/MSDs would be considered to be sprains or strains, and not all sprains or strains would be considered to be MSIs/MSDs. Approaches to prevent ergonomics related MSI/MSDs are varied and are almost always supported with before-and-after data showing the number of MSI/MSDs incurred. The information on MSI/MSDs is based on data pulled from agencies such as the AWCBC or individual boards and commissions.

As a result of the discussion at CAALL-OSH, there was interest to develop mapping criteria that could be used as a national mapping strategy for MSIs/MSDs. This would allow for consistent and accurate reporting and analysis and for a better targeting of MSI/MSD initiatives across the country.

The ergonomics leads in Newfoundland and Labrador (Linda Sagmeister) and Ontario (Brian McInnes) co-chaired this project and reached out to all jurisdictions in Canada to see if there was interest in developing a national mapping strategy for MSIs/MSDs and to develop a mapping strategy in collaboration with the other jurisdictions. The goal of the project was to harmonize how jurisdictions across Canada map MSI/MSD data from compensation boards' injury data so there is consistency between them.

3.0 Process

Linda and Brian started by performing a cross jurisdictional review to determine if/how jurisdictions define what a MSI/MSD is and which jurisdictions would be interested in participating in the project. From the responses it was clear which jurisdictions were using a MSI/MSD mapping strategy, that there were significant differences between those strategies, and which jurisdictions were interested in participating in the project to develop a national mapping strategy. Based on information gathered,

there are currently 7 jurisdictions across Canada that have a mapping strategy for some sort of MSI/MSD definition, and all mapping strategies are different from one another.

Contact was made with all jurisdictions, however not all were interested in or able to participate in the project. The following jurisdictions attended at least one meeting: Federal, British Columbia, Alberta, Yukon, Northwest Territories, Saskatchewan, Manitoba, Ontario, New Brunswick, Nova Scotia, and Newfoundland and Labrador. The AWCBC and members of the National Work Injuries Statistics Program (NWISP) participated in the committee as well.

Three meetings were held with the participants in order to discuss the project and its goals, share what each jurisdiction is currently doing surrounding MSI/MSD mapping, come up with a national mapping proposal, and to finalize the national mapping strategy.

4.0 Outcome and participation

The end result of the project was a proposed national MSI/MSD mapping strategy that was largely supported by the jurisdictions who participated in the last meeting that discussed the proposed strategy. Alberta, Manitoba, Ontario, New Brunswick, Nova Scotia, and Newfoundland and Labrador all supported the adoption of the new mapping strategy. British Columbia was the only jurisdiction that had a concern with adopting the new strategy, as it is very different from their current methodology. They did however indicate that they will be investigating the possibility of using the new strategy. Both AWCBC and NWISP are supportive of the proposed mapping strategy.

All jurisdictions that did not participate in the last meeting were contacted in order to determine their thoughts on the proposed mapping strategy. Saskatchewan and Prince Edward Island were both supportive of the proposed strategy. The other jurisdictions did not respond.

Of the 7 jurisdictions that had a mapping strategy, five of those jurisdictions looked at both Nature of Injury and Event/Exposure, one looked at only Event/Exposure, and one looked at only Nature of Injury. The members of the project decided to base the strategy on including both Nature of Injury and Event/Exposure. The strategy uses an “and” algorithm where in order for an injury to be classified as an MSI/MSD, the claim has to be a specified injury (Nature of Injury) AND be caused by a specific event or exposure. The types of injuries and events/exposures that were selected to map to a MSI/MSD are provided at the end of this report.

5.0 Summary

In summary, most jurisdictions are supportive of a standardized mapping strategy for use when identifying MSI/MSD claims. The proposed mapping strategy will be used by several jurisdictions as an in-house measure for helping to inform prevention related work activities. Most jurisdictions would observe a change in percentage of MSI/MSD claims, for the most part a decrease.

It is clear that the definitions of MSI/MSD claims which are currently used by the jurisdictions in the country vary. The proposed mapping strategy is recommended in order to assist with consistency across the jurisdictions when they perform their “data pull” to identify the extent to which they are experiencing MSI/MSD claims. The information will lend itself to a more harmonized approach to identifying and controlling ergonomics related claims and hazards in the workplace.

6.0 Implementation and recommendations for the future:

Through discussion with AWCBC, it has been confirmed that they will now be referencing the MSD mapping strategy (Nature of Injury and Event Description codes together) as recommended in this submission, when providing information to those who request MSI/MSD data. They have also shared the new mapping strategy with all of the coders across the country. The AWCBC and NWISP have announced that they will lead future reviews concerning how MSI/MSD data is mapped and that this final report will be placed on the NWISP committee online forum.

It is suggested that CAALL-OSH provide this information to jurisdictions and that this final report and mapping strategy be posted on the CAALL-OSH website.

A follow up with jurisdictions in the future should also occur, regarding the effects and experiences of the change of mapping practices for MSIs/MSDs.

Appendix: Codes recommended for mapping MSI/MSD

(Event or Exposure Description to be used in conjunction with Nature of Injury Description codes)

Accident Type Code	Event or Exposure Description
5000	Rubbed or abraded by friction or pressure, uns.
5100	Rubbed or abraded by kneeling on surface
5200	Rubbed or abraded by objects being handled
5900	Rubbed or abraded by friction or pressure, n.e.c.
6000	Rubbed, abraded, or jarred by vibration, uns.
6100	Rubbed, abraded, or jarred by vehicle or mobile equipment vibration
6200	Rubbed, abraded, or jarred by other machine or equipment vibration
6900	Rubbed, abraded, or jarred by vibration, n.e.c.
9000	Contact with objects and equipment, n.e.c.
20000	Bodily reaction and exertion, uns.
21000	Bodily reaction, uns.
21100	Bending, climbing, crawling, reaching, twisting
21300	Running-without other incident
21400	Sitting
21600	Standing
21700	Walking -- without other incident
21900	Bodily reaction, n.e.c.
22000	Overexertion, uns.
22100	Overexertion in lifting
22200	Overexertion in pulling or pushing objects
22300	Overexertion in carrying, turning, or wielding objects
22400	Overexertion in throwing objects
22900	Overexertion, n.e.c.
22901	Overexertion in lifting and turning (object)
23000	Repetitive motion, uns.
23100	Typing or keyentry
23200	Repetitive use of tools
23300	Repetitive placing, grasping, or moving objects, except tools
23900	Repetitive motion, n.e.c.
24000	Sustained viewing
25000	Static posture without the application of force to an object
26000	Static posture with the application of force to an object
29000	Bodily reaction and exertion, n.e.c.
29001	Bodily reaction and exertion in lifting (object) and turning (body)

Nature of Injury Code	Nature of Injury Description
0	Traumatic injuries and disorders, uns.
2000	Traumatic injuries to muscles, tendons, ligaments, joints, etc., uns.
2001	Soft Tissue Injury (Traumatic)
2100	Sprains, strains, tears, uns
2101	Rotator cuff tear
2102	Meniscal Tear
2190	Sprains, strains, tears, n.e.c
2900	Traumatic injuries to musculoskeletal system with inflammation of muscles, tendons, ligaments, joints, etc., uns.
2901	Traumatic bursitis
2902	Traumatic tendonitis
2903	Traumatic epicondylitis
2904	Traumatic capsulitis
2905	Traumatic ganglion
2906	Traumatic synovitis
2907	Traumatic tenosynovitis
2908	Traumatic myositis
2909	Traumatic injuries to musculoskeletal system with inflammation of muscles, tendons, ligaments, joints, etc., n.e.c.
2910	Traumatic Arthropathies, arthritis, polyarthritis, ankylosis of the joint
2911	Traumatic dorsopathies, unspecified
2912	Traumatic dorsalgia
2913	Traumatic cervicalgia
2914	Traumatic sciatica
2915	Traumatic lumbago
2916	Traumatic disc disorders, unspecified
2917	Traumatic herniated disc
2918	Traumatic Intervertebral disc syndrome
2919	Traumatic disc disorders, n.e.c.
2920	Traumatic dorsopathies, n.e.c.
2921	Traumatic minor intervertebral disorders (MID)
2922	Traumatic facet syndrome
2923	Traumatic radiculitis
8200	Sprains or strains and bruises
8900	Other combinations of traumatic injuries and disorders, n.e.c.
9700	Nonspecific injuries and disorders, unspecified
9720	Back pain, hurt back
9730	Soreness, pain, hurt, except the back
9780	Multiple nonspecific injuries and disorders
9790	Nonspecific injuries and disorders
12410	Carpal tunnel syndrome
12490	Other disorders of the peripheral nervous system, n.e.c.
12900	Nervous system and sense organs diseases, n.e.c.
13710	Raynaud's syndrome or phenomenon, vibration induced white finger disease
13800	Diseases of the veins, lymphatics, uns.
13810	Varicose veins
13890	Diseases of the veins, lymphatics, n.e.c.
15300	Hernia, uns.
15310	Inguinal hernia
15320	Hiatal hernia
15330	Ventral hernia
15390	Hernia, n.e.c.
17000	Musculoskeletal system and connective tissue diseases and disorders, uns.
17100	Arthropathies and related disorders (arthritis)
17200	Dorsopathies, uns.

17201	Dorsalgia
17202	Cervicalgia
17210	Sciatica
17220	Lumbago
17230	Disc disorders, uns.
17231	Herniated disc
17232	Intervertebral disc syndrome
17233	Diskarthrosis
17239	Disc disorders, n.e.c.
17290	Dorsopathies, n.e.c.
17291	Minor intervertebral disorders (MID)
17292	Facet syndrome
17293	Radiculitis
17300	Inflammation and irritation of joints, tendons, muscles and connective tissues, uns.
17310	Bursitis
17320	Synovitis
17330	Tendonitis
17340	Tenosynovitis
17350	Ganglion/cystic tumour
17370	Sprains, strains, tears (Repetitive)
17390	Inflammation and irritation of joints, tendons, muscles and connective tissues, n.e.c.
17391	Rotator cuff syndrome
17392	Dupuytren's contracture
17393	Epicondylitis
17394	Capsulitis
17395	Trigger finger
17400	Osteopathies, chondropathies, acquired deformities, uns.
17490	Osteopathies, chondropathies, acquired deformities, n.e.c.
17900	Musculoskeletal system and connective tissue diseases and disorders, n.e.c.
17901	Fibromyalgia, fibrositis, myofascitis
41200	Symptoms involving nervous and musculoskeletal systems, uns.
41210	Spasms or tremors, n.e.c.
41230	Eye strain
41280	Multiple symptoms involving nervous and musculoskeletal systems
41290	Symptoms involving nervous and musculoskeletal systems, n.e.c.