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Occupational Disease Prevention Strategy Dermatitis

Occupational Health Clinic – St Michael's Hospital

Irena Kudla

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OCCUPATIONAL DISEASE PREVENTION STRATEGY

DERMATITIS

BACKGROUND

Definition

Occupational skin disease (OSD) is one of the most common occupational diseases in many jurisdictions.[1] The most common types of OSD are irritant contact dermatitis, where workplace irritants such as wet work, detergents, alkalis, solvents and friction cause a direct toxic effect on the skin and allergic contact dermatitis which involves a Type IV immune response to skin sensitizers such as metals, resins and preservatives.[1] Less common occupational skin disorders include: occupational contact urticaria, folliculitis/acne, infections, cancer, hyperpigmentation and vitiligo.[1]

Causes

There are many identified irritants and allergens that can cause OSD. Common irritants include: wet work, soaps and detergents, solvents, food ingredients and cutting oils and fluids.[1-3] Common occupational allergens include: nickel, chromium, epoxy, acrylates, formaldehyde resins, rubber additives, paraphenylenediamine.[1-3]

These causative agents may be found in many industries and jobs. Industries and jobs that more commonly have OSD include: agriculture, beauticians, chemical workers, cleaners, construction workers, cooks and caterers, electronics workers, hairdressers, health and social care workers, machine operators, mechanics, metalworkers and vehicle assemblers.[1] The European Union and Australia have also prioritized OSD from the exposure perspective citing wet work as the priority.[4-6]

Other factors may contribute to the causation of OSD. In particular, a past or current history of eczema are associated with risk factors. Those workers with eczema may have a defective skin barrier that increases the likelihood of irritation or sensitization.[1]

Burden of Disease

The annual incidence of OSD is reported to be between 5.7 and 101 cases per 100,000 workers per year.[1]

OSD is often chronic with 50% of workers continuing to report symptoms after 15 years[7]. Not only is OSD common, it also results in an increased risk of job loss and prolonged sick leave and may also negatively impact quality of life, daily function, healthcare utilization and work as has been demonstrated in Ontario workers with OSD[8-11.]

The economic burden of OSD is considerable and includes: medical costs (treatment, medication, physician visits; medical costs in Europe for occupational hand eczema are estimated at €11 billion per year), direct non-medical costs (travel, informal care, time costs, out-of-pocket expenses, etc.) and indirect non-medical costs (loss of productivity due to reduced performance at work, sick leave, re-training, compensation).[7,12,13] The total economic burden of dermatitis in U.S. workers is estimated at 11.5 billion (direct costs: 8.4 billion; lost productivity: 3.2 billion) and the primary sectors affected are: agriculture, forestry and fishing, mining, construction, manufacturing, wholesale and retail trade, transportation, warehousing and utilities.[13]

Prevention

Primary prevention is the desired strategy. Primary prevention includes the hierarchy of controls including elimination or substitution, engineering controls, administrative controls and personal protective equipment. For secondary prevention, although screening and surveillance are theoretically possible, there is little in the literature regarding these strategies. Tertiary prevention involves medical management and appropriate workplace interventions using primary prevention strategies as appropriate.

Systematic Reviews

The first systematic review of prevention for occupational contact dermatitis was published in 2005.[14] Recently, there have been three systematic reviews of prevention related to occupational skin disease. These include: a Cochrane Review on interventions for preventing occupational irritant contact hand dermatitis; another systematic review of prevention programs for hand dermatitis; and finally, a review leading to evidence-based guidelines for the prevention, identification and management of occupational contact dermatitis and urticaria.[1,3,15] While each review noted the limited number of high quality studies and recommended further evaluation of prevention programs, there was general agreement that there was evidence for comprehensive programs that include: education, skin protection measures including use of cotton liners with gloves, pre- and post- work creams, moisturizers, etc. While reduction of exposure to the agent is the first priority, there were no studies cited in the reviews regarding this strategy. An excellent book summarizing an approach to prevention is by Sithamparanadarajah.[16]

Current State

While we now have a reasonable evidence base for prevention, there is little known about the actual state of prevention practices in workplaces. One source of information about OSD prevention is patients from the Occupational Health Clinic at St Michael's Hospital. Several studies of workers being assessed for OSD conducted over the past 10-12 years have demonstrated that a significant portion of workers report inadequate training, both for general occupational health and safety and skin prevention in particular. In 2000, in a study of 100 workers being assessed for contact dermatitis, 45% reported training related to gloves and 34% reported skin specific training.[17,18] A small study conducted in 2005 found that only 12% reported skin specific training.[19] A study conducted in 2010-2011 of 105 workers being assessed for contact dermatitis found 44% reported training related to gloves at work.[20]

PREVENTION STRATEGY

Contact dermatitis can be prevented using traditional occupational hygiene measures based on the hierarchy of controls. These controls are addressed in detail in *Objective 1* of this document. Improved understanding of where to implement these controls and determine the effectiveness of new primary preventative efforts can be achieved through surveillance programs (*Objective 2*). All levels of prevention (primary, secondary and tertiary) should make use of the best available evidence (*Objective 3*). To date, primary preventative efforts have been lacking. The main barriers to primary prevention for contact dermatitis seem to be: 1) lack of awareness; and 2) lack of incentives (financial, regulatory). Lack of awareness can be addressed through education of relevant stakeholders. This is discussed in *Objective 4* of this document. Educational programs and enforcement of regulations for contact dermatitis (recommended) should be targeted (*Objective 5*). Recommendations for increased regulation and other incentives are discussed in *Objective 1* and *Objective 6* respectively.

Objective 1: Focus on reducing harmful exposures

Approaches to reducing exposure include: elimination or substitution of harmful substances (irritants, allergens), technical measures (eg., enclosure of the process, automation), organization (eg., distribution of work tasks to decrease duration of exposure), skin protection program to maintain skin barrier function, personal protective equipment and screening.

Elimination and substitution are not always feasible, however, there are excellent examples of the effectiveness of such primary prevention methods, such as: 1) the introduction of powder-free gloves which limits the amount of leachable protein in latex gloves; 2) chromate-free cement; and 3) elimination of aldehyde disinfectants (eg., glutaraldehyde). Such measures have been introduced in various countries of the European Union.

Some workers (eg., healthcare, service, automotive sectors) are at an increased risk of developing occupational contact dermatitis because of exposure to wet work. Wet work includes activities where workers: 1) perform the majority of their work (i.e., regularly > 2 hours/day) with their hands in a wet environment; 2) must wash their hands frequently or intensively; and 3) wear protective gloves with occlusion effects (accumulation of heat and moisture) for a corresponding period (the "liquid-tight" effect of protective gloves prevents the evaporation of perspiration which leads to swelling of the skin with increased duration that gloves are worn thus reducing the skin's barrier effect; because the skin is pre-damaged in this way, it becomes easier for irritants, potentially sensitizing substances or infectious agents to penetrate the skin).

With regards to the prevention of dermatitis caused by wet work, the most effective prevention measures are those which aim to reduce at the source or preferably completely eliminate the exposure to wet work caused by occupational processes entirely or provide engineering alternatives for wet work tasks, such as automated cleaning processes for machines. The next preferred set of control measures comprises those which change the way wet work tasks are carried out (ie., changes to work practices). For example, implementation of "no-touch" techniques for handling wet objects – such as the use of tongs or baskets and crates to raise products out of liquids. The introduction of administrative time restriction and task rotation control measures are other wet work exposure controls. These controls arrange for wet work tasks to be distributed amongst a group of workers over time so that no one worker is excessively exposed. An example of this might be the distribution of a task such as hair washing amongst workers in a hairdressing salon, so that this duty is carried out by more than one worker.

Another control measure is the development and implementation of a workplace "skin protection program". A skin protection program would include elements such as the workplace supply of mild hand cleansers, as well as the provision of after-work moisturizers and (if appropriate) suitable pre-work ("barrier") creams. The skin protection program should be easy to understand and accessible to all employees. Warning signs should be visible to employees with potential exposure.[21,22] The provision of ongoing education and training about the appropriate use of moisturizers and barrier creams is another important wet work control measure.[?]

The least effective, but most commonly utilized control measure are those which make use of personal protective equipment (PPE) often in the form of occlusive gloves. As discussed above, the wearing of occlusive gloves may be regarded in itself as wet work exposure. If occlusive gloves are used for long periods, it is recommended that thin cotton gloves are worn under the outer gloves to address the potential damage to the skin from excessive sweating.

Health and safety laws prescribe that PPE including chemical protective gloves and coveralls, is the last line of protection. The reasons for this include:

- PPE can only protect the wearer. Control measures at source protect all those in the area
- If the PPE is sized, selected or used incorrectly, or is badly maintained, the wearer is unlikely to receive adequate protection;
- PPE is uncomfortable to wear and is an intrusion into normal activities;

- PPE may interfere with the work. The interference may be due to factors such as incorrect size, inappropriate shape, inappropriate thickness (causing loss of dexterity) and incompatible material from which PPE is made;
- Contaminated PPE may present one or more risks to the wearer and third parties such as waste handlers and family members. In the case of family members, risk arises when the contaminated PPE is taken home;
- The extent of protection achieved depends on good fit and attention to detail.

When PPE is used as the last resort, it is the last line of defence between the user and harm. If it does not work for any reason, the user will be exposed to the hazard. This is why PPE must be selected, used and maintained and stored correctly.

The situations where employers are required to provide PPE for dermal exposure protection include:

- Where dermal exposure risks remain (residual risk) even after implementing *reasonably practicable* controls at source (eg., process, engineering and administrative) to ensure adequate safe working distance (SWD) between the chemicals and the skin;
- Short-term or infrequent dermal exposures where implementing controls at source to establish suitable SWD is not reasonably practicable;
- As an interim measure, while other control measures are being put in place to achieve adequate dermal exposure control;
- For dealing with emergency work that cannot wait until suitable controls at source are put in place;
- To deal with temporary failure of control where other means of controls are not reasonably practical;
- Emergency rescue by trained personnel

Exposure of the hands to chemicals is an important and significant contributor to total skin exposure. It has been shown that the exposure of the hands accounts for between 50 and 90% of total skin exposure. To mitigate this problem, it is common practice to provide gloves rather than establishing short working distance between the skin and the contaminants by other measures. This could be the reason that chemical protective gloves are one of the most widely used forms of PPE. Gloves are used for providing localized protection to the skin from irritant, allergic and corrosive substances and/or protection against chemical uptake through the skin.

Many factors affect the performance of chemical protective gloves including:

- glove factors (permeation, penetration and degradation)
- mechanical and physical factors (stretching, flexing, tearing, etc.)
- glove material
- dexterity, grip and comfort
- internal contamination (due to various incorrect use patterns)
- temperature and humidity (can affect structure and integrity of some glove materials)
- glove-related skin problems (materials used in their manufacture may cause irritation or allergy)

Barriers to implementation of the above identified preventative measures are lack of awareness and/or lack of incentives (financial, regulatory). Educational efforts targeted at employers and workers will help, but may not be fully effective in the absence of regulatory requirements specifically addressing occupational skin disease. Development of legislation is a medium to long term objective in the overall disease prevention strategy, while educational efforts with the focus being on technical measures, organization, skin protection program and use of personal protective equipment could be short term objectives. Consideration could be given to focusing on controlling skin exposure to wet work. For all, there exist materials and regulations that could be used to develop Ontario specific materials and legislation.

From an educational standpoint, the Health and Safety Executive in the United Kingdom has an extensive body of literature directed at employers and workers on implementation of prevention strategies, including user friendly guides (www.hse.gov.uk/skin) as does the European Agency for Safety & Health at Work (Occupational Skin Disease and Dermal Exposure in the European Union (EU-25): Policy & Practice Overview) (Appendix 1), the Australian Safety & Compensation Council (Appendix 2) and the BauA German Federal Institute for Occupational Safety & Health (Appendix 3). Educational materials designed for both employers and workers (based on the abovementioned sources) are currently being used at the Occupational Health Clinic at St. Michael's Hospital, and this information could form the basis for educational outreach to the key players in OH&S in Ontario (MOL and HSAs).

There are currently no comparable occupational exposure limits (OELs) for dermal exposures as for inhalation exposures. From a regulatory perspective, the simplest approach that could be taken in Ontario would be to do the same as has been done in various countries of the European Union and Australia and adopt a guideline for the prevention of occupational dermatitis caused by wet work. Ontario could also adopt the use of the newly revised NIOSH skin notations (refer to Appendix 4: NIOSH Current Intelligence Bulletin 61: A Strategy for Assigning New NIOSH Skin Notations) and corresponding Skin Notation Profiles (see Appendix 5 for example).

Objective 1 - Key Actions.

Short term

1. Collect and review available resources on occupational skin disease, hazards generally and wet work specifically and their control using technical measures, organizational measures, development of a skin protection program and personal protective equipment controls. Such resources include tools developed by the BauA German Federal Institute of Safety & Health, Health and Safety Executive (HSE) in the UK, the Australian Safety & Compensation Council and the Occupational Health Clinic at St. Michael's Hospital.
2. Review NIOSH skin notations and consider if they could be used as a guide in Ontario for organizations involved in OHS system.
3. Identify programs in place in other jurisdictions (eg., Germany – hairdressing) that could be trialed in Ontario
4. Review regulations focused on skin exposures in other jurisdictions.
5. Identify needs and gaps and develop a plan for an educational program for frontline OHS professionals including those at HSAs, MOL. CREOD has recently received approval from the WSIB Research Advisory Committee to carry out this work.

Medium Term

1. Deliver educational materials to various organizations identified in the needs assessment process such as HSAs.
2. Deliver educational program to Ministry of Labour inspectors on occupational skin disease and its risk factors (as above). Inspectors should issue warnings if exposure to wet work is identified as a cause for concern (using the General Duty Clause until a guideline for wet work is developed) and target the appropriate sectors (manufacturing, service, healthcare).

Long Term

1. If NIOSH skin notations (and corresponding skin notation profies) are found to be useful, implement their use in Ontario. Ministry of Labour to consider current guidelines on wet work implemented by the jurisdictions noted above.

Objective 2: Establish appropriate reporting and surveillance mechanisms

Establishment of surveillance and reporting systems for OSD is possible, but may not be a cost effective intervention in the broader perspective of the Occupational Disease Prevention Program. This is because, in contrast to many exposures of concern for occupational disease, exposures resulting in OSD are ubiquitous across many industries. If surveillance on a broad scale were to be undertaken, expansion of CAREX (currently chemically based and cancer specific) to include dermal sensitizers could be considered.

Surveillance on a smaller scale, for example, at the level of individual workplaces, could be feasible and recommended as part of workplace specific health and safety programs. Occupational contact dermatitis (OCD) is one of the most common occupational diseases. Sectors with higher prevalence of OCD include manufacturing and healthcare. The earlier the disease is diagnosed the better the outcomes. Screening would seem to have the potential to identify workers at an early stage and implement treatment and workplace interventions to improve outcomes.

Though screening has been suggested for OCD, there are no published reports in the literature related to screening. It seems timely to test the feasibility of screening for OCD. An important consideration is the capacity of the workplace to conduct screening. In a worksite with an occupational health centre, this should be reasonably easy. However, some industries such as construction present challenges since worksite clinics are not always possible. Thus there is a need to assess the feasibility of a simple screening tool in the workplace setting. CREOD is preparing a proposal to examine screening and two sectors have been selected with contrasting worksite occupational health services to assess whether the tool is feasible in a variety of settings.

The UK HSE has developed informational material (www.hse.gov.uk/skin) for both the employer and workers to check for early signs of dermatitis. The expressed intent of screening for secondary prevention is to: 1) identify susceptible workers (eg., those with pre-existing skin problems (eg., psoriasis, eczema); 2) identify work-related skin disease at an early and therefore still reversible stage; and 3) monitor the effectiveness of preventative efforts (control measures).

Objective 2 - Key Actions:

Short Term

1. Collect and review available surveillance tools (similar to those used by the HSE in the United Kingdom) with a view to recommending those that could be used in Ontario workplaces.
2. Review the experience with screening in other jurisdictions.
3. Plan a feasibility study for OSD screening in workplaces.

Medium Term

1. HSAs in conjunction with the MOL should develop a tool for employers to assess exposure to wet work in targeted sectors (manufacturing, service, healthcare). Occupational health clinics (St. Michael's Hospital & OHCOW) could report annually the number of OSD cases referred.

Long Term

1. HSAs in conjunction with the MOL should develop a tool for employers to assess if workplace screening and surveillance programs are found to be feasible and of value, convene a process to consider the use of surveillance and screening for occupational disease.
2. A centralized surveillance database may not be feasible or necessary (high risk occupations and industries are already well known) though expansion of CAREX

(currently chemically based and cancer specific) to include dermal sensitizers could be considered

.**Objective 3: Ensure maximum use of best evidence**

High priority areas for targeted intervention to reduce OSD are generally well known and, for the most part, the groundwork regarding evidence for and implementation of control strategies has already been done by countries within the European Union. Use of data and guidance information from these countries is sufficient to ensure that the best evidence is being utilized.

Operationalising primary and secondary prevention strategies requires stakeholders to be knowledgeable about OSD. This process requires capturing the evidence and delivering it to HSAs who in turn will deliver it to employers and workers through effective knowledge transfer and exchange. This can be accomplished through the HSAs (in consultation with CREOD) by the provision of guidance documents and other educational tools, as well as through training programs for workers and health and safety representatives. Occupational hygienists and inspectors must also be trained with regards to occupational skin disease awareness including current methods/tools available for skin exposure assessment (eg., swipe samples). Education of healthcare providers is of the utmost importance to address informal surveillance for the condition by general practitioners and other providers. This will facilitate identification of cases and increase reporting, as well as referral to specialized centres for more detailed assessment when appropriate.

With respect to research, to date most OSD research in Canada has focused on diagnosis and awareness of OSD. Past research has also considered educational tools for workers and employers (skin exposure audit). Funding for future research could place an increased focus on prevention, such as the development of intervention studies for specific sectors. CREOD has received approval to carry out a study funded by Bridging the Gap to assess the needs of front-line HSA consultants and then through a multi-stakeholder process, develop a plan to address gaps.

Objective 3 - Key Actions:

Short Term

1. Facilitate linkages between OSD researchers and the OHS system partners that use prevention information. These include primary prevention (eg HSA consultants, MOL inspectors, occupational safety and occupational hygiene practitioners to develop effective and evidenced-based guidance documents and educational tools for HSAs, employers and workplaces.
2. Educational tools already developed by the European Union could form the basis for tool development (as they are based on best evidence) and tailored to specific industry sectors as appropriate.
3. Continue to work with the provincial medical schools to ensure that undergraduate medical training includes an appropriate level of occupational disease education in the curriculum including training on OSD (Occupational Health Champions Program).
4. Work with occupational health and safety training programs in Ontario (e.g. Ryserson, UofT) to ensure they include appropriate content. The MOL should consider support of occupational health and safety training programs.

Medium and Long Term

1. Work with the Ministry of Health and Long-term Care to include occupational histories in the electronic medical records including questions about OSD.

Objective 4: Improve education and awareness

With respect to awareness and knowledge about OSD, a recent study by CREOD of OSSA staff and clients indicated there are significant gaps.[15] Awareness of OSD in the service sector was rated as low (18% of sector members and 8% of OSSA staff thought OSD was seen as a problem). Only 3% of OSSA staff and none of the sector members rated their knowledge of OSD as moderate to expert.

Effective prevention of OSD, as with occupational disease in general, requires improved education and awareness of stakeholders. The main stakeholders are workers, employers, healthcare providers, Ministry of Labour inspectors, the Health and Safety Associations and researchers.

These initiatives should be directed initially to sectors that have been noted as having a high incidence of OSD. These include [15]: agriculture, forestry and fishing, mining, construction, manufacturing, wholesale and retail trade, transportation, warehousing and utilities. Germany cites the service sector (hairdressers, bakers, florists, pastry chefs), construction, manufacturing and healthcare). The European Union and Australia have also prioritized OSD from the exposure perspective citing wet work as the priority.

To improve education amongst workers and employers, improved incorporation of dermal exposure hazards into Workplace Hazardous Materials Information System (WHMIS) training should be considered. WHMIS requires both *general* and *specific* hazard training of workers. General training covers such topics as: the regulations, labels, MSDSs, controlled products, symbols etc. Hazard specific training is intended to delve more deeply into preventing hazards specific to a given workplace such as: additional training for work tasks where specific hazards have been identified and the provision of specific personal protective equipment for the task, etc. For hazard specific training in particular, it would be useful to include dermal exposure hazard awareness in workplaces where it is relevant (eg., wet work in healthcare, food services, hairdressing, etc.). Also, enforceable guidelines (ie., wet work) will need to be introduced to provide a clear incentive for employers to adhere to WHMIS legislation.

Objective 4 - Key Actions:

Short Term

1. Targeted marketing through the HSAs aimed at the manufacturing, service and healthcare sectors on the existence of OSD and its prevention. Resources available from the UK HSE can be used for this purpose (www.hse.gov.uk/skin). Work is ongoing with CREOD and WSPS re awareness.
2. Identify and assemble information on available training (programs, continuing education (CE), etc.). Identify gaps in available programs. Meet with educational providers to explore delivery of programs to address gaps.
3. Encourage OHS professionals to participate in professional development courses such as those offered by the American Industrial Hygiene Association (a course in "Dermal Stress Management" via teleweb long distance learning has been offered in the past).
4. Review models in other jurisdictions e.g. EU and Germany - EUROPREVENTION CAMPAIGN 2010: HEALTHY SKIN @ WORK, EPOS (WHICH INCLUDES CAMPAIGNS AT THE NATIONAL LEVEL, EUROPEAN LEVEL (DECLARATION OF DRESDEN) (HAIRDRESSERS) AND INTERNATIONAL LEVEL (WHO GLOBAL WORKSHOP) and determine their application in Ontario.
5. Also see items in Objective 1 and Objective 3

Medium Term

1. Examine the current occupational hygiene dermal exposure assessment methodologies currently used in MOL inspections by occupational hygienists.

Long Term

1. Revise WHMIS legislation to more clearly define dermal exposures and incorporate this into hazard specific training.
2. Develop a "prevention of wet work guideline". This would strengthen the ability to update and enforce WHMIS specific hazard legislation. This guideline can be developed based on the guidelines previously developed by Germany, the UK and Australia.

Objective 5: Target high priority diseases, exposures, occupations, and industries

The number of workers exposed to dermal hazards in Ontario has not been well characterized to date, though it is well established that the manufacturing, service and healthcare sectors tend to have the most workers at risk for development of OSD. From this perspective, it would be easiest and most effective to target industries where OSD is known to be problematic rather than exposures or occupations. This can be accomplished through the HSAs; specifically the Workplace Safety & Prevention Services (WSPS) (manufacturing, farming and services) and Public Services Health & Safety Association (PSHSA)(which includes community and healthcare).

From a long term perspective, if a "prevention of wet work guideline" is developed, then OSD could be the focus of Ministry of Labour enforcement blitzes. The blitzes could focus on the manufacturing, healthcare or service industries. Inspectors could review whether the employer was providing appropriate preventive strategies in compliance with WHMIS (once WHMIS legislation pertaining to OSD and wet work is strengthened), keeping records with respect to worker skin surveillance and skin protection programs.

Objective 5 - Key Actions:

Short Term

1. Health & Safety Associations to focus educational campaigns and OSD training programs on targeted high risk industry sectors (manufacturing, services and healthcare).

Medium and Long Term

1. Make wet work the focus of a Ministry of Labour enforcement blitz targeting the manufacturing, services and healthcare sectors.

Objective 6: Promote ongoing engagement and strategic partnerships

The key stakeholders for OSD prevention are employers, workers, the Ministry of Labour, the WSIB, the HSAs, occupational health and safety professionals and researchers. Development and enforcement of a new "prevention of wet work guideline" would be the responsibility of the Ministry of Labour. HSAs would be integral for development and dissemination of information and training for OSD prevention. Employers would ultimately be responsible for ensuring compliance with the wet work guideline and WHMIS if developed or amended respectively. Employers would need to put the recommendations into practice.

Occupational health professional and physicians specializing in the area of OSD should also be considered key stakeholders with respect to partnerships for OSD prevention. This is

because they are in the best position to educate stakeholders on OSD which ultimately provides justification for preventative efforts.

In order to promote ongoing engagement and strategic partnerships for OSD prevention, it would be useful to establish a working group that includes key stakeholder representatives to discuss and make recommendations around implementation of high priority prevention initiatives. The working group could initially consider OSD prevention generally and also address compliance through a wet work guideline and updated WHMIS legislation if these are deemed appropriate. The working group could also consider targeted consultation with employers to ensure recommendations can be reasonably implemented or if there are certain exclusions that should be considered. The working group could include employers, workers, the Ministry of Labour, WSIB, HSAs, occupational health professionals, physicians and researchers specializing in OSD.

Objective 6 - Key Actions:

Short Term

1. Establish a working group consisting of key stakeholder representatives to address OSD prevention on a more general basis. This group could include employers, workers, the Ministry of Labour, WSIB, HSAs, occupatioanl health professionals, physicians and researchers specializing in OSD. The CREOD BTG has been funded, therefore, the workshop associated with the grant could be a kick-off for this group.

Medium Term

1. The working group to address legislative initiatives addressing the hazard of wet work, including the need for and ultimate structure of a wet work guideline and amendments to WHMIS to further delineate requirements (further education) for OSD.
2.

Long Term

1. If a "prevention of wet work guideline" and updated WHMIS legislation is developed, the working group could address educational programs to assist in compliance with the guideline.

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