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Credits
This document has been developed by the College & Association of Acupuncturists of Alberta (CAAA) and derived as a profession-specific summary of information contained in the five volumes of Best Practices in Occupational Health and Safety in the Health Care Industry (produced by the Government of Alberta. The complete documents can be found at http://www.employment.alberta.ca/SFW/6311.html. This document has been modified and expanded through a grant from Alberta Human Services (Workplace Health and Safety).

The CAAA recognizes and thanks the College of Traditional Chinese Medicine Practitioners and Acupuncturists of British Columbia and the College of Traditional Chinese Medicine Practitioners and Acupuncturists of Ontario for granting permission to utilize large portions of their document “Safety Program Handbook for Traditional Chinese Medicine Practitioners and Acupuncturists”, December 2012. In addition, the CAAA recognizes and thanks the Alberta College of Speech-Language Pathologists and Audiologists and the Society of Alberta Occupational Therapists for granting permission to utilize large portions of their document “Handbook of Occupational Hazards and Controls for Rehabilitation Professionals” in the creation of this document. The CAAA also recognizes and thanks the College of Hearing Aid Professionals of Alberta for granting permission to use sections of their “Handbook of Occupational Hazards and Controls for Hearing Aid Professional” in the creation of this document. The CAAA also recognizes and thanks Bryan Buell RRT, BGS, CARTA Executive Director for his encouragement and assistance with this project.

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Occupational Health and Safety Hazards and Controls for Acupuncturists

Introduction
As part of the Alberta Healthcare Initiative, a series of Best Practice documents were produced by Alberta Employment and Immigration – Workplace Health and Safety to better acquaint healthcare workers with workplace hazards and appropriate control measures. Five documents have been produced; each developed with the input of a multidisciplinary stakeholder group. The documents are available on the Alberta Human Services – Occupational Health and Safety website http://humanservices.alberta.ca/working-in-alberta/6311.html as follows:

  www.humanservices.alberta.ca/documents/WHS-PUB_bp009.pdf

- **Best Practices for the Assessments and Control of Biological Hazards, Vol. 2**

- **Best Practices for the Assessments and Control of Chemical Hazards, Vol. 3**

- **Best Practices for the Assessments and Control of Physical Hazards, Vol. 4**

- **Best Practices for the Assessments and Control of Psychological Hazards, Vol. 5**

In an effort to focus the hazard assessment and control information for specific healthcare professions, a series of short summaries of relevant information have been produced using excerpts from the five best practice documents. Readers are directed to the original documents for more details and more comprehensive information. Please note that hyperlinks are provided to reference documents for the convenience of the reader. These links are functional at the time of first availability of this document but, due to the changing nature of web information, may not be functional at a later date. The CAAA and the Government of Alberta does not assume responsibility for updating hyperlinks. This document focuses on hazards and controls in the practice of acupuncture.
How this Handbook is organized

This Handbook is designed as a reference manual. Acupuncturists and those who employ them may consult individual sections to obtain information related to general OHS issues, such as legislation and programs, as well as specific hazards that are categorized as biological, chemical, physical and psychological. Due to the desire to have this handbook used as a reference, there may be some repetition in places where the same controls are described for different hazard classes. Some aspects discussed in this Handbook may not be directly applicable to all Acupuncturists.

Managing Occupational Health and Safety

For most Acupuncturists, the top priority is the safe and effective service to a client or patient. It is possible that the professional’s own safety may be compromised in the course of providing services. Acupuncturists may be subject to a wide range of hazards that may impact their ability to work. These include (but are not limited to) exposure to blood borne pathogens and other biological agents, ergonomic issues, working alone, driving hazards when going to clients’ homes, the potential for abusive behaviour from clients or co-workers, exposure to chemical agents, and physical hazards such as trips and falls, etc.

For larger clinics to identify and reduce the potential for exposure to various hazards, an organization is advised to ensure adequate and appropriate health and safety programs are implemented. A good health and safety program is well-integrated into the employer’s culture and reflects the high value the employer places on those who work there.

Occupational Health and Safety – A Joint Effort

The employer and the workers of the organization are partners in managing the health and safety of the workplace. Each has a significant role to play to ensure an effective system.

<table>
<thead>
<tr>
<th>Management</th>
<th>Workers</th>
</tr>
</thead>
</table>
| • Establishes, implements, communicates and enforces policies and safe work procedures  
• Monitors workplace safety and health  
• Identifies and corrects workplace hazards  
• Provides training  
• Follows up on reported incidents | • Are aware of health and safety policies and safe work procedures  
• Follow company policies, rules, and safe work practices  
• Attend training  
• Report all hazards and incidents  
• Cooperate with management in OHS program development and implementation |

For the individual practitioner who provides services independent of a larger employer, it is important to understand the principles of health and safety and to integrate safety into all aspects of their work. In addition to the moral rationale for implementing occupational health and safety policies, programs and practices, there is a legal imperative for all employers to ensure the health and safety of all those in the workplace.

1 The terms client and patient may be used together or interchangeably throughout this document to reflect the receiver of acupuncture services.
A Legal Perspective

Occupational health and safety legislation sets minimum standards for workplace health and safety and designates legal accountabilities. For Acupuncturists, it is critical that there is a basic understanding of applicable legislation and that programs are implemented to ensure compliance.

### Alberta OHS Legislation

The **OHS Act**, **OHS Regulation** and **OHS Code** constitute the enforceable OHS legislation in Alberta.

- **OHS Act** – sets forth OHS duties, obligations and rights of employers and employees in general terms and is applicable to all industries.
- **OHS Regulations** – cover policy and administrative matters related to the OHS Act and may be applicable to all industries or to specific industries.
- **OHS Codes** – provide specific technical requirements related to OHS topics, each section of which may be applicable to all industries or to specific industries. Codes are updated on a periodic basis.

The following section, excerpted from Volume 1 – Overview of Best Practices in Health and Safety in the Healthcare Industry\(^2\), provides concise information and references related to OHS legal requirements.

The Government of Alberta’s Employer’s Guide to the Occupational Health and Safety Act\(^3\) includes discussion of the following employer responsibilities:

- Identification, communication and control of workplace hazards
- Maintenance of equipment in safe working order
- Proper labelling and storage of chemicals
- Development and enforcement of safe work practices
- Provision of Material Safety Data Sheets and proper labels for controlled substances
- Training of workers
- Implementation of appropriate protective measures

The Government of Alberta’s Worker’s Guide to the Occupational Health and Safety Act\(^4\) includes discussion of the following worker legal rights and responsibilities:

- The right to know about the hazards and controls in the workplace
- The responsibility to participate in training and apply knowledge to the job
- The right to access the employer’s safe work procedures or codes of practice
- The responsibility to follow health and safety rules

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\(^2\) Overview of Best Practices in Occupational Health and Safety in the Healthcare Industry Vol. 1  


The responsibility to report unsafe situations and refuse to perform work that puts the worker or co-workers in imminent danger

_It makes sense..._

Most Acupuncturists are not required to have Workers Compensation Board (WCB) coverage. Some employers think health and safety responsibility only applies to workers who are covered by WCB accounts.

Remember, even if someone is not covered by WCB, employers are still required to comply with OHS legislation. Under the Alberta OHS Act and Code, this includes every occupation, employment, business, calling, or pursuit over which the legislature has jurisdiction. (OHS Act, Section 1).

From a best practice perspective, as well as an ethical perspective, all individuals who provide services in an organization should be included in the health and safety program. This means that hazard assessments should be completed, incidents reported and investigated, and training should take place for those providing services, regardless of their official “employee” status. The organization’s health and safety policies, rules and responsibilities should be communicated to all these individuals and they should be held accountable for complying with them.

**Serious Injuries and Incidents**

Employers must report serious injuries and incidents to Occupational Health and Safety as soon as possible. The types of reportable incidents are detailed in the OHS Act. Occupational Health and Safety’s contact line for reporting serious incidents or injuries anywhere in Alberta is 1-866-415-8690. **If the employer has WCB coverage, when workers are injured in workplace incidents, workers and employers must follow the Workers’ Compensation Act regarding the filing of claims.**

**Imminent Danger**

“Imminent danger” refers to any danger that a worker would not normally face in their tasks or any dangerous conditions under which a worker wouldn’t normally carry out their work. Workers must refuse to perform any task they believe would put them or their fellow workers in imminent danger.

If a worker refuses work due to imminent danger, the employer must protect other workers exposed to the hazard and undertake an investigation into the cause of the work refusal. The investigation must be documented and actions taken to rectify the cause of the work refusal. If the worker is not satisfied with the employer’s actions, the worker may take the matter to Alberta Employment and Immigration, Workplace Health and Safety for an OHS Officer to investigate.

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5 Taken in part from the Employer’s Guide – Occupational Health and Safety Act; Work Safe Alberta, revised 2003
Employers need to inform workers of their right and duty to refuse work that they believe presents imminent danger. For most organizations, educating employees about these responsibilities is achieved by including information on imminent danger in orientations that are provided to newly hired employees. Similarly, management personnel need to be aware of imminent danger provisions and what procedure to follow if a worker refuses work due to imminent danger. Employers should have procedures in place before imminent danger is ever reported by a worker. These procedures should identify the steps to follow and who should be involved in the investigation, communications, and follow-up.

**Role of Government of Alberta OHS Officers**
Alberta Human Services OHS Officers enforce the OHS Act, Regulation and Code in Alberta workplaces. Officers work with employers to ensure compliance with legislative requirements. Officers may provide information to assist employers in understanding and applying legislative requirements to their workplaces.

The Occupational Health and Safety division of Alberta Human Services operates a 24-hour contact line where employers and workers can obtain health and safety information, or report serious incidents or concerns regarding their workplaces. When a worker contacts Occupational Health and Safety, an OHS Officer may complete a follow-up including contacting the worker, employer and/or inspecting the worksite.

**Worksite Inspections**
An Officer may inspect a worksite for the purposes of identifying workplace hazards, because of a reported concern, or because of a serious injury or incident.

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Officers may, or may not, inform an employer of a workplace inspection before their visit. Regardless if advance notification of a site visit is given or not, legislation requires the employer’s participation with the Officer in the inspection. An employer must allow the Officer onto the work premises for inspection.

If an Officer tours the physical worksite, the employer should appoint a management representative to escort the Officer through the premises to facilitate the inspection and to respond to any enquiries. The Officer may request that the worker who reported the concern or a labour representative also participate in the inspection.

Alberta OHS legislation empowers OHS Officers with significant authority on worksites. An Officer may enter work premises to perform inspections. Officers may also request and review health and safety documentation, interview workers, take measurements, seize equipment, take photographs and stop work at the work site to protect the health and safety of workers or to preserve investigative evidence. Officers may also issue tickets and levy fines to the employer as well as to individual workers.

The following chart summarizes major Alberta legislation applicable to Acupuncturists.
## Alberta OHS 2009 Code Requirements

<table>
<thead>
<tr>
<th>Part #</th>
<th>Title</th>
<th>Application</th>
</tr>
</thead>
</table>
| 2      | Hazard Assessment, Elimination and Control | • Requires employers to assess a worksite and identify existing or potential hazards before work begins. A written report must include the results of the hazard assessments and the methods used to eliminate or control the hazards.  
• Employers are required, if reasonably practicable, to involve workers in the assessment, control and elimination of hazards.  
• Employers are required to eliminate hazards if reasonably practicable to do so. If elimination is not reasonably practicable, employers must apply the hierarchy of controls first by implementing engineering controls, followed by administrative controls and finally, as a last option, by using personal protective equipment. |
| 4      | Chemical Hazards, Biological Hazards and Harmful Substances | • Requires employers to ensure that worker exposure to a harmful substance is kept as low as reasonably practicable/reasonably achievable and does not exceed the substance’s Occupational Exposure Levels (Schedule 1, Table 2).  
• Requires employers to assess worker exposure to harmful substances and establishes monitoring requirements. |
| 7      | Emergency Preparedness and Response | • Employers are required to establish an emergency response plan for responding to emergencies that may require rescue or evacuation. The emergency response plan must be written and available to workers.  
• Part 7 defines the minimum elements to be included in the emergency response plan. |
| 11     | First Aid | • Requires employers to provide first aid services, supplies and equipment in accordance with the applicable requirements of Schedule 2, Tables 3-7.  
• The first aid requirements that an employer must meet are based on a combination of three factors – how hazardous the work is, the time taken to travel from the work site to a health care facility (a measure of the remoteness of the work site), and the number of workers on each shift.  
• If an acute illness or injury occurs at the work site, Part 11 requires the affected worker to report the illness or injury to the employer as soon as practical. The employer is required to maintain a written record of every illness or injury reported. |
| 14     | Lifting and Handling Loads | • The intent of this section is to reduce or eliminate the manual handling of materials, and therefore the possibility of injury.  
• Requires employers to provide, where reasonably practicable, appropriate equipment for lifting, lowering, pushing, pulling, carrying, handling or transporting heavy or awkward loads. |
<table>
<thead>
<tr>
<th>Part #</th>
<th>Title</th>
<th>Application</th>
</tr>
</thead>
<tbody>
<tr>
<td>18</td>
<td>Personal Protective Equipment (PPE)</td>
<td>• Outlines the requirements for PPE including eye protection, foot protection, and respiratory protective equipment.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• If the hazard assessment indicates the need for PPE, the employer is required to ensure workers wear the appropriate type of PPE and that they use and wear the PPE correctly. The employer is required to ensure that workers are trained in the correct use, care, limitations and maintenance of PPE.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Workers are required to use and wear appropriate PPE in accordance with training and instructions received. Workers are also required to inspect PPE before use and not use PPE that is unable to perform the function for which it was designed.</td>
</tr>
<tr>
<td>25</td>
<td>Tools, Equipment and Machinery</td>
<td>• Defines the responsibilities of the employer and workers in operating tools, equipment and machinery.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Requires operators of machinery to ensure that the starting and operating the machinery will not endanger the operator or other workers.</td>
</tr>
<tr>
<td>27</td>
<td>Violence</td>
<td>• For the purposes of the OHS Code, violence means the threatened, attempted or actual conduct of a person that causes or is likely to cause physical injury.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Part 27 requires employers to develop written policies and procedures respecting potential workplace violence.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Requires employers to:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>o Instruct workers how to recognize workplace violence</td>
</tr>
<tr>
<td></td>
<td></td>
<td>o Communicate the organization’s policy and procedures related to workplace violence</td>
</tr>
<tr>
<td></td>
<td></td>
<td>o Develop appropriate responses to workplace violence</td>
</tr>
<tr>
<td></td>
<td></td>
<td>o Develop procedures for reporting, investigating and documenting incidents of workplace violence.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Employers are required to investigate incidents of workplace violence.</td>
</tr>
<tr>
<td>28</td>
<td>Working Alone</td>
<td>• The working alone requirements of Part 28 apply when both of the following conditions are met:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1. A worker is working by himself or herself, and</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. Assistance is not readily available to the worker if there is an emergency or the worker is injured or ill.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Employers are required to include working alone as a hazard in the hazard assessment process required by Part 2.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Employers are required to provide an effective communication system for workers working alone.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• If effective electronic communication is not practicable, the employer must implement other controls such as visits to the worker or scheduled worker contacts.</td>
</tr>
<tr>
<td>29</td>
<td>WHMIS</td>
<td>• Employers must ensure that controlled products are used, stored, handled or manufactured at a worksite in accordance</td>
</tr>
<tr>
<td>Part #</td>
<td>Title</td>
<td>Application</td>
</tr>
<tr>
<td>-------</td>
<td>--------------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td></td>
<td></td>
<td>with Part 29.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Requires employers to provide training to workers who work with or near controlled products. The Part defines the specific topics that must be included in the training.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Outlines labelling requirements for controlled products including decanted products, placards, laboratory samples, etc.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Defines the requirement to provide material safety data sheets for controlled products.</td>
</tr>
<tr>
<td>35</td>
<td>Health Care and Industries with Biological</td>
<td>• Addresses hazards associated with blood borne pathogens and other biohazardous materials.</td>
</tr>
<tr>
<td></td>
<td>Hazards</td>
<td>• Requires employers to control exposures to biological hazards according to the hazard elimination and control requirements of Part 2, Section 9.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Employers are required to provide safety-engineered medical sharps to minimize the risk of exposure unless the safety-engineered medical device is not clinically appropriate in the circumstances or not available in the commercial market.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Employers are required to establish safe work procedures for the use and disposal of medical sharps. Workers must be trained in the safe work procedure. Workers are required to use and dispose of medical sharps in accordance with the training they have received.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Part 35 deals with the requirement to provide sharps containers and a prohibition on the recapping of waste needles.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Employers are required to establish policies and procedures addressing the storage, handling, use and disposal of biohazardous materials.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Employers must implement policies and procedures for post-exposure management of workers exposed to biohazardous material.</td>
</tr>
</tbody>
</table>


In addition to legislation, Acupuncturists should also be aware of the Alberta Healthcare Health and Safety Initiative, which was established to help reduce workplace injuries in the healthcare industry. An important component of this Initiative is the Healthcare Compliance Strategy, which includes inspections of healthcare industry employers by government officers. More details about this program can be found at [http://employment.alberta.ca/documents/WHS/WHS-PUB_healthcare_strategy.pdf](http://employment.alberta.ca/documents/WHS/WHS-PUB_healthcare_strategy.pdf).
Occupational Health and Safety Management Systems
Over the past twenty years, the development and implementation of occupational health and safety management systems (OHSMS) has become widespread. A well-implemented OHSMS focuses the organization on prevention of workplace injuries and illness, rather than on the more traditional approach of reacting to health and safety incidents. To effectively prevent workplace injuries and illness, a management system uses the approach of continuous improvement. It has clearly defined responsibilities, worker participation and a focus on risk management through the proactive identification of hazards and controls.

Most OHSMS have similar themes. These include:

- Management leadership
- Written policies and procedures
- Roles, responsibilities and accountabilities
- Worker participation
- Training
- Measurement of performance and outcomes
- Identification of required action to ensure continuous improvement

For small acupuncture clinics or private practitioners, it may not appear practical to implement an OHSMS. However, it is important for all Acupuncturists to be aware of the importance of occupational health and safety and to ensure that work is conducted in a healthy and safe environment using only safe work practices.
Hazard Assessment Process

Hazard identification and assessment
One of the key activities in a good OHS management system is the proactive identification and assessment of hazards. This is also a legal requirement in Alberta. Though this often requires effort on the part of several people in the organization, it provides the greatest reward as it enables control of a hazard before it becomes a significant issue. Some organizations perform hazard assessments only for “high risk” jobs. However, to derive the best benefit of the hazard identification and assessment process, it should be a systematic process that looks at all jobs/tasks in the organization. An inventory of positions/jobs/tasks is necessary to ensure that all hazards are identified. Assessment of the hazards assists in classifying hazards by risk level which helps to address high priority hazards promptly. Key features of hazard identification and assessment process include:

- Inclusion of all types of hazards – biological, chemical, physical, and psychological
- Classification of each hazard as to its
  - frequency of occurrence (numbers of people exposed to the hazard or how often they are exposed),
  - severity potential (how severe the consequences would be if exposure were to occur), and
  - probability of occurrence (how often the hazard is likely to lead to exposure).
  Numerical values for each of these factors are given and either added or multiplied together to determine a risk level.
- Participation of workers who actually perform the jobs/tasks to ensure accuracy of identification and assessment.

Controls are broken down into three types – engineering, administrative and personal protective equipment (PPE) controls. In occupational health and safety, there is a well-established “hierarchy” of controls that describes which controls are more effective.
Definitions and Examples

**Engineering Controls** – designed to “engineer out” the hazard; for example, substituting a safer chemical for one that is toxic, using better ventilation such as fume hoods or extraction fans, machine guards to prevent contact with moving parts, etc.

**Administrative Controls** – implementing policies and safe work procedures, infection prevention and control practices, company rules, scheduling plans, training programs, worker orientation, etc.

**Personal Protective Equipment (PPE)** – items worn or used directly by the worker to reduce contact with hazardous substances. Examples include gloves, goggles, proper shoes, protective clothing, etc.

Acupuncturists may be exposed to a variety of workplace hazards in the course of performing their functions. The type and degree of exposure is dependent upon the type of service, the type of patients or clients, and the specific tasks performed. A key component of a health and safety program is to identify and assess hazards and determine appropriate controls. A systematic approach to hazard assessment includes the following steps:

1. List all work-related tasks and activities.
2. Identify potential biological, chemical, physical and psychological hazards associated with each task. Remember to consider the range of clients or patients, which may impact the potential hazard.
3. Assess the risk of the hazard by considering the severity of consequences of exposure, the probability that the exposure will occur and the frequency the task is done.
4. Identify the controls that will eliminate or reduce the risk. The hierarchy of controls should be followed. This means that engineering controls are the most effective, followed by administrative controls (such as training and rules), followed by personal protective equipment (PPE).
5. Implement the controls for each hazard.
6. Communicate the hazard assessments and required controls to all workers who perform the tasks.
7. Evaluate the controls when there are changes to the processes or equipment as well as periodically to ensure they are effective.
Is your hazard assessment process complete?

<table>
<thead>
<tr>
<th>Hazard Identification and Assessment – Components of an effective system</th>
<th>Yes?</th>
<th>No?</th>
<th>Required follow up (what should be done)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Has an inventory been taken of all tasks performed?</td>
<td>☐</td>
<td>☐</td>
<td></td>
</tr>
<tr>
<td>Are health and safety hazards identified for all tasks listed in the inventory?</td>
<td>☐</td>
<td>☐</td>
<td></td>
</tr>
<tr>
<td>Have health and safety hazards been evaluated for risk and prioritized based on risk?</td>
<td>☐</td>
<td>☐</td>
<td></td>
</tr>
<tr>
<td>Are workers actively involved in the hazard identification and control process?</td>
<td>☐</td>
<td>☐</td>
<td></td>
</tr>
<tr>
<td>Do workers have access to the hazard assessment records?</td>
<td>☐</td>
<td>☐</td>
<td></td>
</tr>
<tr>
<td>Is training provided for those conducting the hazard identification and assessment process?</td>
<td>☐</td>
<td>☐</td>
<td></td>
</tr>
<tr>
<td>Are the hazard identification and assessment records reviewed periodically or when changes are made to the jobs/tasks or equipment?</td>
<td>☐</td>
<td>☐</td>
<td></td>
</tr>
<tr>
<td>Are the results of the hazard identification and assessment records communicated to all workers who perform the job/task?</td>
<td>☐</td>
<td>☐</td>
<td></td>
</tr>
</tbody>
</table>

**Note:** A sample hazard assessment and control form for Acupuncturists is provided in Appendix B. This can be customized to meet the individual acupuncturist’s needs by eliminating procedures that are not conducted, adding additional procedures if needed and modifying controls that are listed. Keep a copy of your hazard assessment handy and review it periodically to ensure that it is up to date.
Biological Hazards and Controls

A Look at Potential Biological Hazards to Acupuncturists

As with all potential hazards in the work environment, OHS legislation requires a systematic process to identify and assess existing and potential risks of exposure to biological hazards.

“Occupational Exposure Limits” have not been established for biological agents. Best practices aim to eliminate or reduce the risk of exposure to pathogens. When conducting hazard and risk assessments, the factors that are required for the transmission of infection must be considered. These factors are commonly referred to as the “chain of infection” components. Controls are directed at the chain’s links to break the “chain of infection” at one of its links. The classic depiction of the chain of infection is:

\[
\begin{align*}
\text{Infectious Agent} & \quad \text{Susceptible Host} \\
\text{Reservoir} & \quad \text{Portal of Entry} \\
\text{Portal of Exit} & \quad \text{Modes of Transmission}
\end{align*}
\]

In the above diagram, the “links” in the chain of infection are:

**Infectious Agent** – A microorganism capable of causing disease in humans. Infectivity is affected by the organisms’ viability, virulence, invasiveness and pathogenicity.

**Reservoir** – A source that allows for microbial growth and multiplication. Examples include people, equipment, and materials.

---

6 Chain of Infection: Diagram & Explanation; Infection Control for Nursing Students; [http://faculty.ccc.edu/tr-infectioncontrol/chain.htm](http://faculty.ccc.edu/tr-infectioncontrol/chain.htm)
**Portal of Exit** – The means by which the organisms can leave the reservoir. Some examples include blood, skin, by coughs and sneezes, through other body substances. The portals of exit may be different for different organisms, based on where they are located in the body of the host.

**Mode of Transmission** – The method whereby the organisms are transmitted from one place to the next. Examples may be by direct contact, indirect contact with a contaminated body substance, vectors, and fomites (contact with inanimate objects carrying infectious disease).

**Portals of Entry** – The site where organisms can gain access to the hosts. Examples include mucous membranes, breaks in the skin, needle punctures, etc.

**Susceptible Host** – A person who lacks the immunity or resistance to the invasion of the body and reproduction by the microorganisms, resulting in infection.

When conducting hazard assessments, each task and worksite must consider the chain of infection. List tasks or environmental situations where Acupuncturists may be exposed to biological agents and for each task identify the potential reservoirs, portals of exit and entry. Then consider the types of biological agents and modes of transmission. Once these are identified, select controls that aim to break the chain of infection at the most appropriate links. These controls should be employed to eliminate or reduce the transmission of infection to Acupuncturists as well as to patients.

**Factors Affecting Disease Transmission**

Biological agents must be assessed for the level of risk that they pose to Acupuncturists. Not all infectious diseases are occupational hazards for all Acupuncturists, as several factors influence whether Acupuncturists contract infectious diseases.

Three types of factors affect the transmission of infectious disease. These are source factors (biological agent factors), host factors and environmental factors. Source factors include the type and virulence of the biological agent, the viability of the organisms, the size of particles, and the concentration of organisms in the particles. Host factors include the health status of the person and management system aspects that reduce the potential for exposure. Environmental factors include proximity to the infectious agent, types of surfaces, facility design, environmental conditions, and ventilation factors.

Much more information about infectious diseases is found on the Public Health Agency of Canada’s website at [http://www.phac-aspc.gc.ca/id-mi/index-eng.php](http://www.phac-aspc.gc.ca/id-mi/index-eng.php)

The following sections have been adapted from the *Safety Program Handbook for Traditional Chinese Medicine Practitioners and Acupuncturists* (December 2012) with the kind permission of the College of Traditional Chinese Medicine Practitioners and Acupuncturists of British Columbia and the College of Traditional Chinese Medicine Practitioners and Acupuncturists of Ontario.

*Infection prevention and control is an essential consideration for Acupuncturists when providing patients with safe health care services. Infection control is an ongoing process that focuses on minimizing the*
risks of spreading infections to patients, to staff, and to practitioners while performing required routines and procedures.

In a clinical setting, infection prevention and control is the responsibility of all staff. However, the establishment and assignment of effective procedures and the ongoing monitoring and accountability rests with the practitioner.

Acupuncturists are required to not only establish infection prevention and control strategies and procedures, but also regularly evaluate and update these procedures in order to continually address concerns of infectious illnesses and of the spread of blood-borne diseases.

Practitioners have an obligation to remain current on infection and control procedures and to ensure that such practices are implemented in their practices and by their staff. This includes the availability of the necessary supplies and equipment, as well as the personal and staff training that is required to maintain a safe and healthy office setting for both patients and employees.

This document consolidates published guidelines from government agencies, regulatory bodies and professional associations. As such, this document is based on “best practices” established at the time of writing. Many recommendations have been adapted from techniques currently in use by other health care professions. Knowledge of safety issues and clinical risk management should not be limited by the scope of this course. Participants are expected to continually remain knowledgeable by referencing other sources, including their regulating provincial college (CTCMA-BC, CTCPMAO), federal and provincial government health ministries, and other regulatory agencies.

Current information related to Infection Prevention and Control can be obtained from:

- Health Canada (http://www.hc-sc.gc.ca/index-eng.php)
- British Columbia Ministry of Health (http://www.gov.bc.ca/health/)
- Ontario Ministry of Health and Long-Term Care (http://www.health.gov.on.ca)
- British Columbia Centre of Disease Control (http://www.bccdc.ca/default.htm)
- Public Health Ontario (http://www.oahpp.ca/index.html)

Acupuncturists are responsible to:

- know and apply the current infection control guidelines to your practice;
- train others under your supervision;
- ensure the ongoing quality of your infection control practices;
- monitor changes to infection control practices and make adjustments to your practice as needed;
- refer or report patients with suspected infectious diseases to the appropriate health care professional or facility.

Understanding and practicing effective infection prevention and control procedures is an important safety consideration for patients, for staff and for your personal safety. Understanding how
diseases are transmitted is the first step for practitioners in establishing and maintaining procedures that can break or interrupt the chain of infectious transmission. Infection control requires attention to interactions with patients and staff, with instruments and equipment, and to the practice environment.

**Infections can occur with or without direct skin penetration.**

Sharps (e.g., acupuncture needles, dermal needles) are intended to penetrate the skin thereby becoming easily and regularly contaminated by blood or body fluids. The contaminated sharp can infect the practitioner through inadvertent penetration caused by unsafe disposal or handling of the sharps.

Infections may be the result of the use of contaminated equipment or utensils coming in contact with open cuts or contaminated hands inadvertently touching mucous membranes at the eye, nose, or mouth.

As well, potential sources of infection are found through normal contact with the environment including treatment tables, work surfaces, door knobs, and waiting room furniture. The name to such objects is **fomites** (objects that have become contaminated with microorganisms and serve as a vehicle of transmission for infection).

Infectious organisms can be spread throughout a clinic by contamination or by cross-contamination.

- **Contamination** is the spread of infectious micro-organisms to an object (such as an acupuncture needle or herb storage container).
- **Cross-contamination** is the indirect spread of infection from one person to another person via unclean instruments or improper sterilization processes.

Contamination and cross-contamination put both the patient and the practitioner at risk and can be caused by practices such as the following:

- Clean equipment or instruments are placed on unclean surfaces.
- Sterile equipment or instruments are placed on non-sterile surfaces.
- Practitioner hygiene is not sufficient.
- Contaminated instruments and tools are not disposed of promptly and appropriately (used instruments and equipment can be contaminated even without clear visible signs of blood or secretions).
- Linens are not cleaned thoroughly.
- Surfaces and facilities are not satisfactorily and regularly cleaned (viruses can survive on damp, warm work surfaces for just a few hours, e.g., HIV, or for weeks or longer, e.g., Hepatitis A can survive for months).

As health care professionals, Acupuncturists have an obligation to report communicable/reportable diseases. If during the course of treatment, practitioners become aware of a communicable/reportable disease, they must take the necessary steps to report as required by provincial legislation.
Exposure routes for infectious agents include:

**Injection**
- Puncture resulting in transmission to bloodstream/tissues
- Vector borne (spread by animals or insects)

**Inhalation**
- Droplet (a form of direct contact with secretions of an infected person expelled a short distance during sneezing, coughing or talking).
- Airborne (air-suspended microorganisms); these can include particulates that have been resuspended after settling.

**Absorption; skin or mucous membrane contact**
- Indirect contact (resulting from contact with a contaminated object or surface)
- Material-borne (spread by food, water, drugs, etc. that may be infected)

**Ingestion**
- Indirect contact (resulting from contact with a contaminated object or surface)
- Material-borne (spread by food, water, drugs, etc. that may be infected)

In this section the biological hazards most commonly encountered by Acupuncturists and methods to control them are presented. Employers should carefully evaluate the potential for exposure to biohazardous materials in all tasks and ensure that they have an effective hazard control plan in place. This information will be useful for inclusion into hazard assessments. Please note, this is not designed to be an exhaustive treatment of the subject, but is rather an overview summarizing the most frequently encountered biological hazards for Acupuncturists.

**Note:** The following chart provides basic information about control strategies for commonly occurring biological hazards. Administrative controls include Routine Practices that are to be used as a minimum and Additional Precautions as warranted based on the risk assessment. Worker education and good communication processes are also critical administrative controls. Any PPE selected must be based upon the risk assessment of the task and the environment in which it is used. All legislation related to the selection and use of controls must be followed.

**Biological hazard identification and risk assessment processes**

As with all other hazards, biological hazards that may be encountered in the workplace must be identified. Risks of exposure must be considered based on the tasks that are performed and the Acupuncturists’ locations or environment. The first step in conducting a hazard assessment for a biological hazard involves describing the work involved and listing each job task with consideration to the environmental factors. This includes identification of actual or potential exposures to biological hazards in the workplace, and specifically, the risk of exposure to biological hazards in the job tasks.
How to assess and control biological hazards in the workplace

Step 1: List tasks and environment aspects

Step 2: Identify the potential for exposure to biological agents through the various routes of entry (injection, inhalation, absorption, ingestion)

Step 3: Assess the hazard and determine the risk for exposure

Step 4: Identify appropriate controls following the hierarchy of controls

Step 5: Communicate the information to workers and provide training

Step 6: Evaluate the effectiveness of controls and improve them as required

Reminder

Controls listed in the following chart are categorized as Engineering, Administrative and Personal Protective Equipment (PPE) controls. Remember to follow the hierarchy of controls in choosing the most appropriate controls. This chart illustrates the decreasing effectiveness of controls. Several categories of controls may be used simultaneously to reduce risk of exposure.
The following chart summarizes the most common types of biological hazards, their sources and their recommended control measures to protect Acupuncturists from exposure.

<table>
<thead>
<tr>
<th>Type of Biological Hazard</th>
<th>Source of Hazard</th>
<th>Recommended Control Measures</th>
</tr>
</thead>
</table>
| Blood borne pathogen      | Needle stick injuries, contaminated surfaces of equipment and furnishings, cups, lancets | • Immunization of staff  
• Pre-screening of patients  
• Use of disposable, single use, sheathed needles  
• Proper disinfection of cups, other reusable equipment, surfaces, and linens  
• Use of sharps disposal containers  
• Proper spill response procedures and waste disposal  
• Gloves and masks, protective eyewear as required |
| Respiratory infectious agent | Patients coughing, etc., contaminated surfaces | • Immunization of staff  
• Pre-screening of patients  
• Proper disinfection of surfaces and materials  
• Adequate ventilation  
• Gloves and masks, protective eyewear as required |
| Intestinal and other parasite | Patients with parasitic infections – contaminated bedding, skin contact | • Pre-screening of patients  
• Proper disinfection of surfaces and materials  
• Gloves and masks, protective eyewear as required |
| Sexually transmitted infectious agent | Treatment of infected patient | • Immunization of staff  
• Pre-screening of patients  
• Proper disinfection of surfaces and materials  
• Gloves and masks, protective eyewear as required |
| Other infectious agents | Needlestick injuries, contaminated surfaces, direct patient contact, etc. | • Proper disinfection of cups, other reusable equipment, surfaces, and linens  
• Pre-screening of patients  
• Proper disinfection of surfaces and materials  
• Gloves and masks, protective eyewear as required |

**Infection Prevention and Control Procedures**

*Routine practices and additional precautions*

Procedural controls may include procedures that relate to detection and follow-up of infectious diseases, the use of Routine Practices and Additional Precautions as directed, baseline health assessments and periodic screening of workers, hazard identification and control processes, and outbreak management procedures. Awareness of the infectious disease status of patients is another good control, though this is not always possible for Acupuncturists. All work procedures should include the consideration and control of the risk of exposure to workers. Routine Practices and Additional Precautions (where required) greatly assist in reducing the transmission of infectious agents from both known and unknown patient sources by treating all contacts as potential risks.
Infection Prevention and Control Definitions:

- **Routine Practices** include a recommended pattern of behaviours to form the foundation of limiting the transmission of microorganisms in all health care settings and is generally accepted care for all clients. Elements of Routine Practices are: hand hygiene; risk assessment related to client symptoms, care and service delivery, including screening for infectious diseases; risk reduction strategies through the use of PPE, cleaning environment, laundry, disinfection and sterilization of equipment, waste management, safe sharps handling, client placement and healthy workplace practices; and education of healthcare providers, clients and families, and visitors.

- **Additional precautions** are practices used to prevent transmission of infectious agents that are spread by direct or indirect contact with the client or client’s environment that are necessary in addition to Routine Practices for certain pathogens or clinical presentations. These precautions include Contact Precautions, Droplet Precautions, and Airborne Precautions that are based on the method of transmission.


Routine Practices include being attentive to all routes of transmission. Awareness of routes of transmission has led to the development of a variety of transmission-route specific strategies. Most of these are well documented in infection prevention and control plans. In particular, hand hygiene is identified as the single most important administrative strategy in infection prevention and control.

Hand hygiene is the most important infection control measure. Hand washing should be done:

- before and after patient contact or acupuncture treatment;
- before and after preparing, handling, or dispensing herbs or herbal remedies;
- when hands are contaminated during the treatment;
- immediately after inadvertent exposure to blood or body fluids;
- when hands are visibly soiled;
- after contact with environmental surfaces or equipment;
- after removing gloves;
- before preparing, handling, serving or eating food;
- after handling money or other items that may be contaminated;
- after answering the phone or using the computer or other electronic devices and returning to a patient;
- after personal body functions.

Another important control to reduce the potential of exposure to biological hazards is the cleaning and disinfection of clinic equipment and surfaces. The following sections (in italics) have been adapted from the *Safety Program Handbook for Traditional Chinese Medicine Practitioners and Acupuncturists* (December 2012) with the kind permission of the College of Traditional Chinese Medicine Practitioners and Acupuncturists of British Columbia and the College of Traditional Chinese Medicine Practitioners and Acupuncturists of Ontario.
General Housekeeping
All housekeeping surfaces need routine or periodic cleaning with a solution of diluted detergents. Establish a cleaning schedule to ensure all surfaces are kept clean, and educate your cleaning staff to ensure they understand the importance of their work in a health care setting. High traffic or high touch surfaces should be identified for more frequent cleaning (e.g., door knobs, handles) possibly using a low-level disinfectant, where appropriate. Non-clinical surfaces that are low-risk of contamination should be cleaned first then disinfected using a low-level disinfectant such as:

- quaternary ammonium compounds
- chlorine bleach solution (e.g., 1:500, 1 part chlorine and 499 parts water)
- 3% hydrogen peroxide
- phenols (sometimes called phenolics)

These products come as liquids or as disinfectant wipes. Staff should use household utility gloves for disinfecting.

Note: There is a difference between alcohol-based wipes and detergent-based wipes when cleaning. Alcohol wipes do not clean and their use is limited to routine environmental decontamination. Detergent wipes clean but do not disinfect. Detergent wipes are suitable for environmental cleaning, but are not suitable for blood and body fluid spillages.

Floor mops should be cleaned and dried after use, and fresh cleaning solutions should be used each day to prevent creating reservoirs for infectious organisms. Carpets are not recommended for high traffic areas. Carpets are more difficult to clean and disinfect to the standard required in a health care setting.

Clinical Contact Surfaces
Clinical contact surfaces that may be contaminated by spray, splatter, or touch should be cleaned and disinfected after each patient visit. Surfaces should be cleaned (using utility gloves) with a low-level disinfectant. In some instances, an intermediate level disinfectant (e.g., 1:10 household bleach mixed daily or 70-90% isopropyl alcohol) may be necessary. To facilitate clinical cleaning, treatment areas should be uncluttered and well organized.

Spot Cleaning of Blood Spills
- Wear household utility gloves.
- Blot or wipe up as much as possible using disposable towels. Dispose of the paper towels in a plastic lined and covered container (see additional information on waste disposal).
- Clean the spill area with a detergent disinfectant. Dry with disposable towels.
• Use an intermediate-level, hospital-grade disinfectant on the area and follow the manufacturer’s directions. An alternative is a 1:10 dilution of household bleach and leave for at least 10 minutes before drying with a disposable towel.

Laundering Sheets, Towels or Other Linens
Practitioners may use linens (washed on-site or handled by a linen service) or disposable paper sheets to cover patient treatment areas. All bed linens, used towels, or disposable paper sheets must be changed between patients. Linens (e.g., sheets, towels, gowns, pillow cases) can be laundered with hot water (70°C to 80°C) and soap if there is no visible soiling (bleach can be added as required by soiling).

Linen that is soiled with blood should be handled, transported and laundered with additional care. Place linen in appropriate impermeable bags and use protective nonmedical utility gloves when handling.

Cleaning, Disinfecting and Sterilizing
Practitioners are expected to understand the differences among and important features of what is meant by cleaning, disinfecting, and sterilizing in the context of their TCM practice.

Cleaning is the removal of visible soil from objects and surfaces and normally is accomplished using water with detergents or enzymatic products. Thorough cleaning is vital before high-level disinfection and sterilization because inorganic and organic materials that remain on the surfaces of instruments constrain the effectiveness of these processes.

Sterilization describes a process that destroys or eliminates all forms of microbial life and is carried out in health-care facilities by physical or chemical methods. Steam under pressure, dry heat, and liquid chemicals are sterilizing agents often used in health care facilities.

Disinfection describes a process used on inanimate objects that kills or destroys many or all infectious microorganisms, except bacterial spores. In health care settings, objects are usually disinfected using liquid chemicals.

Sterilants are a unique class of disinfectants. Unlike sterilization, disinfection does not kill spores. A few disinfectants will kill spores with prolonged exposure times (3–12 hours); these are called chemical sterilants. These same chemicals used for shorter exposure periods can act as high-level disinfectants.

Decontamination removes infectious microorganisms from objects so they are safe to handle or discard.

Germicide is an agent that can kill pathogenic organisms or “germs”. The term germicide includes both antiseptics and disinfectants.

Antiseptics are germicides that can be applied to skin and tissue; while disinfectants are anti-microbial substances that can be applied only to inanimate objects.

Fungicide, bactericide, and sporicide are examples of terms that indicate by their prefix the type of microorganism that can be destroyed through application. For example, a fungicide is an agent that kills fungus.
**Cleaning Instruments and Equipment**

Cleaning of equipment and reusable patient care items and instruments is an essential step for preventing transmission of infected micro-organisms to patients and to practitioners.

Practitioners can reference a useful Fact Sheet from Toronto Public Health titled, Personal Service Settings: Cleaning Instruments.


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**Instruments MUST be properly cleaned, rinsed and dried before disinfection and sterilization.** Cleaning can be considered the most important step since it is required to remove any organic debris that will compromise the process of disinfection or sterilization. The following chart is adapted from “Infection Prevention and Control Best Practices for Personal Services Setting”, Ministry of Health and Long-Term Care, Ontario, January 2009.

**Steps to Clean Instruments**

<table>
<thead>
<tr>
<th>Cleaning Process</th>
<th>Reason and Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 <em>Soak items that cannot be immediately cleaned in a container of clean warm water (with or without detergent) in a clean sink or in a labelled “dirty instruments” container.</em></td>
<td>Soaking instruments prevents blood and other organic matter from drying on the item. Do not soak dirty items in hot water or in a disinfectant before cleaning, as this can cause organic matter (dirt) to stick to the surface of the object.</td>
</tr>
<tr>
<td>2 Put on thick rubber utility gloves (non-medical gloves).</td>
<td>Thick rubber utility gloves suitable for cleaning have a wider bib at the wrist to help prevent water from entering the inside of the glove.</td>
</tr>
</tbody>
</table>
3. Take instruments apart and rinse in a sink filled with lukewarm water. Hot water may cause organic matter (dirt) to stick to objects.

4. Prepare cleaning sink by adding warm water and detergent. To reduce the risk of injury, ensure that sharp objects are visible by using low suds detergent according to directions.

5. Clean instrument surfaces by using friction (washing and scrubbing motions). Use a brush to clean any crevices or seams in instruments. Scrub below the water surface to prevent splashing into the eyes or onto clothing. An ultrasonic cleaner may be used for cleaning. When using this device, the lid should be closed to prevent aerosolization.

6. Inspect instruments to ensure removal of all visible organic matter. Organic matter prevents disinfection from occurring.

7. Drain dirty water. Rinse cleaned instruments under running water. Rinsing removes residual detergent and soil that may impair the function of the instrument or interfere with the action of disinfectants.

8. Either air dry or dry with a disposable towel. If wet items are not dried a film may be left on the surface which may contain pathogens.

9. Store cleaned instruments in a covered container (can be towel or clean storage area) until disinfected or sterilized, as required. Uncovered, clean instruments may become contaminated by dust or moisture.

10. Clean and disinfect the sink. Sinks become contaminated during use, therefore, cleaning and disinfection is required to reduce microorganisms prior to reuse.

11. Remove rubber utility gloves and wash, rinse and, hang to dry. Cleaned rubber utility gloves may be used again as long as the rubber is not torn or punctured.

12. Perform hand hygiene. Hand hygiene should be performed after removing gloves.

**Additional Best Practices: Cleaning**

- Staff must be protected when cleaning instruments. Supply required personal protective equipment.
- Begin the cleaning process as soon as possible after use so that organic material does not dry and harden.
- If staff are required to clean equipment, it is best to assign tasks to a single person who should receive ongoing training related to new instruments or equipment.
Follow manufacturer’s recommendations and keep important procedures near the reprocessing area for reference and reminder.

The use of automated cleaning equipment can be more efficient, effective and safe for staff by reducing risks of exposure to blood or body fluids. Large debris should be removed before using ultrasonic cleaners. Ultrasonic cleaners do not sterilize or disinfect.

Sterilizing, Disinfecting
Specific patient care items must be cleaned and then disinfected or sterilized after each use. Instruments are categorized based on whether they contact sterile tissue, mucous membranes, or intact skin. Medical instruments are categorized as critical, semi-critical, or non-critical. The categorization is used to determine the reprocessing requirements.

Categorization of Medical Instruments

<table>
<thead>
<tr>
<th>Category</th>
<th>Definition</th>
<th>Reprocessing (minimum requirement)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Critical Item</td>
<td>enters sterile tissue including bloodstream (arteries and veins).</td>
<td>cleaning, followed by sterilization</td>
</tr>
<tr>
<td>Semi-critical item</td>
<td>contacts intact mucous membranes or non-intact skin (but ordinarily does not penetrate) the exception being needling followed by cupping in which exposure to blood borne pathogens require sterilization of cupping devices. e.g., cupping devices, acupuncturescope</td>
<td>cleaning, followed by high-level disinfection* (some items may require only intermediate level disinfection)</td>
</tr>
<tr>
<td>Non-critical item</td>
<td>contacts intact skin (but not mucous membranes) or does not directly contact the patient these items are rarely contaminated e.g., Tuina devices, electrical clips and rubber or silicone electrical pads.</td>
<td>cleaning, plus low level disinfection</td>
</tr>
</tbody>
</table>

*Sterilization is preferred for semi-critical items, but especially for items that cannot tolerate sterilization, high-level disinfection can be used.

Some of the factors that reduce the effectiveness of disinfection and sterilization include:

- insufficient cleaning as an initial step to remove matter
- nature and level of contamination
- incorrect dilution of disinfectant
- water that is used is too hard
• inadequate exposure time to the germicide
• physical nature of the object (e.g., small crevices, flexible hinges)
• incorrect temperature and pH of the disinfection process
• reduced effectiveness because used passed expiry date
• reactions to rubber or plastic

**Disinfection**

Disinfection is a process used on inanimate objects to eliminate many or all pathogenic micro-organisms, except bacterial spores.

Disinfectants are all registered in Canada and should come with a DIN number. This means that the manufacturer has to stand behind the claims about which microorganisms it is effective against and the described safe use of the product. You should request the material safety data sheet (MSDS) which provides information about the product and the worker safety procedures. There are three levels of disinfection: high-level, intermediate-level, and low-level.

**Chemical disinfectants**

Chemical disinfectants are used to decontaminate surfaces, reservoirs of infectious material, and to clean up spills of infectious material. The choice of chemical disinfectant must be made carefully based on:

• Types of organisms, suspected or known
• Items or surfaces to be decontaminated
• Hazards posed to the worker by the disinfectant
• Cost of disinfectant
• Corrosiveness of disinfectant
• Shelf life and required dilution of disinfectant
• Material which inactivates the disinfectant
Considerations in the Use of Chemical Disinfectants

- As much as possible, know what the possible contaminants are.
- Choose the disinfectant carefully. More than one may be required. Keep in mind the items to be disinfected and the properties and limitations of the various available disinfectants. If more than one disinfectant is required, ensure that those selected are chemically compatible.
- Follow the manufacturer’s directions for making the proper dilutions of the disinfectants.
- The effective life of disinfectants can vary depending on the formulations and the conditions of usage. Follow the manufacturer’s directions.
- The effective exposure time that the disinfectant must be in contact with the contaminant will also vary with conditions of usage. Often overnight exposure may be recommended to ensure effective decontamination.
- Understand the health and safety hazards that may be posed by a particular disinfectant and ensure appropriate precautions are taken. Wear disposable gloves when using any disinfectants. Wear other personal protective equipment or clothing as necessary, depending upon the disinfectants. Consult Material Safety Data Sheets for details.
- Workers with particular sensitivities to specific disinfectants should avoid using those disinfectants.
- Perform tests of the disinfectants to ensure effective disinfection.

A Word about Bleach
Household bleaches contain sodium hypochlorite; the free chlorine concentration is 5.25%. This is equivalent to 52,000 ppm. Dilutions of 1 to 10 are frequently used in clinic areas. This provides 5,200 ppm of available chlorine. A 1 to 20 dilution (2500 ppm) may be used for routine disinfection when negligible amounts of organic material are present (such as disinfecting surfaces and counters). Concentrations up to 10,000 ppm (1 to 5 dilution) may be used for heavy organic contamination. Hypochlorites are effective against a wide range of bacteria and viruses and are most commonly used for instrument soaks, spill response, work surfaces, and liquids to be discarded.

Solutions of hypochlorite lose effectiveness with time. Dilutions decay more rapidly. For this reason, solutions should be replaced regularly. Recommended shelf life for a working dilution is approximately 24 hours. This is particularly important to keep in mind when providing hypochlorite germicides with spill response supplies.

Time required for disinfection depends upon the nature and amount of material that is to be disinfected. For decontaminating liquid wastes, a more concentrated form of disinfectant should be used; the resulting solution should be kept for at least 1 hour before disposal. For spill response, disinfectant should be allowed to react with spilled material for approximately 30 minutes before further clean-up. It is important to note that hypochlorites are very corrosive to metals and should not be used to disinfect metal...
instruments. In addition, fumes from concentrated bleach can be hazardous, and the bleach solutions can irritate skin. Appropriate personal protective equipment should be worn when handling concentrated solutions.

**Disinfection Chart**

The following chart is adapted from, “Infection Prevention and Control Best Practices for Personal Services Setting,” Ministry of Health and Long-Term Care, Ontario, January 2009. This chart is **NOT** inclusive of all approved high-, intermediate-, and low-level disinfectants but is only to provide guidance to practitioners.

**High-Level Disinfection**

High-level disinfectants will kill all bacteria and viruses but will not kill large numbers of bacterial spores. These disinfectants may be used for critical items that cannot withstand heat sterilization.

<table>
<thead>
<tr>
<th>Chemical (examples)</th>
<th>Application</th>
<th>Exposure Time (approximate)</th>
<th>Notes</th>
</tr>
</thead>
</table>
| 2% gluteraldehyde* (not recommended for personal service settings) | semi-critical devices | 45 minutes (follow manufacturer’s instructions) | Toxic, irritating to skin, and limited shelf life  
Use in well ventilated room  
NEVER use as a spray  
Not recommended for personal service settings |
| 6% hydrogen peroxide (not the 3% hydrogen peroxide found in stores) | semi-critical devices | 45 minutes (follow manufacturer’s instructions) | Can be corrosive to metals such as brass, copper, silver |
| Ortho-phthalaldehyde (OPA) 0.55%             | semi-critical devices | > 10 minutes (follow manufacturer’s instructions) | Less occupational risk  
No mixing and fast acting  
Stains proteins and limited shelf life |
| 1:50 chlorine bleach solution (using 5.25% chlorine bleach) | semi-critical devices | > 20 minutes               | Inexpensive, but can corrode and destroy adhesives |

* can be used as a **sterilant** with increased exposure time (>10 hours) and carefully following manufacturer’s instructions.

**Intermediate-Level Disinfection**

Intermediate-level disinfectants will kill most bacteria, most fungi, and most viruses but does not kill large numbers of bacterial spores such as *Mycobacterium tuberculosis*.

<table>
<thead>
<tr>
<th>Chemical (examples)</th>
<th>Application</th>
<th>Exposure Time (approximate)</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>70 – 90% isopropyl alcohol</td>
<td>semi-critical , devices environmental surfaces</td>
<td>10 minutes</td>
<td>allow to dry fast acting can damage rubber</td>
</tr>
</tbody>
</table>
Low-Level Disinfection

Low-level disinfectants will kill some bacteria, some fungi, and some viruses (e.g., HBV, HCV) but it is not effective against Mycobacterium tuberculosis, fungi, or spores.

<table>
<thead>
<tr>
<th>Chemical (examples)</th>
<th>Application</th>
<th>Exposure Time (approximate)</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quaternary ammonium</td>
<td>non-critical devices</td>
<td>follow manufacturer’s</td>
<td>Do not use for instruments</td>
</tr>
<tr>
<td>compounds</td>
<td>daily cleaning and</td>
<td>instructions</td>
<td>Low risk of irritation to</td>
</tr>
<tr>
<td></td>
<td>disinfection of all surfaces</td>
<td></td>
<td>the user</td>
</tr>
<tr>
<td>3% hydrogen peroxide</td>
<td></td>
<td></td>
<td>May corrode or oxidize some metals</td>
</tr>
<tr>
<td>1:500 chlorine bleach</td>
<td></td>
<td></td>
<td>For environmental surfaces only</td>
</tr>
<tr>
<td>solution</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Phenolics</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Sterilization

Sterilization, when done correctly, destroys all forms of microbial organism (bacteria, viruses, spores, and fungi) including the most resistant forms such as bacterial spores. Any item that is invasive or pierces the skin MUST be sterile. Single-use, pre-sterilized, acupuncture needles must be used prior to the expiry date and should not be reused or re-sterilized.

Any sterile instruments that are accidently touched or contaminated, either before or during treatment, should be replaced by another sterile instrument. All items that are reprocessed for sterilization must be pre-cleaned and appropriately packaged and stored after sterilization. There are two main types of sterilization: steam (autoclave) and dry heat.

Steam Autoclave

Steam sterilization is a practical, economical, and effective means of sterilization and is the most frequently used form used by TCM practitioners. The time required for sterilization will be dependent on whether the instrument is wrapped or unwrapped. For example, packaged items at 121°C may require a sterilization time of 30 minutes. Others may suggest 133°C for 15 minutes. Unpackaged instruments regularly require less time. Unwrapped instruments should be used immediately to avoid contamination. Some autoclaves may not have a drying cycle, but packages must be dry before being removed to reduce chance of contamination. Always follow manufacturer’s guidelines and instructions when using the autoclave.
Dry Heat Sterilizers

It is recommended that dry heat sterilizers be used for items that cannot be sterilized by steam. It can be effective for use with glass and may be more effective for instruments that cannot be disassembled. Dry heat sterilizers require longer exposure time and higher temperatures (limiting available options for packaging).

Sterilization CANNOT be done by domestic ovens, microwave ovens, boiling water, alcohol, ultraviolet sterilizer, or pressure cookers.

Monitoring Sterilization

Chemically treated bags or tape that alters colour are useful to confirm that items have been processed and have been exposed to the required combination of time, temperature, and steam. These indicators do NOT provide evidence that sterilization has taken place. Only biological indicators (or spore tests) can confirm sterilization. Spore strips or vials should be placed in the centre of the load during a regular sterilizing cycle. For steam sterilization, Bacillus stearothermophilus should be used, and for dry heat, Bacillus subtilis should be used.

Tests should be conducted each month (more frequently for heavy use) and sent to a laboratory to test for spore kill. Your clinic should have a back-up plan for sterilization in case test results are positive and the sterilizer needs to be repaired or replaced.

All items for sterilization must be pre-cleaned. The effectiveness of sterilization is influenced by time, temperature, pressure (in autoclave), and full contact with the item that is being sterilized.

The following chart is adapted from, “Infection Prevention and Control Best Practices for Personal Services Setting,” Ministry of Health and Long-Term Care, Ontario, January 2009.

Steps to Sterilizing Instruments

<table>
<thead>
<tr>
<th>Steps</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Clean instruments. (See chart: Steps to Clean Instruments)</td>
<td>Instruments that are not clean cannot be sterilized.</td>
</tr>
<tr>
<td>2 Perform hand hygiene and apply gloves.</td>
<td>Hands should be as clean as possible to prevent contamination of clean instruments/equipment.</td>
</tr>
<tr>
<td>3 Clean instruments must be placed in the appropriate sterilization package and sealed.</td>
<td>Sealed packaged items will maintain sterility after sterilization has been achieved until opened for use. If packaging becomes wet or damaged, sterility cannot be ensured. Instruments in damaged packages must be re-sterilized or discarded. Ensure packaging is appropriate for type of sterilizer used.</td>
</tr>
<tr>
<td></td>
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</tr>
<tr>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>4</td>
<td>Temperature sensitive <strong>chemical indicators</strong> must be used with each package.</td>
</tr>
<tr>
<td>5</td>
<td>Load the sterilizer evenly and avoid overloading the chamber. Follow manufacturer’s directions for loading the chamber.</td>
</tr>
<tr>
<td>6</td>
<td><strong>Start</strong> the sterilization process.</td>
</tr>
<tr>
<td>7</td>
<td>After the sterilization cycle has been completed, <strong>remove</strong> instruments when dry.</td>
</tr>
</tbody>
</table>
|8 | **Store** sterilized items in a clean, dry, place that is protected from dust, dirt, and moisture. Sterile items must be stored off the floor. | Handling increases the chances of punctures of sterilized bags. Sterilized items must be stored separately from dirty equipment/instruments. Check the following:  
  - the seal is intact  
  - package is free of tears, dust, dampness  
  - chemical indicators have changed to appropriate colour |
|9 | **Record** information about each sterilization cycle in the log book. | Monitor each load, recording temperature, pressure, cycle length, etc. Mark the date that the product was sterilized. |

**Additional References:**

British Columbia Ministry of Health (Patient Safety Branch), March 2007; Best Practice Guidelines for the Cleaning, Disinfection and Sterilization of Medical Devices in Health Authorities; *Cleaning Disinfection Sterilization MedicalDevices.pdf*


Use of Personal Protective Equipment (PPE) to reduce exposure to biological hazards

Gloves
The use of disposable medical gloves is recommended in situations such as:
- the patient begins bleeding during the treatment
- the patient has open lesions or is known to have a contagious disease
- the practitioner has a skin infection, or hand wounds, cuts, hangnails that are not properly bandaged
- where exposure to blood borne pathogens are likely i.e. use of lancets, three-edged needle, plum blossom and seven star needle or lancet for blood-letting.

Masks
Masks can provide additional protection for the practitioner or the patient to transmission by droplets or splatter. Masks are effective in minimizing the risks and the spread of droplet-borne organisms (e.g., coughs and sneezing), but are less effective for airborne infections.

Patient Management
Some patients may arrive at a clinic with communicable diseases that will require additional precautions to keep you, your staff, and other patients safe.

Because of the very nature of the work of Acupuncturists, people who are ill will be seeking your advice and the waiting room of the clinic may be an environment that hosts infectious diseases. It is the responsibility of the practitioner to protect all patients who have come to her or him for health care through vigilant patient management and a clean clinical environment.

Additional Precautions for Infectious Patients

- Try to arrange the waiting room to maximize the separation of possibly infectious patients from other patients (2 metres or more if possible).
- Post signs that patients with respiratory or gastrointestinal symptoms should clearly identify this to the practitioner or to staff.
- Post signs encouraging respiratory etiquette (covering nose and mouth).
- Offer masks to patients, provide tissues, waste containers, and hand sanitizers.
Droplet Transmission Precautions

- Triage the patient from the waiting room as quickly as possible.
- Use a mask and wear medical gloves while working within 2 metres of the patient, and offer a mask and hand sanitizer to the patient.
- At the end of the treatment, wipe all horizontal surfaces and utilized instruments with low-level disinfectant.

Contact Transmission Precautions

- Triage the patient from the waiting room as quickly as possible.
- Wear medical gloves and gown, as appropriate.
- Offer patient hand sanitizer.
- At the end of the treatment, wipe all horizontal surfaces and identified instruments with low-level disinfectant.

Airborne Transmission Precautions

- Triage the patient from the waiting room as quickly as possible.
- Try to see these patients at the end of the day or during low volume times.
- Use a high-efficiency mask (e.g., N95 particulate respirator).
- If treating patients with chickenpox (varicella) or measles (rubeola), the treating practitioner should be immune.
- Provide a mask for the patient to use throughout the treatment; offer hand sanitizer.
- Notify staff of the need for extra care or to use masks if not immune.
- Open a window if possible, or allow time for ventilation to exchange air (ideally, the patient is at the end of the day).

Acupuncturists must ensure that infection prevention and control procedures (including routine practices and additional precautions) are evident in their practice and applied by staff.
Chemical Hazards and Controls
This section will provide a brief overview of selected chemicals that Acupuncturists may come into contact with. Note that this list is not extensive or all-inclusive. These controls are briefly summarized and the reader should link to the references provided for additional information. The proper choice of control measures must be based on a risk assessment for the specific tasks being performed. Safe work practices are administrative controls necessary for working with all harmful substances and educating workers in the practices is vital. Safe work procedures should be designed to:

- Limit the worker’s exposure time
- Reduce contact with the substance through any route of exposure to the worker
- Ensure safe disposal of substances and disposable equipment that comes into contact with harmful substances
- Ensure safe handling and decontamination of reusable equipment
- Require the use of all designated controls

Worker education is critical for safely handling of harmful substances.

<table>
<thead>
<tr>
<th>General Resources – Chemical Hazards</th>
</tr>
</thead>
<tbody>
<tr>
<td>CCOHS Cheminfo (<a href="http://ccinfoweb.ccohs.ca/">http://ccinfoweb.ccohs.ca/</a>).</td>
</tr>
<tr>
<td>Alberta Workplace Health and Safety Bulletins (<a href="http://employment.alberta.ca/SFW/136.html">http://employment.alberta.ca/SFW/136.html</a>).</td>
</tr>
</tbody>
</table>

The following charts, adapted from Volume 3 – Best Practices for the Assessment and Control of Chemical Hazards in Healthcare[^7], summarize important information about some of the chemical hazards that may be encountered by Acupuncturists.

<table>
<thead>
<tr>
<th>Chemical</th>
<th>Uses</th>
<th>Risks</th>
<th>Controls</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alcohol-based hand sanitizers</td>
<td>Hand hygiene when water is not available and hands are not visibly soiled</td>
<td>May dry hands; flammable if stored in large quantities</td>
<td>Appropriate storage of product (away from ignition sources and incompatible products). Provision of hand cream to soothe hand dryness.</td>
</tr>
<tr>
<td>1/500 chlorine bleach solution</td>
<td>Low level disinfectant for use with non-critical items only; daily cleaning and disinfection of surfaces, not instruments</td>
<td>Corrosive; may be eye, skin, and respiratory irritants; may react with other products to create hazardous products</td>
<td>Properly designed and maintained ventilation systems. Automatic diluting machines. Purchase of products in ready to use concentrations to minimize handling. Safe work procedures. Worker education. Gloves and eye protection.</td>
</tr>
<tr>
<td>3% hydrogen peroxide</td>
<td>Low level disinfectant for use with non-critical items only; daily cleaning and disinfection of surfaces, not instruments</td>
<td>Corrosive; may be eye, skin, and respiratory irritants; may react with other products to create hazardous products</td>
<td>Properly designed and maintained ventilation systems. Automatic diluting machines. Purchase of products in ready to use concentrations to minimize handling. Safe work procedures. Worker education. Gloves and eye protection.</td>
</tr>
<tr>
<td>Quaternary ammonium compounds</td>
<td>Low level disinfectant for use with non-critical items only; daily cleaning and disinfection of surfaces, not instruments</td>
<td>Corrosive; may be eye, skin, and respiratory irritants; may react with other products to create hazardous products</td>
<td>Properly designed and maintained ventilation systems. Automatic diluting machines. Purchase of products in ready to use concentrations to minimize handling. Safe work procedures. Worker education. Gloves and eye protection.</td>
</tr>
<tr>
<td>Phenolics</td>
<td>Low level disinfectant for use with non-critical items only; daily cleaning and disinfection of surfaces, not instruments</td>
<td>Corrosive; may be eye, skin, and respiratory irritants; may react with other products to create hazardous products</td>
<td>Properly designed and maintained ventilation systems. Automatic diluting machines. Purchase of products in ready to use concentrations to minimize handling. Safe work procedures. Worker education. Gloves and eye protection.</td>
</tr>
<tr>
<td>1/50 chlorine bleach solution</td>
<td>Intermediate-level disinfectant used for cleaning semi-critical devices and environmental surfaces</td>
<td>Likely an eye, skin, respiratory tract irritant; may react with other products to create hazardous products; corrosive</td>
<td>Substitution with less harmful product. Properly designed and maintained ventilation systems. Automatic diluting machines. Purchase of products in ready to use concentrations to minimize handling. Safe work procedures. WHMIS program and maintenance of MSDSs. Worker education. Accommodation for sensitized workers or those with health issues. Gloves and eye protection.</td>
</tr>
<tr>
<td>70-90% isopropyl alcohol</td>
<td>Intermediate-level disinfectant used for cleaning semi-critical devices and environmental surfaces</td>
<td>Likely an eye, skin, respiratory tract irritant; may react with other products to create hazardous products</td>
<td>Automatic diluting machines. Purchase of products in ready to use concentrations to minimize handling. Safe work procedures. Gloves and eye protection.</td>
</tr>
<tr>
<td><strong>Chemical</strong></td>
<td><strong>Uses</strong></td>
<td><strong>Risks</strong></td>
<td><strong>Controls</strong></td>
</tr>
<tr>
<td>---------------------------</td>
<td>----------------------------------------------</td>
<td>---------------------------------------------------------------------------</td>
<td>--------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>2% glutaraldehyde</td>
<td>High-level disinfectant used for semi-critical devices for 45 minute soak time</td>
<td>Toxic (suspected carcinogen)</td>
<td>Avoid use in clinical areas; substitute with less toxic disinfectant, e.g. OPA</td>
</tr>
<tr>
<td>6% hydrogen peroxide</td>
<td>High-level disinfectant used for semi-critical devices for 45 minute soak time</td>
<td>Irritant; corrosive</td>
<td>Use in well ventilated area. Purchase products in ready to use concentrations to minimize handling. Safe work procedures. Gloves and eye protection.</td>
</tr>
<tr>
<td>Ortho-phthalaldehyde (OPA) 0.55%</td>
<td>High-level disinfectant used for semi-critical devices for &gt;10 minute soak time</td>
<td>Irritant</td>
<td>Properly designed and maintained ventilation systems. May require local exhaust ventilation. Purchase of products in ready to use concentrations to minimize handling. Safe work procedures including disposal and spill procedures, and keeping soaking containers closed at all times. Worker education. Control access to work area. Exposure monitoring. Accommodation for sensitized workers or those with health issues. Gloves, eye protection, face shield and chemical-resistant protective clothing.</td>
</tr>
<tr>
<td>1/50 chlorine bleach solution</td>
<td>High-level disinfectant used for semi-critical devices for &gt;20 minute soak time</td>
<td>Likely an eye, skin, respiratory tract irritant; may react with other products to create hazardous products; corrosive</td>
<td>Substitution with less harmful product. Properly designed and maintained ventilation systems. Automatic diluting machines. Purchase of products in ready to use concentrations to minimize handling. Safe work procedures. WHMIS program and maintenance of MSDSs. Worker education. Accommodation for sensitized workers or those with health issues. Gloves and eye protection.</td>
</tr>
<tr>
<td>Latex</td>
<td>Found in some medical devices and gloves</td>
<td>Exposure can produce irritant contact dermatitis, allergic contact dermatitis, and allergic responses including immediate hypersensitivity and shock</td>
<td>Purchase latex-free devices and gloves</td>
</tr>
<tr>
<td>Personal care products, scents, fragrances</td>
<td>Personal care items such as shampoos, soaps, perfumes, creams, deodorants, etc. Also in cleaning products</td>
<td>May cause a variety of mild to severe symptoms. Allergic, asthmatic and sensitive workers may experience reactions</td>
<td>Elimination of scented products. Substitution with less harmful products. Properly designed and maintained ventilation systems. Signage in work areas where affected workers work</td>
</tr>
<tr>
<td>Combustion products of</td>
<td>Treatment</td>
<td>Inhalation may cause respiratory effects if</td>
<td>Well ventilated treatment area</td>
</tr>
</tbody>
</table>
**Controls for Chemical Hazards**

The major controls to reduce the exposure of Acupuncturists to chemicals include:

- proper ventilation
- substitution of a toxic chemical with a less toxic chemical (e.g. smokeless moxa)
- purchasing chemicals in ready-to-use dilutions
- proper storage and disposal of chemicals
- personal protective equipment including appropriate gloves and eye protection

For Acupuncturists, chemical exposures may be limited by ensuring the facilities are well designed, have effective ventilation, adequate storage for any chemicals used and have easily cleanable surfaces.

**Elimination**

Elimination of a hazardous chemical from the workplace is always desirable but not always possible. For example, disinfectants are required when biological hazards are present and cleaning solutions are necessary to maintain hygienic conditions.

**Substitution**

Some chemicals are chosen based on tradition or cost. In recent years, efforts have been made to find less hazardous alternatives to some of the chemicals commonly used. One example of this is using hydrogen peroxide-based cleaners rather than chlorine-based cleaners.

When substituting a chemical for one that is currently in use, it is critical to ensure that the new chemical does not have properties that may make it more toxic or more flammable, etc. The choice of chemical disinfectants should include consideration of dermatological effects as well as cleaning effectiveness.

**Equipment design**

Specialized equipment such as glass cups must be chosen to incorporate safe and effective design features. Ease of cleaning should be considered.

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8 *Acupuncture Today*, Peter Dubitsky, April 010, “Moxibustion and Indoor Air Quality”

http://www.acupuncturetoday.com/mpacms/at/article.php?id=32186
**Ventilation**
Adequate ventilation depends upon the size of the space, the numbers of people in the space, the nature of the work or processes and the nature of the chemicals or biological agents that may be present. Heating Ventilation and Air Conditioning (HVAC) systems are usually maintained by facility operators and are required to comply with building codes. For most clinic environments, standard air quality criteria are likely sufficient and will ensure the comfort of staff and clients. However, in areas where toxic or irritating chemicals are used, local exhaust ventilation may be required. In some acupuncture clinics, chemicals requiring increased ventilation may include concentrated disinfectants and moxa⁹.

**Policies and procedures, training**
Administrative controls, including policies and procedures, should be in place to ensure that there are safe work procedures for storing and using chemicals and discarding chemical wastes appropriately. Acupuncturists may come into contact with chemicals that may be used in treatment and disinfection procedures. Workplace Hazardous Materials Information System (WHMIS) training should be provided to all Acupuncturists. In addition, emergency call lines that provide expertise and advice regarding toxic chemicals should be made available.

**WHMIS program**
A Workplace Hazardous Materials Information System (WHMIS) program is designed to reduce the risk of exposure to chemicals in the workplace and is a legal requirement for all employers who use controlled products in Alberta. To be effective, a WHMIS program must be relevant to the workplace, presenting information and training specific to the chemicals that are used in the workplace. The components of WHMIS include having current Material Safety Data Sheets for all products in the workplace, ensuring all products are appropriately labelled and ensuring that all workers are instructed on how to use the chemicals safely.

**Exposure follow-up – emergency response equipment**
Exposure follow-up includes the provision of appropriate emergency response equipment to reduce the impact of the exposure. Emergency response equipment for Acupuncturists usually refers to emergency eyewashes that can provide sufficient water to dilute the contaminant before it can cause extensive damage. Wherever chemical exposure could pose a hazard to eyes and skin, emergency wash devices are required. Normally, an emergency eyewash will be located where the chemicals, such as disinfectants, are made up and used. There is a variety of emergency eyewash equipment available. Appropriate signage that is easily visible must be provided to indicate where the eyewashes are kept.

**Chemical waste handling and disposal**
Chemical wastes must be addressed with a good chemical waste management system. Municipal and/or Provincial codes address appropriate disposal requirements and aim to reduce contamination, possible injuries, illness or reactions related to chemical exposures.

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⁹ *Acupuncture Today*, Peter Dubitsky, April 0110, “Moxibustion and Indoor Air Quality”
**Additional considerations for reducing risk of exposure**

It is prudent to be aware of the need for modification of the work environment, conditions or required PPE for workers who may be medically vulnerable to the effects of some substances. Higher risk workers may include pregnant workers, workers with allergies or those who are sensitized to certain chemicals. Some common approaches to accommodate these workers include temporary reassignment to areas or tasks where the exposure potential is eliminated, work scheduling to reduce the amount of exposure, and changes to the PPE to accommodate limitations.

**Personal protective equipment (PPE)**

PPE is designed to protect the worker from exposure to chemicals by blocking access to the route of entry into the body. Gloves, aprons and other protective clothing reduce exposure through the dermal (skin) contact route. Eye and face protection reduce exposure through skin and mucous membrane contact. Respirators reduce exposure to the respiratory system.

**Gloves**

The most frequently used PPE by workers to prevent exposure to chemicals is gloves. When choosing gloves, the following must be considered:

- The nature and concentration of the chemicals
- The amount of time the gloves will be exposed to the chemical
- Dexterity required to perform the task
- Extent of protection needed (to wrist or higher)
- Decontamination and disposal requirements

Rules for glove use for chemicals\(^{10}\),\(^{11}\)

- Wear the appropriate gloves for the task when needed; for reusable gloves, follow the manufacturer’s guidelines for care, decontamination and maintenance. Choose gloves resistant to holes and tears.
- Ensure gloves fit properly and are of the appropriate thickness to offer protection; ensure adequate supplies of gloves in appropriate sizes.
- Avoid using latex gloves (due to latex allergies).
- Do not use worn or defective gloves.
- Wash hands once gloves have been removed.
- Disposable gloves must be discarded once removed. Do not save for future use.
- Dispose of used gloves into the proper container. Have separate disposal locations for gloves contaminated with chemicals which pose a toxic hazard.
- Non-disposable/reusable gloves must be washed and dried, as needed, and then inspected for

\(^{10}\) OSH Answers- Chemical Protective Clothing – Gloves; [http://www.ccohs.ca/oshanswers/prevention/ppe/gloves.html](http://www.ccohs.ca/oshanswers/prevention/ppe/gloves.html)

\(^{11}\) Glove Use in Laboratories; University of Florida Chemical Hygiene Plan; [http://www.ehs.ufl.edu/Lab/CHP/gloves.htm](http://www.ehs.ufl.edu/Lab/CHP/gloves.htm)
tears and holes prior to reuse.

- Remove gloves before touching personal items, such as phones, computers, pens and one’s skin.
- Do not wear gloves into and out of areas. If gloves are needed to transport anything, wear one glove to handle the transported item. The free hand is then used to touch door knobs, elevator buttons, etc.
- Do not eat, drink, or smoke while wearing gloves. Gloves must be removed and hands washed before eating, drinking, or smoking.
- If for any reason a glove fails, and chemicals come into contact with skin, remove the gloves, wash hands thoroughly and obtain first aid or seek medical attention as appropriate.

**Eye and face protection**

For most workers who use chemicals, goggles or face shields are necessary. In most cases, goggles are considered re-usable. All reusable PPE must be properly decontaminated and maintained. Selection of protective eyewear should take into account:

- Level of protection required
- Comfort of the wearer
- Secure fit that does not interfere with vision or movement
- Ease of cleaning and disinfection
- Durability
- Compatibility with prescription glasses and other PPE that must be worn at the same time (e.g. respirators)

**Respirators**

According to the Alberta Occupational Health and Safety Code 2009, there is a duty to provide and use respiratory protective equipment (RPE) when a hazard assessment indicates that a worker may be exposed to airborne contaminants or exposed to an oxygen deficient environment. Employers are required to use engineering and administrative controls before using RPE (respecting the hierarchy of controls). Though uncommon for Acupuncturists, respirators may be required in certain circumstances to protect workers from exposure to chemicals by inhalation.

**Protective clothing**

Chemical protective clothing is available as gowns, aprons, and foot covers. The choice of protective clothing relies on an accurate hazard assessment. Should protective clothing become contaminated with a chemical or damaged, the clothing must be removed and handled according to company procedures (disposal or proper decontamination). Residual chemicals may continue to present an exposure hazard. Workers must not wear clothing that is contaminated with chemicals home, as this may pose a danger to themselves and others.

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Physical Hazards and Controls

There are many potential physical hazards to which Acupuncturists may be exposed. The nature of the work may pose ergonomic hazards, the potential for slips, trips and falls, exposure to environmental conditions, driving hazards, cuts, and electrical hazards.

In this section the physical hazards most commonly encountered by Acupuncturists and methods to control them are presented. Employers should carefully evaluate the potential for exposure to hazards for various tasks and ensure that they have an effective hazard control plan in place. This information will be useful for inclusion into hazard assessments.

The following chart provides basic information about control strategies for commonly occurring physical hazards for Acupuncturists. The selection of controls must be based on a risk assessment of the tasks and environment. Worker education and good communication processes are critical administrative controls. All legislation related to the assessment of hazards, selection and use of controls must be followed.

<table>
<thead>
<tr>
<th>Potential Physical Hazards</th>
<th>Summary of Major Control Strategies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ergonomic hazards associated with the provision of patient services, including services requiring repetitive motion, twisting and lifting as well as tasks, postures and force levels required for some manipulations.</td>
<td>Ergonomic criteria incorporated into facility design and equipment selection. Adjustable client treatment beds. Worker education and awareness sessions. Early reporting of signs and symptoms of ergonomic concerns. Stretches and micro-breaks. Appropriate footwear with gripping soles and good support.</td>
</tr>
<tr>
<td>Ergonomic hazards associated with material handling of equipment, furniture and supplies including lifting, carrying, pushing, pulling, etc.</td>
<td>Ergonomically designed storage areas with adequate space. Ergonomically designed equipment and furniture with appropriate casters and handles. Provision of appropriate materials handling equipment such as carts, wheeled cases, etc. Safe work procedures including proper lifting procedures. Worker education and awareness sessions. Early reporting of signs and symptoms of ergonomic concerns. Stretches and micro-breaks. Maintenance program for equipment and furniture.</td>
</tr>
<tr>
<td>Ergonomic hazards associated with driving include sustained postures (and potentially awkward posture) and duration</td>
<td>Select an appropriately designed vehicle which incorporates ergonomic and adjustable features. Consider a retrofit back support if the lumbar support in the vehicle seat is inadequate. Adjust the seat and other features of the vehicle to fit the worker. Follow safe work procedures. Early reporting of signs and symptoms of ergonomic concerns. Stretches</td>
</tr>
</tbody>
</table>
### Potential Physical Hazards

<table>
<thead>
<tr>
<th>Potential Physical Hazards</th>
<th>Summary of Major Control Strategies</th>
</tr>
</thead>
<tbody>
<tr>
<td>and micro-breaks. Vary driving position and vary tasks, when possible. Maintain vehicle.</td>
<td></td>
</tr>
<tr>
<td><strong>Falling hazards associated with slips, trips and falls</strong></td>
<td>Install slip resistant flooring. Ensure adequate lighting. Perform regular maintenance on flooring, stairwells, hallways, handrails, etc. Implement a spill cleanup program that includes prompt spill cleanup, use of warning signs, etc. Maintain good housekeeping practices and minimize clutter and tripping hazards. Appropriate footwear with gripping soles and good support.</td>
</tr>
<tr>
<td><strong>Cuts from sharp instruments, including medical instruments and scissors, or equipment, including needles, lancets, etc.</strong></td>
<td>Avoid use of sharps when not required. Replace sharps with Safety Engineered Medical Devices. Proper storage and disposal of sharps. Safe work procedures. Gloves, as appropriate.</td>
</tr>
<tr>
<td><strong>Electrical hazards arising from use of electrical cords and appliances</strong></td>
<td>Ground fault circuit interrupters when used close to water sources. Safe work procedures that include use of electrical cords, power bars and appliances that includes company approval requirements. Worker training.</td>
</tr>
</tbody>
</table>

### Controls for Physical Hazards

#### Ergonomic hazards

One of the most commonly encountered physical hazards for Acupuncturists is the use of awkward body positions when performing services. Engineering controls include ergonomically designed work areas. These hazards may be reduced by a program that includes:

- Having adequate equipment
- Having adequate staffing
- Ongoing ergonomic training
- Eliminating the need to push/pull/carry
- Providing handles to objects to be lifted
- Ensuring that friction between the floor and the cart wheels is low
- Minimizing the distances over which objects are to be pushed, pulled, or carried (change the layout of the workplace if necessary)
- Utilizing carts or wheeled devices designed for the specific application

Controls that focus on how work is performed and organized are administrative controls. Administrative controls include policies, procedures, work practices, rules, training, and work scheduling.

- Ensure risk assessments are performed that consider individual client factors, as well task, environmental and worker factors
- Maintain equipment, vehicles and tools to optimize their operation
- Provide training programs to educate workers regarding biomechanical risk factors, signs and symptoms and safe work practices
• Provide self-assessment tools to identify and control biomechanical hazards
• Encourage monitoring and early reporting of the signs and symptoms of MSIs

The most important personal protective equipment to control ergonomic hazards is appropriate footwear with gripping soles and good support.

Driving-related Hazards

Some Acupuncturists drive to client locations to provide services and must deal with the ergonomic issues associated with driving and transporting equipment and materials in their vehicles. It is important for drivers to remember to vary their work activities and work position frequently during the work day for optimal comfort. During long periods of driving, this may mean stopping at a safe location and getting out of the vehicle for a stretch or varying the adjustable seat controls slightly in order to maintain comfort.

Some Acupuncturists transport materials (equipment, supplies, etc.) in a vehicle as part of their regular job duties. Manual handling from a vehicle is a potential risk factor for musculo-skeletal injuries (MSIs) and may incorporate factors such as high forces and awkward postures. Useful strategies to reduce the risk associated with manual handling from a vehicle include the following.

• Use safe postures when handling a load. Obtain training if you are unsure of recommended lifting postures
• Organize the trunk so that items can be moved with minimal reaching
• Get as close to the material as possible to decrease forces
• Use wheeled carts or suitcases to minimize the forces required to move the load
• Consider making two or more trips to decrease the weight of each load
• Ask for assistance if another person is available to help
• Check the carrying path to ensure there are no tripping hazards

In addition to controlling ergonomic hazards related to driving, employers also must address other legal requirements related to driving, including the use of personal vehicles for work purposes and the legislation related to distracted driving.

The Alberta OHS Code includes legislative requirements for the use of personal vehicles for work purposes related to licensing and mechanical inspection. If a worker uses a personal vehicle for work purposes,
(a) an employer must ensure that the worker complies with section 256(1) by complying with the appropriate licensed driver requirements of provincial legislation, and
(b) the worker must ensure that the vehicle is maintained in sound mechanical condition.

The first requirement can be met if the employer verifies that the worker has the appropriate provincial driver’s license required to operate the type of personal vehicle being used. The second requirement can be met if the worker follows the maintenance requirements of the vehicle manufacturer.

OHS Code, Part 19
The use of mobile phones has been the subject of much debate. Research indicates that personal communication devices, including hands-free devices, may distract drivers and lead to motor vehicle incidents.

**Personal Communication Devices and Driving**

The use of personal communication devices, including cell phones, while driving is a major distraction that is common on our roads.

Research supports the following conclusions:

- Cell phone use (hand-held or hands-free) multiplies the risk of traffic collisions by four.
- Using a cell phone while driving slows the driver’s reaction time.
- Cell phone use increases the risk of rear-end collisions.
- Using a cell phone while driving reduces visual field attention.
- Cell phone conversations increase the probability of missing red lights.

It should be noted that cell phone use is only one in a long list of potential distractions that should be managed for safe driving. Other hazardous distractions include texting, adjusting radios and iPods, eating, applying makeup, conversations with passengers, etc.

To address these issues, the Alberta Government (Ministry of Transportation) introduced the Distracted Driving Law, effective September 1, 2011. Highlights of the legislation taken from the Ministry of Transportation web site are summarized below.

**Bill 16 - Distracted Driving Legislation**

<table>
<thead>
<tr>
<th>Highlights:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Restricts drivers from:</td>
</tr>
<tr>
<td>- using hand-held cell phones</td>
</tr>
<tr>
<td>- texting or e-mailing</td>
</tr>
<tr>
<td>- using electronic devices like laptop computers, video games, cameras, video entertainment displays and programming portable audio players (e.g., MP3 players)</td>
</tr>
<tr>
<td>- entering information on GPS units</td>
</tr>
<tr>
<td>- reading printed materials in the vehicle</td>
</tr>
</tbody>
</table>

---

• writing, printing or sketching, and
• personal grooming

Complements the current “driving without due care and attention” legislation
Applies to all vehicles as defined by the Traffic Safety Act, including bicycles
Applies to all roads in both urban and rural areas of the province
The fine for this offence is $172.

Please note that if you use your vehicle for work-related travel, you should ensure that your motor vehicle insurance covers business travel.

Trips, Slips and falls
In order to prevent slips, trips and falls, adequate lighting should be available. Cords and other tripping hazards should not be in the path of traffic. Non-slip flooring should be provided. The following are common controls used to reduce the risk of slips, trips and falls in client service areas:

• Designing client service areas and equipment layout to minimize cords and to accommodate equipment without creating tripping hazards
• Designing client service areas with adequate space to accommodate portable equipment without creating tripping hazards
• Providing adequate storage space to minimize the storage of equipment in hallways
• Keeping hallways clear of obstructions
• Using cord covers over electrical cords, as necessary
• Utilizing non-slippery surfaces on the whole steps or at least on the leading edges
• Performing regular maintenance to keep stairs in good repair. Ensure nothing is sticking out of surfaces on the stairs, handrails or banisters (e.g. nails or splinters)
• Maintaining lighting levels
• Using angular lighting and colour contrast to improve depth perception
• Education of workers and enforcement of the use of proper footwear
• Timely clean-up of any spills
• Eliminate the use of extension cords that may pose tripping hazards
• Keep walkways free of clutter

The use of appropriate footwear by Acupuncturists is essential to prevent trips, slips and falls. Workers should be required to wear flat shoes with non-slip soles that offer good support.
**Cuts**
The most effective controls to reduce cuts include:

- Safety cutters as bag and box openers
- Proper storage and disposal of sharp implements
- Worker education
- Safe work procedures
- Keeping sharp edges away from the body
- Use of tools correctly
- Restricted access to work areas
- Signs and warnings in hazardous areas, and
- Safe disposal of all sharps, including broken glass

Eye protection is important if there is any possibility that fragments of glass or other sharps may enter the eyes, and footwear must protect the wearer from accidental exposure to sharps. Gloves are usually required as PPE to protect workers from cuts. The selection of gloves depends on the nature of task. Cut-resistant gloves are available that are made from a variety of materials including Kevlar, Dyneema, HexArmor, stainless steel and wire mesh.

**Electrical Hazards**
Insulation protects workers from contact with electricity. All equipment, wiring and cords must be maintained and used in a manner that keeps electrical insulation intact.

Electric appliances and equipment are protected from overloading by means of electric overloading devices such as fuses or circuit breakers. Although these devices will stop the flow of current when too much current flows through them, they are intended to protect equipment but not workers. All overloading devices must be of sufficient ratings. Ground fault circuit interrupters (GFCIs) are safety devices that will interrupt the flow of current by monitoring the flow of current to and from the device. GFCIs are important engineering controls that are used in wet environments and to power tools and equipment outdoors and required by provincial building codes.

Another important engineering control is grounding. Grounding of electrical equipment refers to creating an electrical path to earth (ground). Grounding provides some protection to equipment operators if there is a fault in the equipment or insulation that energizes the equipment housing; electricity would flow to ground rather than through the worker.

Grounding for equipment that is plugged into electrical receptacles can be identified by the third prong on the electrical plug. Similarly electrical cords commonly have a third prong on the plug end. The third
prong that facilitates grounding must not be removed or filed down. The housings of all equipment should be suitably grounded. Some electrical cords for tools or other equipment do not have a third grounding prong. This equipment is double insulated, meaning that it has been designed with additional insulating considerations to prevent the housing of the device from becoming energized.

A major component of an electrical safety program is worker training. Extension cords are used in many applications for temporarily supplying power. Considerations to follow when using extension cords include:

- Protect cords from damage; do not allow carts to be wheeled over cords.
- Never keep an extension cord plugged in when it is not in use.
- Do not use a damaged extension cord.
- Extension cords and most appliances have polarized plugs (one blade wider than the other). These plugs are designed to prevent electric shock by properly aligning circuit conductors. Never file or cut the plug blades or grounding pin of an extension cord.
- Do not plug one extension cord into another. Use a single cord of sufficient length.

Hazard assessments should guide the development of work procedures to assess and control electrical hazards.

**Burns**

To reduce the risk of burns, administrative controls include worker education, established safe work practices, assessment of work area to identify potential sources of burns, and equipment maintenance programs.
Psychological Hazards and Controls

Each clinic should systematically conduct hazard assessments for tasks performed by each worker and identify if and where the potential exists for psychological hazards. In this section, examples are provided of psychological hazards that may be encountered in any healthcare setting, and possible control measures will be suggested. Employers should carefully evaluate the potential for exposure to hazards in all areas and ensure that they have an effective hazard control plan in place. This information will be useful for inclusion into hazard assessments. Please note, this is not designed to be an exhaustive treatment of the subject, but is rather an overview summarizing the some of the reported psychological hazards in healthcare settings.

The following chart provides basic information about control strategies for commonly occurring psychological hazards. The selection of controls should be based on a risk assessment of the tasks and environment. Worker tolerance to stressors varies considerably. Most controls listed here relate to organizational controls, with some mention of personal controls that may be useful in controlling risk. Not all controls listed will be applicable for all companies. Worker education and good communication processes are critical administrative controls. All legislation related to the assessment of hazards, selection and use of controls should be followed.

<table>
<thead>
<tr>
<th>Potential Psychological Hazards or Effects of Workplace Stressors</th>
<th>Summary of Major Control Strategies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abuse by clients or members of the public</td>
<td>Isolation areas for agitated clients. Furniture arrangement to prevent workers entrapment. Lockable washrooms for workers separate from client or visitors. Controlled access. Grating or bars on street level windows. Bright lighting in parking lots. Alarm systems and panic buttons. Video surveillance. Management policies and procedures related to no tolerance of violence or abuse. Worker education in violence awareness, avoidance and de-escalation procedures. Liaison and response protocols with local police. Policies related to control of keys. Working alone policies. Reporting procedures for incidents and near misses. Ability to request support. Use of counselling services.</td>
</tr>
<tr>
<td>Abuse by co-workers</td>
<td>Alarm systems and panic buttons. Video surveillance. Management policies and procedures related to no tolerance of violence or abuse. Worker education in violence awareness, avoidance and de-escalation procedures. Working alone policies. Reporting and investigation procedures for incidents and near misses. Assertiveness training. Use of mediation and/or counselling services.</td>
</tr>
<tr>
<td>Hazards related to working alone: Threat of violence</td>
<td>Management policies and procedures that ensure no age discrimination. Proactive</td>
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</tbody>
</table>
Potential Psychological Hazards or Effects of Workplace Stressors

<table>
<thead>
<tr>
<th>Summary of Major Control Strategies</th>
</tr>
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<tbody>
<tr>
<td>Stress related to work-life conflict</td>
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</tbody>
</table>

Controls for Psychological Hazards

Potential psychological hazards and controls vary greatly in jobs, locations and companies and are only briefly discussed here. Personal factors impact how stressors are viewed and addressed. A comprehensive discussion of causes and impacts of psychological stressors on workers and on the organization can be found in Best Practices for the Assessments and Control of Psychological Hazards – Vol. 5¹⁷.

This list of prevention procedures and control techniques is not all-inclusive, but rather a sample of the complexities that should be considered in a psychological safety program for Acupuncturists:

- Development, communication and enforcement of policies that indicate no tolerance for any form of violence, harassment, or abuse including bullying. Awareness sessions for all workers on abuse and violence in the workplace, reporting procedures and controls.
- Client guidelines and signage to emphasize that abuse will not be tolerated – this may include the preparation and dissemination of client information guidelines, in which client behaviour is discussed, the commitment to no tolerance for abuse against workers and the encouragement of mutual respect are covered.
- Working alone guidelines and communications protocols. Working alone guidelines are required by Alberta occupational health and safety legislation (OHS Code, Part 28), and must include a written hazard assessment as well as communication protocols for workers who must work alone.

¹⁷ Best Practices for the Assessments and Control of Psychological Hazards, Vol. 5
• Alarm systems and emergency communication devices (panic buttons, etc.). Identification of workers or locations that should be provided with alarm systems and panic buttons should occur. Once any alarm systems are installed or provided, all workers should be trained on how to use them and how to respond to alarms. The alarm systems and emergency communication devices should be maintained and tested to ensure their effectiveness.

• Identification and correction of high risk facility issues (e.g. isolated areas, parking lots, low lighting, no escape routes, etc.). There are many risk factors posed by the design of the facility. The employer should identify risk factors and work to reduce the risk in the areas. A checklist would be useful for employers to help identify facility issues contributing to worker risk.

• Training programs that include non-violent crisis intervention and assault management techniques.

Working alone\(^{18}\)

In some circumstances, working alone poses psychological as well as physical hazards. Psychological hazards of working alone relate to the potential threat of violence or abuse that may be increased when there is no one else present to intervene or deter acts of violence. Workers who are isolated or unable to have contact with others may also experience medical crises and be unable to obtain necessary medical treatment. In many jurisdictions, working alone legislation has been passed to address worker safety. In Alberta, the requirements for working alone are in Part 28 of the OHS Code.

<table>
<thead>
<tr>
<th>Working Alone Legislation</th>
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Part 28 of the OHS Code (Working Alone) applies if:

- A worker is working alone at a work site, and
- Assistance is not readily available if there is an emergency or the worker is injured or ill.

Working alone is considered a hazard that requires hazard assessment and control under Part 2.

OHS Code, Part 28, Section 393

For Acupuncturists, workers who may need to work alone include those who travel to meet clients in the community, workers in transit who are traveling alone, and those working in isolated locations,

\(^{18}\) This section is reproduced from *Best Practices for the Assessments and Control of Psychological Hazards*, Vol. 5, which will be available at [http://www.employment.alberta.ca/SFW/6311.html](http://www.employment.alberta.ca/SFW/6311.html)
away from public view, as well as lone practitioners. In determining if working alone requirements apply, it is important to consider three factors\(^{19}\) that impact “readily available assistance”. These are

- Awareness by other persons that a worker needs assistance
- Willingness of the others to provide assistance, and
- Timeliness of assistance provided.

In all cases, a risk assessment should be conducted for each task/job where a worker may work alone. If the nature of the work poses hazards with a high probability of injury, immediate assistance may be required.

*What are the considerations in a risk assessment?*

Not all working alone situations are alike. The employer should consider physical factors (lighting, communication methods, accessibility of the area, and history of security problems) of the location, the hazards of the task being performed by a lone worker, a worker’s health status, and the effectiveness of any existing controls in assessing the level of risk. Controls useful in some circumstances may be impractical in others. For example, a cellular telephone may seem like a control for almost all lone workers. However, in many circumstances taking out the phone and making a call may not be practical or safe. Involving workers in the risk assessment and determination of appropriate controls will lead to the selection of practical and effective controls.

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**Controls required**

Employers must, for any worker working alone, provide an effective communication system consisting of

- radio communication,
- and land line or cellular telephone communication, or
- some other effective means of electronic communication that includes regular contact by the employer or designate at intervals appropriate to the nature of the hazard associated with the worker’s work.

If effective electronic communication is not practicable at the work site, the employer must ensure that

- the employer or designate visits the worker, or
- the worker contacts the employer or designate at intervals appropriate to the nature of the hazard associated with the worker’s work.

Alberta OHS Code 2009, Part 28

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Controls to employ for workers working alone

Elimination of the risk is the most effective control for working alone hazards. Where possible, the employer should schedule and organize work so that workers are not required to work alone. An excellent source of information about controls for working alone with clients is the CCOHS document Working Alone with Patients.20

Controls for lone workers include;

- communication devices (cellular telephones, walkie-talkies, etc.)
- satellite tracking systems
- restricted access
- locks
- workplace design considerations
- panic alarms
- bright lighting
- mirrors to facilitate seeing around corners or hallways
- surveillance cameras, etc.
- client intake screening procedures
- repeat offender reports
- check-in procedures
- refusal to provide services
- personal safety alarms

20 Working Alone – Working With patients; OSH Answers; Canadian Centre for Occupational Health and Safety; http://www.ccohs.ca/oshanswers/hsp/programs/workingalone_patients.html
**Working alone checklists**

To identify who may be exposed to hazards of working alone and determine appropriate controls to prevent injury, a thorough assessment should be conducted. The following checklist\(^{21}\) from “Working Alone Safely – A Guide for Employers and Employees” may be useful in developing best practices for dealing with hazards of working alone. Additional checklists for workers with other risk factors are also included in the Guide.

<table>
<thead>
<tr>
<th>Checklist for workers who meet clients off-site</th>
<th>Yes</th>
<th>No</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Worker training</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Are workers trained and competent to work alone?</td>
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<td></td>
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<tr>
<td>• Do workers receive training in the recognition of potentially violent situations?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Are workers trained in non-violent responses to threatening situations?</td>
<td></td>
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</tr>
<tr>
<td>• Have workers been instructed on safe work procedures for</td>
<td></td>
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</tbody>
</table>

## Checklist for workers who meet clients off-site

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
<th>N/A</th>
</tr>
</thead>
</table>

**meeting clients at their premises?**

**Safe work procedures**

- Are the safe work procedures based on hazard assessments?

- Do the safe work procedures consider client behaviour?

- Do the safe work procedures consider location and physical factors of the premises?

- Do the safe work procedures consider possible presence of dangerous weapons?

- Are workers required to have a safe visit plan for high risk situations?

- Does the plan include the mechanism to enable regular contact with the office?

- Does the plan include a process to inform the office when arriving and leaving client premises?

- Does the plan permit use of a “buddy” or second person to accompany the worker in high risk situations?

- Does the plan allow for meeting the client in an alternate, safer location?

- Does the plan discuss the use of security services?

- Does the plan enable deferring visits until proper safety measures can be met?

**Communication**

- Is there an effective means of communication to enable workers to contact persons capable of providing immediate assistance?

- Does the communication system ensure regular contact?

- Is there a “check-in” process in place?
Checklist for workers who meet clients off-site

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Is regular contact initiated by the employer or designate at intervals appropriate to the nature of the hazard?</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Work-Life balance**

An employer should strive to develop policies and programs that support work-life balance. The following is a list of general work-life balance policies and programs to consider:

- Flexible time arrangements including alternative work schedules, compressed work week, voluntary reduced hours, part-time work and phased in retirement
- Flexible work locations through the use of technology such as telecommuting and satellite offices
- Flexible job design through job redesign, job sharing
- Wellness programs
- Flexible benefits including paid and unpaid leaves for maternity, parental care giving, educational and sabbatical leaves
- Employer sponsored childcare and eldercare practice and referral services

A work-life conflict issue is often brought on by workload and work demands. Some strategies to reduce the impact of increased workloads and work demands include the following:

- Identify methods to reduce worker workloads. According to research, special attention is required for managers and professionals.
- Strive to reduce the amount of time workers spend in job-related travel.
- Provide a limited number of days of paid leave per year for caregiver responsibilities (childcare and eldercare) and personal problems.
- Measure the use of work-life practices (e.g. job sharing, compressed work week, etc.) and reward sections of the company with high usage. Investigate sections where usage is low.
- Increase supportive management.

For a more detailed discussion of controls to prevent or reduce psychological hazards, please consult Best Practices for the Assessments and Control of Psychological Hazards – Vol. 5.
APPENDIX A - Sample Workplace Health and Safety Policy

OCCUPATIONAL HEALTH & SAFETY POLICY

Purpose:

- To identify company and personal responsibilities and accountabilities for workplace health and safety.
- To ensure compliance with all applicable occupational health and safety legislation.

Policy Statement:

___________ provides a safe and healthy work environment in its clinic by actively ensuring the occupational health and safety of workers through a variety of occupational health and safety procedures. These include:

- Orientation for new workers
- Workplace Inspections
- Accident/incident reporting and follow-up
- Safe work practices and procedures
- Hazard assessment and control
- Workplace Hazardous Materials Information System (WHMIS) for working with controlled substances

All persons engaged in work or business with _________________ must avoid unsafe work practices and risks, follow established health and safety rules and safe work practices.

Responsibilities of Management:

- Develop, implement and enforce health and safety rules and safe work practices within their areas of responsibility.
- Provide information, advice and assistance on occupational health and safety to workers.
- Ensure that workers are trained in how to prevent illness and injury and respond to workplace accidents/incidents and injuries.
- Implement corrective actions to address identified and reported hazards.
- Investigate all workplace incidents.

Responsibilities of Workers and Students:

- Comply with health and safety policies and guidelines.
- Correctly use safety equipment, protective clothing and personal protective equipment.
- Notify and report all unsafe conditions, accidents, injuries, and near misses.
- Participate in the occupational health and safety program including all required training.

Applicability:

This policy applies to all employees who work within or provide services on behalf of _________________.

______________________________  ______________________________
Signature                                           Date
APPENDIX B – Sample Hazard Identification, Assessment and Control Form

HAZARD ASSESSMENT & CONTROL RECORD

<table>
<thead>
<tr>
<th>Site:</th>
<th>Date Completed:</th>
<th>Department:</th>
<th>Completed by:</th>
<th>Title:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
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</tbody>
</table>

To customize this Hazard Assessment & Control Record for your workplace, consider the tasks or activities that are done in your workplace. Identify (circle) the risk as High (H) Medium (M) or Low (L) by considering how often the task is done, how probable the exposure might be, and how serious the consequences of the exposure might be (given your current controls). Identify what controls are currently in place by checking all those that apply. In the recommended controls column, check those additional controls you plan to implement. Then identify who is responsible for implementing the additional controls and a timeline for when it will be done. You do not always need to apply additional controls; however, if you risk is high, you should implement more controls; if it is medium, you should consider additional controls. (You may not perform all of these tasks or activities and you may perform others not listed here. Revise this Record to be appropriate for your workplace.)

<table>
<thead>
<tr>
<th>Task / Activity</th>
<th>Hazard</th>
<th>Risk Class (High, Med., Low)</th>
<th>Existing Controls (check ones currently available/in use)</th>
<th>Recommended Additional Controls (check those not in use, but to be added)</th>
<th>Follow-up (include person responsible and timeline for implementation)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Needling; use of acupuncture needles, lancets</td>
<td>Cuts; Blood-borne pathogen exposure</td>
<td>H M L</td>
<td>☐ Immunization of staff</td>
<td>☐ Immunization of staff</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>☐ Pre-screening of patients</td>
<td>☐ Pre-screening of patients</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>☐ Use of disposable, single use, sheathed needles</td>
<td>☐ Use of disposable, single use, sheathed needles</td>
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<td></td>
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<td></td>
<td>☐ Proper disinfection of cups, other reusable equipment,</td>
<td>☐ Proper disinfection of cups, other reusable equipment, surfaces, and</td>
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<td></td>
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<td>surfaces, and linens</td>
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<td>☐ Use of sharps disposal containers</td>
<td>☐ Use of sharps disposal containers</td>
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<td></td>
<td></td>
<td></td>
<td>☐ Proper spill response</td>
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<table>
<thead>
<tr>
<th>Task / Activity</th>
<th>Hazard</th>
<th>Risk Class (High, Med., Low)</th>
<th>Existing Controls (check ones currently available/in use)</th>
<th>Recommended Additional Controls (check those not in use, but to be added)</th>
<th>Follow-up (include person responsible and timeline for implementation)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cleaning of equipment, surfaces,</td>
<td>Blood borne pathogen exposure; Exposure to respiratory infectious</td>
<td>H</td>
<td>Procedures and waste disposal</td>
<td>Procedures and waste disposal</td>
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<tr>
<td>and linens</td>
<td>diseases</td>
<td>M</td>
<td>□ Gloves and masks, protective eyewear as required</td>
<td>□ Gloves and masks, protective eyewear as required</td>
<td>-</td>
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<td>Immunization of staff</td>
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<td>Pre-screening of patients</td>
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<td>Use of disposable, single use, sheathed needles</td>
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<td>linens</td>
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<td>Use of sharps disposal containers</td>
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<td>Proper spill response procedures and waste disposal</td>
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<td>Adequate ventilation</td>
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<td></td>
<td>Gloves and masks, protective eyewear as required</td>
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</tr>
<tr>
<td>Treatment of patients</td>
<td>Exposure to blood-borne pathogens, respiratory pathogens, intestinal</td>
<td>H</td>
<td>Procedures and waste disposal</td>
<td>Procedures and waste disposal</td>
<td>-</td>
</tr>
<tr>
<td>patients</td>
<td>and other parasites, sexually-transmitted infectious agents</td>
<td>M</td>
<td>□ Gloves and masks, protective eyewear as required</td>
<td>□ Gloves and masks, protective eyewear as required</td>
<td>-</td>
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<td></td>
<td></td>
<td>L</td>
<td></td>
<td></td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Immunization of staff</td>
<td></td>
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<tr>
<td></td>
<td>Pre-screening of patients</td>
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<tr>
<td></td>
<td>Proper disinfection of surfaces and materials</td>
<td></td>
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</tr>
<tr>
<td></td>
<td>Gloves and masks, protective eyewear as required</td>
<td></td>
<td></td>
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<td>-</td>
</tr>
<tr>
<td>Diluting and use of chemical</td>
<td>Skin and/or respiratory irritation</td>
<td>H</td>
<td>Selection of low human toxicity disinfectants</td>
<td>Selection of low human toxicity disinfectants</td>
<td>-</td>
</tr>
<tr>
<td>disinfectants and cleaners</td>
<td></td>
<td>M</td>
<td>Purchase of solutions in ready-to-use concentrations</td>
<td>Purchase of solutions in ready-to-use concentrations</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td>L</td>
<td>Good ventilation</td>
<td>Good ventilation</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Cover open containers of disinfectants</td>
<td>Cover open containers of disinfectants</td>
<td>-</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Gloves and eye protection</td>
<td>Gloves and eye protection</td>
<td>-</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Have emergency eyewash</td>
<td>-</td>
</tr>
<tr>
<td>Task / Activity</td>
<td>Hazard</td>
<td>Risk Class (High, Med., Low)</td>
<td>Existing Controls (check ones currently available/in use)</td>
<td>Recommended Additional Controls (check those not in use, but to be added)</td>
<td>Follow-up (include person responsible and timeline for implementation)</td>
</tr>
<tr>
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<td>------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Use of autoclave or dry oven for sterilization</td>
<td>Burns</td>
<td>H M L</td>
<td>□ Have emergency eyewash solution available</td>
<td>□ Allow steam to dissipate before removing items from autoclave</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>□ Ensure autoclave operates at correct temperature and pressure</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>□ Use heat-resistant gloves for removing items</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>□ Let items cool completely before handling</td>
<td></td>
</tr>
<tr>
<td>Use of Moxabustion</td>
<td>Exposure to combustion products of moxa smoke;</td>
<td>H M L</td>
<td>□ Use of smokeless moxa</td>
<td>□ Use of smokeless moxa</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Burns</td>
<td></td>
<td></td>
<td>□ Eliminate use of moxa</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>□ Very good ventilation</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>□ Masks as required</td>
<td></td>
</tr>
<tr>
<td>Cupping</td>
<td>Burns</td>
<td>H M L</td>
<td>□ Use of safe flame method</td>
<td>□ Use of safe flame method</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Exposure to blood borne pathogens</td>
<td></td>
<td></td>
<td>□ Use away from stored flammables</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>□ Have fire extinguisher nearby</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>See above for blood-borne pathogen controls</td>
<td></td>
</tr>
<tr>
<td>Patient positioning, moving of equipment, materials handling, repetitive tasks (including needling)</td>
<td>Musculoskeletal injuries; repetitive strain injuries (e.g. carpal tunnel, etc.);</td>
<td>H M L</td>
<td>□ Adjustable furniture, treatment beds</td>
<td>□ Adjustab</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>el furniture, treatment beds</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>□ Ergonomic consideration in layout of clinic</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>□ Ergonomic computer workstations</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>□ Carts for the movement of materials or equipment</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>□ Stools to reduce strain related to standing for long periods</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>□ Proper footwear</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>See above for blood-borne pathogen controls</td>
<td></td>
</tr>
<tr>
<td>Task / Activity</td>
<td>Hazard</td>
<td>Risk Class (High, Med., Low)</td>
<td>Existing Controls (check ones currently available/in use)</td>
<td>Recommended Additional Controls (check those not in use, but to be added)</td>
<td>Follow-up (include person responsible and timeline for implementation)</td>
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</tr>
<tr>
<td>Clinic work</td>
<td>Tripping and falling</td>
<td>H</td>
<td>□ Regular maintenance of floors and carpets</td>
<td>□ Regular maintenance of floors and carpets</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>M</td>
<td>□ Slip-resistant flooring</td>
<td>□ Slip-resistant flooring</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>L</td>
<td>□ Well-lit areas</td>
<td>□ Well-lit areas</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>□ Lack of clutter</td>
<td>□ Lack of clutter</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>□ Good housekeeping and prompt spill cleanup</td>
<td>□ Good housekeeping and prompt spill cleanup</td>
<td></td>
</tr>
<tr>
<td>Use of electrical equipment</td>
<td>Shock; Tripping on cords</td>
<td>H</td>
<td>□ Ground fault circuit interrupters when used close to water source</td>
<td>□ Ground fault circuit interrupters when used close to water source</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>M</td>
<td>□ Elimination of use of long extension cords</td>
<td>□ Elimination of use of long extension cords</td>
<td></td>
</tr>
<tr>
<td>Driving</td>
<td>Collisions; Ergonomic strain when moving equipment into and out of vehicle;</td>
<td>H</td>
<td>□ Organization of trunk for easy moving of items</td>
<td>□ Organization of trunk for easy moving of items</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>M</td>
<td>□ Verify walking travel path is clear of tripping hazards</td>
<td>□ Verify walking travel path is clear of tripping hazards</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>L</td>
<td>□ Avoid use of personal communication devices and other distractions while driving</td>
<td>□ Avoid use of personal communication devices and other distractions while driving</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>□ Keep emergency supplies in vehicle</td>
<td>□ Keep emergency supplies in vehicle</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>□ Safe driver training</td>
<td>□ Safe driver training</td>
<td></td>
</tr>
<tr>
<td>Working alone</td>
<td>Violence or abuse</td>
<td>H</td>
<td>□ Restricted access to clinic</td>
<td>□ Restricted access to clinic</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Health issue while working alone</td>
<td>M</td>
<td>□ Communication devices</td>
<td>□ Communication devices</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Vehicle break-down</td>
<td>L</td>
<td>□ Adequate security</td>
<td>□ Adequate security</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>□ Panic alarms</td>
<td>□ Panic alarms</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>□ Working alone plan (summoning back-up as required)</td>
<td>□ Working alone plan (summoning back-up as required)</td>
<td></td>
</tr>
<tr>
<td>Workplace activities</td>
<td>Interpersonal conflict leading to stress</td>
<td>H</td>
<td>□ Policy of no tolerance of abuse</td>
<td>□ Policy of no tolerance of abuse or violence</td>
<td></td>
</tr>
<tr>
<td>Task / Activity</td>
<td>Hazard</td>
<td>Risk Class (High, Med., Low)</td>
<td>Existing Controls (check ones currently available/in use)</td>
<td>Recommended Additional Controls (check those not in use, but to be added)</td>
<td>Follow-up (include person responsible and timeline for implementation)</td>
</tr>
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<td>-----------------------------</td>
<td>---------------------------------------------------------</td>
<td>---------------------------------------------------------------------</td>
<td>------------------------------------------------------------------</td>
</tr>
<tr>
<td>Hazards related to impacts of aging on workers</td>
<td>Work-life imbalance</td>
<td>M L</td>
<td>or violence □ Training on interpersonal communications, de-escalation techniques □ Mediation □ Work accommodation for aging workers □ Counselling services</td>
<td>□ Training on interpersonal communications, de-escalation techniques □ Mediation □ Work accommodation for aging workers □ Counselling services</td>
<td></td>
</tr>
</tbody>
</table>

Reviewed by: ___________________________  Title: ___________________________  Date: ___________
## APPENDIX C - Sample Workplace Inspection Checklist

**Date:** ____________________________  
**Clinic treatment room/area:** ____________________________

**Inspected by:** ____________________________

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>No</th>
<th>Not Applicable</th>
<th>Details (location, etc.)</th>
<th>Corrective Action (include name of individual responsible and timelines)</th>
<th>Date Corrected</th>
</tr>
</thead>
<tbody>
<tr>
<td>Are all work areas clean and orderly?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Are doorways, aisles, hallways and stairwells free of materials and obstructions that could pose a tripping or evacuation hazard?</td>
<td></td>
<td></td>
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<tr>
<td>Is lighting adequate?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Is ventilation adequate?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Are ceiling tiles in place; no evidence of significant leaks or mould?</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>

### Office areas

**Are filing cabinet drawers properly loaded from the bottom, and do not pose a tipping hazard?**

**Are computer workstations configured in a manner to minimize ergonomic injury?**

**Are the chairs used for computer workstations adjustable?**

### Clinical Areas

**Are sharps containers available and not overfilled?**

**Is personal protective equipment available and ready for use? i.e. eye protection and gloves.**

**Are waterless hand cleaners available where required?**

**Are there appropriate containers available for disposal of biohazardous waste?**

**Are exam tables and other equipment functioning properly?**

### Material Handling and Storage

**Are storage shelves secure and not able to tip?**

**Are heavy items stored at optimal lifting heights (between shoulder and knees)?**

**Are carts available to move heavy items and materials?**
<table>
<thead>
<tr>
<th>Security</th>
<th>Yes</th>
<th>No</th>
<th>Not Applicable</th>
<th>Details (location, etc.)</th>
<th>Corrective Action (include name of individual responsible and timelines)</th>
<th>Date Corrected</th>
</tr>
</thead>
<tbody>
<tr>
<td>Are areas locked as required and do security devices (alarms and locks) work properly?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Emergency Response</td>
<td></td>
<td></td>
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<tr>
<td>Are emergency evacuation routes posted?</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Are emergency phones numbers readily accessible?</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Are adequate first aid supplies available?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fire</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Are fire exits marked and signs illuminated?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Are fire extinguishers, hoses and alarm pull stations clearly marked and free of obstructions?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Have fire extinguishers been inspected and bear inspection tags?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>In areas with fire sprinklers, are materials stored at least 18 inches from sprinkler heads?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Electrical</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Are electrical cords in good condition and free of damage and defects (including not frayed and grounding prongs in place)?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Are there enough electrical outlets / power bars to ensure they are not overloaded?</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Are power bars connected directly to an electrical outlet?</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Is the area around electrical panels free of obstructions?</td>
<td></td>
<td></td>
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<tr>
<td>Are electrical appliances CSA approved?</td>
<td></td>
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</tr>
<tr>
<td>WHMIS</td>
<td></td>
<td></td>
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<tr>
<td>Is the WHMIS inventory current?</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Is the binder of WHMIS MSDSs present and all MSDSs less than three years old?</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Are all controlled products labeled with WHMIS supplier or workplace labels?</td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>Documentation and Training</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Are previous workplace inspections retained and have deficiencies identified during previous inspections been rectified?</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>No</td>
<td>Not Applicable</td>
<td>Details (location, etc.)</td>
<td>Corrective Action (include name of individual responsible and timelines)</td>
<td>Date Corrected</td>
</tr>
<tr>
<td>-----------------------------------------------------------------------------------------------------------------</td>
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<td>-------------------------------------------------------------------------</td>
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</tr>
<tr>
<td>Are Job Hazard Assessments retained and are workers knowledgeable of their contents?</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Have workers received WHMIS training?</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>If workers work alone, are workers aware of working alone procedures and guidelines?</td>
<td></td>
<td></td>
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<tr>
<td>If there is a potential for violence, have workers received violence prevention awareness information?</td>
<td></td>
<td></td>
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<tr>
<td><strong>Other</strong></td>
<td></td>
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</tbody>
</table>

*Corrections should be prioritized to reflect level of risk.*
APPENDIX D - Sample First Aid Record

FIRST AID RECORD

Date of injury or illness:

Day Month Year

Time: AM PM

Date injury or illness REPORTED:

Day Month Year

Time: AM PM

Full name of injured or ill worker:

Description of the injury or illness:

Description of where the injury or illness occurred/began:

Cause of the injury or illness:

First aid provided? ☐ Yes ☐ No

Name of first aider:

First aider qualifications:

Emergency First Aider ☐ Emergency Medical Technician-Paramedic ☐
Standard First Aider ☐ Emergency Medical Technician ☐
Advanced First Aider ☐ Emergency Medical Responder ☐
Nurse ☐

Describe first aid provided:

Copy provided to worker ☐ Copy refused ☐ Injured worker initials ____________

Keep this record confidential and retain for at least 3 years from date of injury/illness is reported

---

### APPENDIX E - Sample Emergency Response Plan

**Company Name:**

**Address:**

<table>
<thead>
<tr>
<th>Potential Emergencies (check all that apply)</th>
<th>□ Fire</th>
<th>□ Infectious disease outbreak</th>
<th>□ Biological spill</th>
<th>□ Bomb threat</th>
<th>□ Suspicious package</th>
</tr>
</thead>
<tbody>
<tr>
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</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Location of Emergency Equipment</th>
</tr>
</thead>
</table>

Emergency equipment is located at: __________________

Fire Alarm: ________________________________________

Fire Extinguishers: ________________________________

Fire Hose: _________________________________________

Panic Alarm Button: ________________________________

AED: _____________________________________________

First Aid Kit (include type): _______________________

Other: ___________________________________________

<table>
<thead>
<tr>
<th>Workers trained in the use of emergency equipment (names)</th>
</tr>
</thead>
</table>

1. ___________________________________________________

2. ___________________________________________________

3. ___________________________________________________

<table>
<thead>
<tr>
<th>Qualified first aid providers and work hours</th>
</tr>
</thead>
</table>

1. _____________________________________________

2. _____________________________________________

3. _____________________________________________

<table>
<thead>
<tr>
<th>Emergency response training requirements</th>
</tr>
</thead>
</table>

Type of training | Frequency required

<table>
<thead>
<tr>
<th>Emergency external contact locations (nearest)</th>
</tr>
</thead>
</table>

- Fire station: _______________________________
- Ambulance: _________________________________
- Police: _____________________________________
- Hospital: _________________________________
- Other: _____________________________________

CALL 911

<table>
<thead>
<tr>
<th>Procedure to transport injured or ill worker</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Evacuation and rescue procedures</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Fire protection requirements</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Alarm and emergency communication requirements</th>
</tr>
</thead>
</table>

Other specific procedures
### APPENDIX F - Staff Incident Report & Investigation Form

| Employee Name: ____________________________ | Date of Incident: ____________________________ |
| Position: ____________________________ | Supervisor’s Name: ____________________________ |
| Location of Incident: ____________________________ | Time of Incident: ____________________________ |

### Description of Incident:

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________

### Body Part Injured:

**Type of Incident:**

- ☐ Infectious / biohazardous
- ☐ Slip/Trip/Fall
- ☐ Motor vehicle accident
- ☐ Sharp object
- ☐ Musculoskeletal – overexertion
- ☐ Temperature
- ☐ Musculoskeletal – repetitive motion
- ☐ Traumatic or stressful event
- ☐ Blood / body fluid exposure
- ☐ Needlestick
- ☐ Violence
- ☐ Chemical / harmful materials
- ☐ Electrical contact
- ☐ Fall from elevation
- ☐ Other ____________________________
- ☐ Fire / explosion
- ☐ Other ____________________________

### Manager and employee complete the following sections:

**Immediate causes (actions and conditions that contributed to the incident):**

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________

**Root causes (underlying causes that allowed Immediate causes to occur):**

- ☐ Controls unavailable
- ☐ Inadequate maintenance
- ☐ Health and safety rules not enforced
- ☐ Hazards not identified
- ☐ Inadequate supervision
- ☐ Unsafe design or construction
- ☐ Insufficient training
- ☐ Inadequate workplace inspection
- ☐ Other ____________________________
- ☐ Inadequate equipment
- ☐ Lack of written procedures or policies
- ☐ Other ____________________________

**Corrective action taken to prevent recurrence:**

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________

**Employee Signature:** ____________________________ | **Date:** __________

**Supervisor Signature:** ____________________________ | **Date:** __________

Forward completed copies of this form to the affected employee and management.

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23 Form developed by Wilco Health & Safety Ltd.
APPENDIX G - Sample Workplace Violence Prevention and Management Policy

Workplace Violence Prevention and Management Policy and Procedures

COMPANY NAME recognizes that there is the potential for workplace violence and other aggressive behavior to be directed at our employees. We will not tolerate behavior from anyone that intimidates, threatens, harasses, abuses, injures or otherwise victimizes our employees and will take whatever steps are appropriate to protect our employees from the potential hazards associated with workplace violence. We are committed to providing our employees with an appropriate level of protection from the hazards associated with workplace violence.

Management Responsibilities

- Inform workers if they are working in an area where there is a potential for violence and identify any risks that are specific to that area.
- Ensure that appropriate procedures are in place to minimize the risk to our workers from violence.
- Ensure that workers are trained in recognizing and responding to situations involving workplace violence.
- Ensure that every reported incident of workplace violence is investigated and potential areas for improvement are identified.

Worker Responsibilities

- Workers are required to be familiar with and follow the procedures that are in place to protect them from workplace violence.
- All workers must participate in the instruction of workplace violence prevention.
- Workers are required to immediately report all incidents of workplace violence to their supervisor or (identify alternate) ________________________________ e.g. manager.
- Workers are responsible for participating in work site hazard assessments and implementing controls and procedures to eliminate or control the associated hazards.

No worker can be penalized, reprimanded or in any way criticized when acting in good faith while following the procedures for addressing situations involving workplace violence.

_____________________________________________  ________________________________
Signature of company owner/president  Date