



March 28, 2014

Amalia Neidhardt, Steve Smith, and Deborah Gold
Division of Occupational Safety and Health
Suite 1901, 1515 Clay Street
Oakland, CA 94612

Dear Cal/OSHA staff:

Re: Discussion draft, Hotel and lodging housekeeping

Worksafe is pleased to submit initial comments about the Cal/OSHA discussion draft responding to Petition 526. As you know, we have contributed to the process at the Occupational Safety and Health Standards Board, as well as your advisory committee meetings.

Our independent non-profit is dedicated to protecting people from job-related injuries, illnesses, and death. In coalition with unions, workers, community, environmental and legal organizations, and scientists, Worksafe engages in campaigns to eliminate hazards from the workplace. We advocate for protective worker health and safety laws and effective remedies for injured workers. We educate policymakers about the magnitude of workplace hazards and their effects on working people and communities, and propose solutions that focus on prevention. Much of our focus is on low-wage immigrant workers, like hotel housekeepers, and their experiences.

Our comments try to follow the outline of the draft document used at the February 27, 2014 meeting. In preparing them, we have found some leads to additional resources to which we want to refer the Division. We will send that information on as soon as possible.

General comments

We support the UNITE-HERE petition for a regulation to cover hotel housekeepers' hazards. There are noticeable similarities between those hazards and the ones affecting healthcare workers, for which the state is about to get a "safe patient handling" regulation. There is plenty of evidence that hotel housekeepers have high musculoskeletal injury rates and face other hazards. That evidence has led diverse organizations -- individual hotel chains and hotel housekeeping groups, government health and safety agencies, and insurance companies -- to recognize the need for preventive

action. In earlier submissions, we documented this recognition and related recommendations for effective ergonomic solutions. Some are being followed in California already. Attached you will find a photo of a fitted sheet, used on a hotel bed in El Segundo, California. It was taken March 22, 2014 at the Hyatt House there.

As a sector, if California's hotel industry were following existing regulations, we would not have heard so many accounts to the contrary at the Board and Cal/OSHA meetings. The evidence you heard from workers, lawyers, physicians, ergonomists, academics and others showed that the Injury and Illness Prevention Program regulation (s. 3203) and Repetitive Motion Injury regulation (5110) are not sufficient to protect workers in this sector. Nor do they give their employers effective incentive or requirements to achieve that goal. Something else is needed.

Cal/OSHA and the Occupational Safety and Health Standards Board have mandates to protect worker health and safety. Therefore, any regulation about hotel housekeepers' hazards needs to emphasize prevention, rather than individual approaches that limit harm. It needs to be reasonably specific, given the resistance from some employers to even acknowledge the hazards or to agree that a regulation is appropriate.

We also want to emphasize the need to involve affected workers and their representatives in any processes that are established in a regulation. Again, studies show that real worker engagement and participation in identifying and fixing job-related hazards leads to effective solutions and many other (perhaps less tangible) benefits to the workers and their employers.

Finally, laws and regulations need to be in clear language. They need to say who is responsible for what, using the active -- not passive -- voice. Health and safety regulations also need to explicitly state the employees' rights to know about hazards and participate in identifying and correcting them. The discussion draft contains a fair bit of unclear language, without naming the employer's responsibilities in some places. We addressed that in several places, and ask Cal/OSHA to review its entire proposal using that lens.

The specific comments are attached in Appendix 2. Please let me know if you have questions.

Sincerely

A handwritten signature in cursive script, appearing to read "Dorothy Wigmore".

Dorothy Wigmore, MS
Occupational Health Specialist

Appendix 1

Fitted sheet in a California hotel

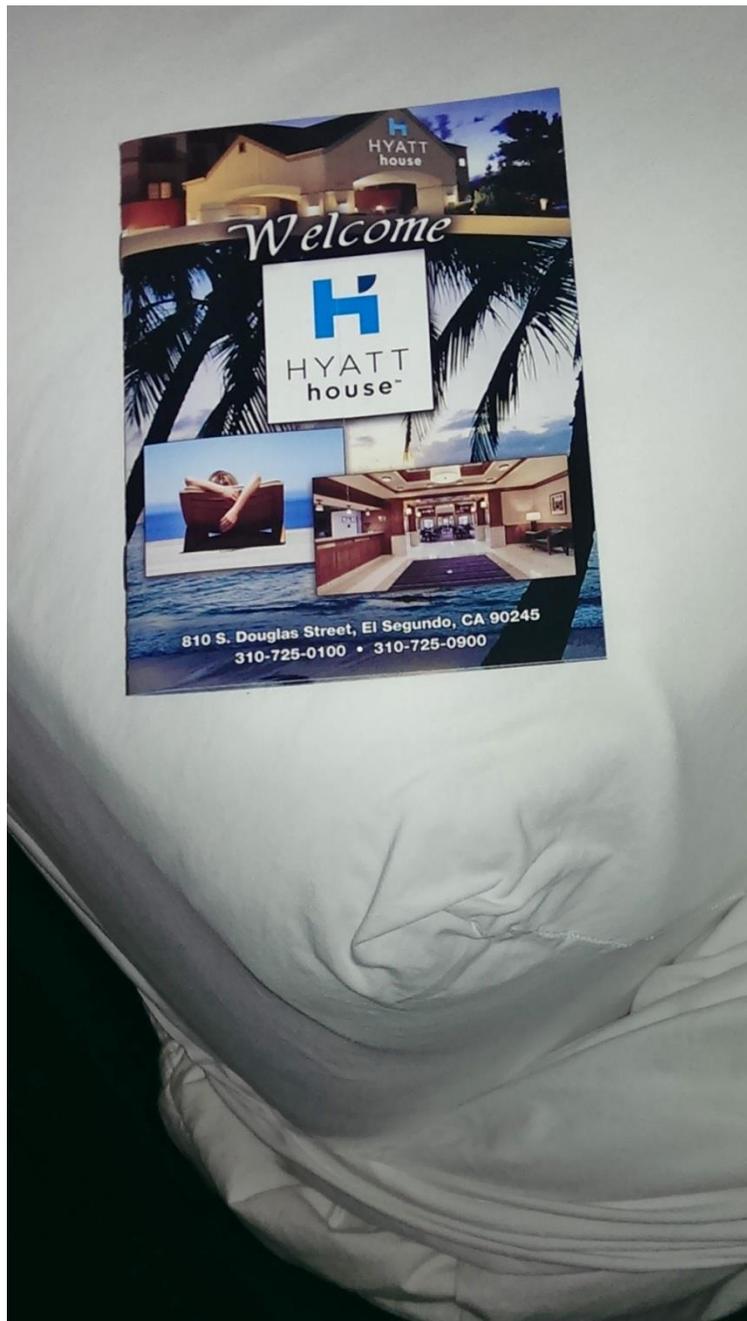


Photo taken
March 22, 2014 at
the Hyatt House,
El Segundo,
California

Appendix 2

***Specific comments about the
Cal/OSHA discussion draft about
hotel housekeepers' hazards and
musculoskeletal injuries***

Scope and application

We agree that the regulation should apply to the named types of establishments. After testimony at the February meeting, we want to ensure that housekeeping activities are covered, wherever they are done in hotels, motels, etc.

Definitions

This section needs more definitions, and changes to the proposed definitions.

To start, as discussed at the February 27 meeting, musculoskeletal injury (MSI) needs to be defined. It is important to capture acute and cumulative effects and to recognize how job-related hazards can aggravate previous injuries or traumas.

Recommendation 1:

1. We offer the definition used by occupational health and safety regulations in British Columbia and Manitoba, Canada [<http://www2.worksafebc.com/publications/ohsregulation/Part4.asp?ReportID=18001> and <http://safemanitoba.com/regulations-view/Part%2008%20-%20Musculoskeletal%20Injuries%20and%20Ergonomics>]:

"musculoskeletal injury" or "MSI" means an injury or disorder of the muscles, tendons, ligaments, joints, nerves, blood vessels or related soft tissue including a sprain, strain and inflammation, that may be caused or aggravated by work.

We support the addition of other definitions and, in general, those recommended by the University of San Diego Center for Public Interest Law (CPIL) and the UNITE-HERE petition. Having more definitions is consistent with Cal/OSHA's proposed safe patient handling regulation, which has 10.

Language also is important in occupational health and safety. If this is truly a prevention program, then the word "prevention" should be used regularly, rather than "controls". See the prevention triangle in Appendix 3.

Recommendations 2 - 4:

2. Use the CPIL and UNITE-HERE definitions.
3. Use the phrase "prevent and reduce" instead of "control" and "prevention practices" instead of "controls".

4. Use the prevention triangle as a non-mandatory appendix, to explain the acceptable approach to prevention practices.

Housekeeping musculoskeletal injury prevention program

This discussion draft uses the word “program”, rather than the word “plan” in the proposed safe patient handling (SPH) regulation. Both proposals allow the specific program/plan to be incorporated in the existing Injury and Illness Prevention Program (IIPP) or “maintained as a separate document”. The discussion draft uses a different phrase than the proposed SPH regulation to link the plan/program to the IIPP. The SPH proposal also requires a policy statement about the purpose of that plan, which is standard in similar regulations in other jurisdictions.

Consistent and clear wording makes Cal/OHSA enforcement easier, while increasing understanding by employers, workers, unions, health care professionals, etc.

The general requirements about the program/plan should be stated first, followed by details about job hazard analysis, investigations, etc. This makes general or overall requirements clear. Having specifics later makes it easier to follow the regulation’s requirements. The ensuing comments are organized according to the elements as listed below.

The elements include evaluation. Any program needs to be evaluated for its effectiveness and changes that are needed to make it better. (This is different from the occupational hygiene use of “evaluate”, which is used in this draft document to mean “assess” or “determine”.) We suggest some resources to do this.

Recommendations 5 - 7:

5. Any regulation for hotel housekeepers should say: “As part of the Injury and Illness Prevention Program (IIPP) required by Section 3203, ...” and “The Plan (or program) shall be maintained and implemented at all times for all housekeeping tasks”.
6. Change the requirement to:
.. each employer covered by this section shall establish, implement, maintain, and evaluate an effective, written ...”

The program/plan shall include at least the following:

- (1) A statement of the employer's policy and commitment to protect the health and safety of housekeepers, with an emphasis on prevention.

- (2) The names, titles and responsibilities of the employer, managers and supervisors for this program/plan.
- (3) The processes, methods and procedures to engage employees and their representatives to participate fully in all aspects of the program/plan.
- (4) Processes, methods and procedures to identify and assess hazards. This includes hazard reporting and job hazard analysis (JHA) procedures that identify and assess housekeeping hazards and lead to effective prevention and reduction of housekeeping hazards.
- (5) The principles that will be used to prevent and reduce housekeeping hazards, and the methods and/or procedures to correct hazards identified by JHAs or other means. This shall include procedures to evaluate the effectiveness of prevention measures.
- (6) Training required of employees, supervisors, managers and others involved with housekeeping, and the labor-management committee members, about the program/plan, JHAs, and prevention and reduction of hazards.
- (7) Evaluation at regular intervals and after changes that may affect the program/plan and housekeeping hazards. le.
- (8) Records that must be kept, for how long, and to whom they will be made available.

7. To the non-mandatory appendix, add these documents that will help with programs:

- the Health and Safety Smart Planner, available at <http://www.iwh.on.ca/smart-planner>, and
- ***Guide to evaluating the effectiveness of strategies for preventing work injuries***, by NIOSH, available at <http://www.cdc.gov/niosh/docs/2001-119/>.

Worker participation and engagement

The literature about effective prevention of MSIs and other health effects, and the hazards behind them, is clear. Workers and their representatives must be involved in meaningful, engaged ways. Joint health and safety committees are common in other jurisdictions, as part of the way to accomplish this. So too are requirements for “worker participation”.

Therefore, we also support mandatory participation for workers and their representatives, and mandatory labor-management health and safety committees (consistent with the rules of Section 3203) that focus on the requirements of whatever regulation is proposed. The Institute for Work &

Health and University of Waterloo have a very useful blueprint available for practical guidance that should be a non-mandatory appendix.

Recommendation 8:

Add a sub-section to the effect that:

To ensure effective implementation of this program/plan, the employer shall establish a labor-management health and safety committee that meets the requirements of section 3203(c) and fulfills the requirements of this regulation. The committee shall have four or more members, at least half of them representing housekeepers. The housekeeper representatives shall be elected in a fair and democratic process by housekeepers who are not associated with the management of the workplace. The employer shall not retaliate against a committee member for anything related to their committee activities or other health and safety activities.

Recommendation 9:

To the non-mandatory appendix, add this document:

- Institute for Work & Health, *Participative Ergonomic Blueprint*, available at <http://www.iwh.on.ca/pe-blueprint>.

Finding and assessing hazards

We support the requirement for a job hazard analysis (JHA) that provides an integrated and overall understanding of the hazards facing housekeepers. There should be a time line for getting a JHA done, and requirements to update the analysis at regular intervals or before there are changes to equipment, tools, workload, or other factors that may cause or aggravate hazards. The Alberta, Canada regulation about hazard assessment provides useful parameters about when JHAs should be done because of changes (see <http://www.humanservices.alberta.ca/SearchAARC/1366.html>).

Section (2)(C) could be re-worded using the British Columbia regulation as a framework (see <http://www2.worksafebc.com/publications/ohsregulation/Part4.asp?ReportID=18001>). They include the types of hazards beyond repetitive motion that are linked to housekeepers' MSIs, especially those related to fatigue and workload. Note that postures can be awkward, static or both (unlike the current Cal/OSHA draft wording).

JHAs are necessary but not sufficient. Effective prevention also requires reporting processes and procedures for hazards, near-misses and reported injuries and illnesses. The two approaches should go hand-in-hand, and need to be linked to requirements to fix hazards, however they are discovered or

identified. There also should be an explicit statement forbidding employer retaliation against housekeepers for reporting injuries, illnesses or hazards.

Recommendations 10 - 11:

10. Change current section (c)(2) to the appropriate number, and its content to say something like this:

- (1) In consultation with the labor-management committee, the employer shall establish procedures and processes for:
 - (A) housekeepers to report hazards, near-misses, injuries and illnesses, recording the information, and analyzing the results;
 - (B) job hazard analysis (JHA) to identify and assess all housekeeping hazards, that lead to effective prevention and reduction of housekeeping hazards; and
 - (C) ensuring that housekeepers who report hazards, near-misses, injuries or illnesses, or those who participate in JHAs, will not be retaliated against.
- (2) The procedures and processes to analyze JHAs and reports of hazards, near-misses, injuries and illnesses shall include investigations and documentation of:
 - (A) the task(s) involved, how they were supposed to be done, how they were done, and reasons for the differences, if any;
 - (B) the prevention measures that should have been present and used, if they were available and in good working order, and, if they were not available, in working order, or used, the reason(s) for that; and
 - (C) the employees', supervisors' and managers' opinions about prevention measures that would have prevented the injury or hazard, including procedures, tools, equipment and/or work practices.
- (3) Following the analysis or the JHA or other reports about hazards, injuries, and illnesses, the employer shall ensure that:
 - (A) the results are provided to the labor-management committee and that the committee has the opportunity to meet and make recommendations about how to prevent or deal with the reported hazards, near-misses, injuries, and illnesses; and
 - (B) the results of JHAs and analysis of reported hazards, explained in clear language, and in the languages spoken in the workplace, and posted in places accessible to housekeepers, are posted in a place accessible to housekeepers within 14 days of being completed, and left up for at least 30 days.
- (4) The employer shall ensure that the initial JHA is done within 90 days of this regulation coming into effect, or before a new establishment

subject to this regulation opens. It also shall be reviewed and re-done [as described in (2)(E)].

(5) JHA procedures shall include:

(A) Effective methods and processes to ensure housekeepers and their representatives participate in meaningful ways to prepare, implement, and analyse the results of, JHAs, and are given paid work time to do so.

(B) Analysis of the design, material handling and performance of tasks related to all housekeeping activities, including, but not limited to:

1. making beds;
2. cleaning, scrubbing, polishing, vacuuming, and related activities;
3. obtaining and moving supplies, linen, tools and equipment into rooms, inside them, from rooms, and outside them (including distances travelled and carts or other devices to move or carry items);
4. removing trash, dishes and other items from a room and getting them to their appropriate destination(s); and
4. moving furniture and other items in the room to carry out tasks.

(C) At a minimum, identifying and assessing the hazards associated with:

(a) the physical demands of work activities, including

- (i) force required (especially lifting and tucking),
- (ii) repetition,
- (iii) duration,
- (iv) static and awkward postures, and
- (v) local contact stresses;

(b) aspects of the workplace layout and condition, including

- (i) working reaches,
- (ii) working heights (especially those above shoulders and below knees),
- (iii) seating,
- (iv) floor surfaces, and
- (v) possibilities for slips, trips, falls, contact with or being struck by/against items;

(c) the characteristics of objects handled, including:

- (i) size and shape,
- (ii) load condition and weight distribution, and

- (iii) container, tool and equipment handles;
 - (d) the environmental conditions, including noise, temperature and humidity; and
 - (e) the following characteristics of the organization of work:
 - (i) work-recovery cycles,
 - (ii) task variability,
 - (iii) workload imbalance, and
 - (iv) work rate.
- (D) Written notification of housekeepers, the labor-management committee, and the housekeepers' representative(s), if any, about all JHAs (process and results). Copies of any JHA, or similar activities following reports of hazards, injuries or illnesses, shall be treated as a record of health and safety monitoring, in accordance with Section 3204.
- (4) The employer and the labor-management committee shall review the procedures and processes for reporting and recording hazards, near-misses, injuries and illnesses annually, with the JHA process and results, or within 30 days after becoming aware of problems with the reporting system(s). The review shall include analysis of the 300 logs and the 301 logs.
- (5) The employer shall ensure that the JHA is repeated:
- (a) at reasonably practicable intervals to prevent the development of unhealthy and unsafe working conditions for housekeepers,
 - (b) when a new work process is introduced,
 - (c) when a work process or operation changes,
 - (d) before the construction of significant additions or alterations that may affect housekeeping, or
 - (e) as needed, based on an evaluation of activities, tasks or other workplace factors that have contributed to housekeeper injuries and illnesses, including the analysis of injuries and illnesses, and reports of hazards, near-misses, injuries and illnesses.

11. Use the SOBANE assessment materials that the Canadian Standards Association included in their latest standard, *Workplace ergonomics - A management and implementation standard*. Translated into English as part of a project funded by the Manitoba Workers Compensation Board, they are in the public domain at http://www.ccohs.ca/hscanada/contributions/seeing_the_workplace_guide08.pdf (see SH.9 and SH.10). The French-language document specifically for hotel housekeepers, which includes the translated materials, is *Guide de concertation Déparis. Femmes de chambres* .

Fixing hazards

This part of the regulation should start with principles and move on to methods and/or procedures, and then evaluation of the fixes. As recommended earlier, “prevention measures” needs to be used regularly.

Recommendations 12 - 13:

12. There should be requirements to the effect that:

The employer is responsible for fixing hazards, and that the most effective approach is to prevent them through informed substitution and/or elimination of the hazard, while the last resort is limiting the harm through administrative measures and personal protective equipment. (NOTE: See the prevention triangle in Appendix 3 for an explanation.)

Methods and/or procedures to correct hazards shall include:

- (A) how to identify, assess, implement and evaluate tools, equipment, work practices and the design and organization of the work;
- (B) procurement, inspection, maintenance, repair and replacement procedures for tools and equipment;
- (C) procedures to ensure that sufficient and appropriate tools and equipment are provided to meet the needs of each housekeeper;
- (D) an effective means to allow full and engaged participation by affected housekeepers, their representatives and the labor-management committee to identify, assess, implement, and evaluate prevention measures;
- (E) evaluating the longer-term effectiveness of prevention measures, and correcting any hazards that still are present.

13. Add to the non-mandatory appendix examples of solutions from elsewhere. If the documents are in another language than English, see if the authors have translations (e.g., the French INRS or Quebec documents mentioned in our earlier submission). If the documents cannot be translated, use the graphics about appropriate “fixes”.

Training

Workers, supervisors and managers need training about this program/plan. All involved need to understand the “rules” and the principles of finding and fixing hazards. The labor-management committee also needs training about its role and responsibilities. All training should be done “on the clock”, i.e. paid work time.

Supervisors and managers need to be competent so they can implement the program/plan, understand what retaliation is and that it is not acceptable, and demonstrate to workers how to use tools and equipment brought in to prevent or reduce hazards. They also need to be able to help housekeepers who may have difficulties with the tasks, tools and/or equipment.

Workers must get training about their rights to know about hazards and to participate in the program/plan, as well as reporting procedures for hazards, near-misses, injuries and illnesses. Effective training starts with their experiences and includes their ideas and feedback.

Those doing the training need to know how to provide effective education and the ins and outs of the program/plan. They also need to know how it is being implemented in that workplace. That means there should be a statement about the purpose of the training, as well as enumeration of its elements.

There are some good training materials available that are relevant to housekeepers' health and safety. However, none have a made-in-California focus. One (the Ohio State University materials developed with OSHA funds, available at https://www.osha.gov/dte/grant_materials/fy10/sh-20998-10.html) was done before research about long-handled tools, so it is missing that valuable component in an otherwise good set of materials that are already translated into Spanish. Others use phrases that are not consistent with the discussion draft or the language of job hazard analyses. Therefore, we suggest Cal/OSHA get training materials developed through its WOSHTEP program.

Recommendations 14 - 17:

14. Revise the introduction to this section to read something like:

The employer shall provide training to ensure that housekeeping employees, their supervisors and managers, and the labor-management committee understand:

- (A) the program/plan,
- (B) the hazards and injuries common in housekeeping tasks,
- (C) the procedures to report injuries, illnesses and hazards without fear of retaliation,
- (D) the principles of correcting hazards, and
- (E) the rights, roles and responsibilities of all involved in the program/plan, including the employees' right to refuse unsafe or unhealthy work and the specific procedures for doing so.

It shall be done using methods and the language that is easily understood by those being trained.

15. Lay out the elements of training before saying when it must be done. This could be something like:

The employer shall provide training that includes at least the following, adapted to the needs of the housekeepers, supervisors and managers, and the labor-management committee:

- (A) the elements of the employer's housekeeping musculoskeletal injury prevention program/plan, including roles and responsibilities;
- (B) how and where to get a copy of the program/plan;
- (C) how to identify and report concerns, and provide feedback, about anything in the program, including the importance of reporting, and how to report housekeeping hazards, injuries and illnesses without fear of retaliation;
- (D) body mechanics, without blaming employees for factors related to their age, size, shape, gender, etc. that may affect body mechanics; and
- (E) the tools, equipment, work practices and organization of the work that is designed to prevent and reduce injuries and hazards, and how to use them.

16. Then say when it must be done. This could be something like:

The employer shall provide training outlined in sub-section "x" at least annually and when:

- (A) the program/plan is first established;
- (B) employees, supervisors or managers are given new job assignments for which they have not received all the training required;
- (C) new tools, equipment or work practices are introduced, ensuring that the training deals with the new tools, equipment or work practices and how they are to be integrated with existing tasks; and
- (D) the labor-management committee requests it.

In addition, the employer also shall train managers and supervisors about:

- (A) their specific roles and responsibilities, as well as those of employees;
- (B) how to identify all categories of housekeeping hazards, including defective equipment and tools;
- (C) the employer's hazard correction procedures;

(D) how to replace defective equipment and tools, and/or to obtain additional tools and equipment that meet the needs of individual housekeepers; and

(E) how to demonstrate and communicate effectively about the use of prevention measures (including equipment and tools) and the work practices that are designed to prevent and reduce hazards, injuries and illnesses.

17. Cal/OSHA should use WOSHTEP to develop made-in-California training materials that can be used to fulfill training requirements in this regulation. They should be done in English, Spanish and other languages, integrating existing training resources and regulatory requirements. Some existing materials not already referred to are in Appendix 3.

Records

We generally support the proposed requirements about records. There should be more documents that are considered records, and they should be made available to additional people or organizations. It might help to spell out the time lines and other requirements in the referenced sections.

Recommendations 18 - 19:

18. Change what is now (e)(1) to include observations or other information collected, rather than just measurements.

19. Ensure that the employer shall provide copies of all records to the labor-management committee and NIOSH too.

Appendices

Recommendation 20:

Cal/OSHA should carefully consider using mandatory appendices where possible. This will make it easier to enforce the regulation and give clearer guidance to employers, committees, workers, and their representatives. The mandatory appendix should be preceded by an explanation about the documents and their expected use(s). It also should include a provision that employers can use other documents, provided they are at least as effective as the mandatory ones, and that they document how the alternative(s) meet the ALAEA requirement.

As the CPIL has suggested, the purpose of any non-mandatory appendix should be spelled out. We also support their suggestion of a mandatory brochure, available in relevant languages, and suggest it follow the outline of

the Washington State one, available at <http://www.lni.wa.gov/Safety/Topics/AtoZ/InjuryFS/PDFs/HotelsWMSDs.pdf>.

Whether mandatory, or non-mandatory, any document that may be updated should be named as “the latest edition” or something to that effect.

We have other suggestions for non-mandatory appendices. Some of them need to be adapted for California rules and language (e.g., “job hazard analysis” instead of “risk assessment”, the phrase used in some). They include:

- WorkCover New South Wales’ *Hotel/motel operators’ risk assessment tool for housekeepers’ tasks* available at http://www.workcover.nsw.gov.au/formspublications/publications/Documents/hotel_motel_operators_risk_assesment_tool_for_housekeepers_4562.pdf; and
- WorksafeBC’s *Ergonomic risk factor identification and assessment. Task list worksheet*, for housekeeping, available at http://www2.worksafebc.com/pdfs/healthcare/rasamples/rasample_cleaner.pdf.

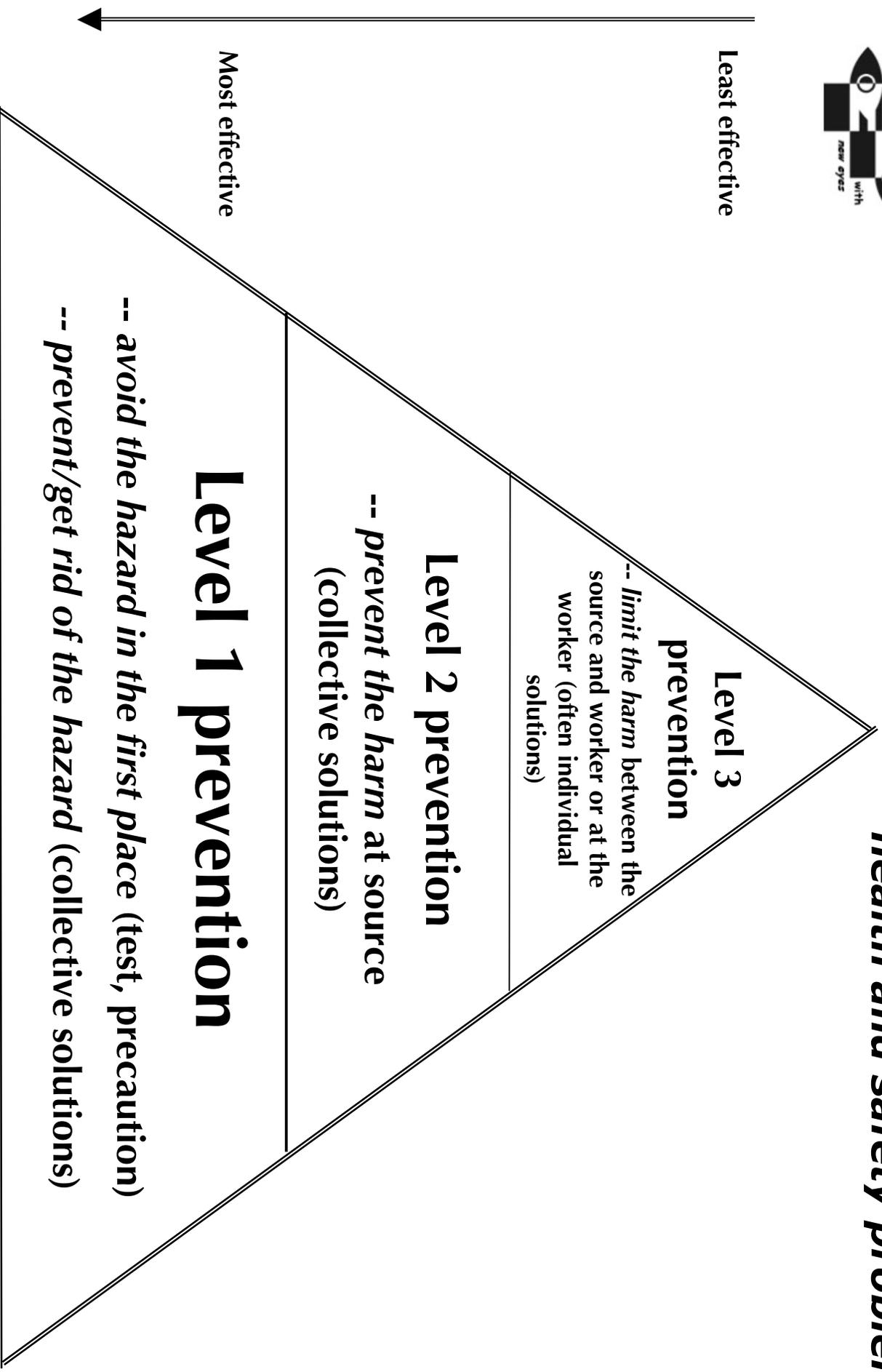


Appendix 3

The prevention triangle and other public domain training materials



The prevention triangle -- principles for solving health and safety problems



* What happens if it's upside down (and you just limit the harm)? It falls over!

What's behind the prevention triangle?

The triangle borrows two concepts from the environmental movement.

Informed substitution is the principle about getting rid of toxic substances whenever a healthier and/or safer substance is available. Replacements are non-toxic or much less hazardous materials. It also describes changes about how things are done, using a different technology or re-organising the task to reduce or get rid of hazards. For more, see www.cleanproduction.org and www.turi.org.

The **precautionary principle** -- "better safe than sorry" -- is part of several environment and health and safety laws. The idea is that there must be proof that something is not harmful before it is used, rather than using workers or the community as guinea pigs and only taking action when problems appear. For more information, see the European Environment Agency's <http://latelessons.ew.eea.europa.eu/>.

Health and safety specialists have used the word "controls" to describe changes or solutions that reduce exposure but don't get rid of the hazard. But their language is changing to emphasise prevention as opposed to putting up with a hazard. The Belgians offer a very useful way to do this, with levels of prevention (see <http://www.meta.fgov.be>).

Level 1 prevention is best. It gets rid of a hazard or avoids introducing a new one (when you use the precautionary principle). This is where substitution using non-toxic alternatives is most effective. Public health practitioners would call this primary prevention.

Level 2 prevention (a.k.a. engineering solutions or controls at the source) limits the hazard at its source (reducing its spread). The hazard is still there but ways to prevent harm include:

- ventilation enclosing the hazard, taking it all out of the workplace (without damaging the environment);
- enclosures to reduce noise levels;
- isolating the hazard or the people who may be exposed to it; and
- wet methods (with dusts).

Level 3 prevention only limits or reduces harm by putting something between the worker and the hazard source.

Changes or "controls" along the path between the hazard and workers, include:

- local ventilation that does not enclose the hazard;
- general ventilation;
- mechanical guards/devices; and
- some administrative controls (e.g. breaks).

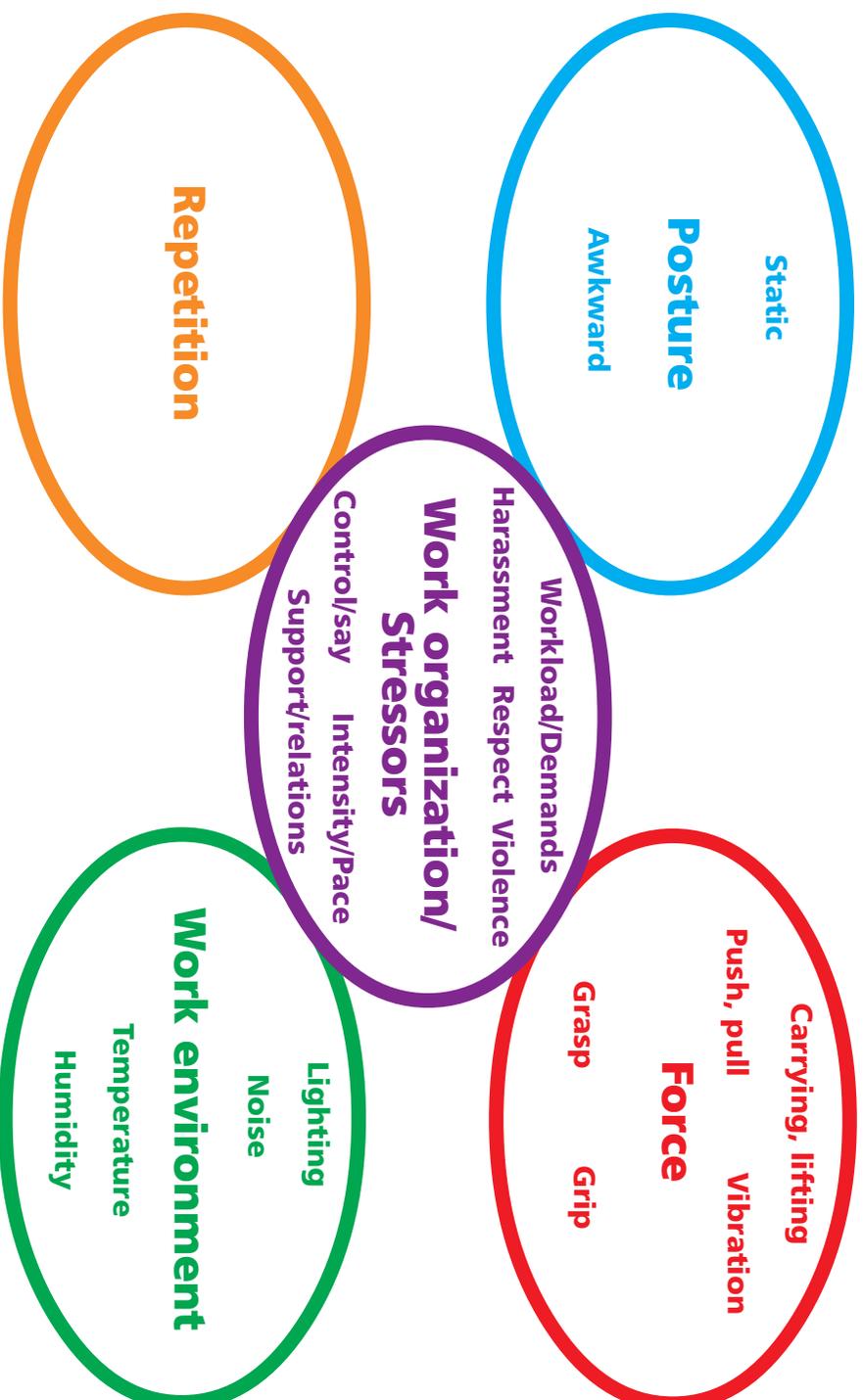
At the worker (controls at the worker), Level 3 prevention includes personal protective equipment/clothing (PPE) and:

- some administrative activities (e.g. rotating workers, because it just spreads the hazard around and may even make it worse for some, especially if hazards to back are involved);
- work procedures, training and supervision, emergency plans;
- housekeeping, repair and maintenance programmes, and hygiene practices/facilities; and
- things to take care of yourself (especially when you're stressed).

These solutions are the least acceptable way to try to fix a problem, although there are times when they're needed.



Ergonomic hazards - the problems behind our aches and pains





Ergonomic hazards lead to musculoskeletal injuries (MSIs)

Ergonomics can be defined as the “law of work”. The approach is to **fit the job to the worker**, not the other way around. It’s about how much people are expected to do with their bodies and brains. As a Canadian ergonomist says, workers are expected to do things on the job that robots don’t do.

When an ergonomic approach is not used to design work activities, tools and/or equipment, you may be exposed to (your body comes in contact with or must deal with) a variety of problems. The odds are that you will end up with “aches and pains”, “sprains and sprains”, musculoskeletal injuries (MSIs) -- whatever you call it, it’s a lot of pain.

When wear and tear reaches a certain point, the result is some kind of disability. It can be short-term but many take a long time to heal, partly because the hazard is not fixed. Sometimes, the damage is permanent.

Whether it lasts a long time or a short time, an MSI affects life on and off the job. Everyday activities can be difficult or impossible -- opening a jar, chopping an onion, driving a car, lifting a child, turning a door knob, getting dressed, and holding a toothbrush.

These injuries, and their often-unseen effects, can be prevented -- by dealing with the hazard(s). There are different types of ergonomic hazards; here are some definitions and examples:

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Force:

The amount of pressure a person uses for a task. It includes pushing, pulling, lifting and even using a computer keyboard. Force puts a strain on the body and can cause damage to body parts or tissues.

Contact stress is one type of force. This may occur if a tool handle or edge digs into the soft tissue of the palm of the hand, the hand is used as a hammer, or someone works on their knees. The contact concentrates force on a small area, putting pressure on those tissues. It may cause injuries.

Vibration is another kind of force. It is found in vibrating tools and equipment. When vibration affects the hands and arms, it can

damage the nerves and/or blood vessels so that a person’s hands/fingertips go numb and cannot be used easily.

Examples of force include:

- lifting heavy boxes
- the grasp or grip used to hold something (avoid pinch grips)
- computer keyboard work
- jack hammer (vibration)
- resting the palm of hand or wrist on a tool handle or edge of something

Posture:

Awkward posture is working in positions that feel uncomfortable. It could be working with your arms over your head,

twisting, bending or reaching, or working with a bent back, bent wrist, etc. This can stretch a person’s physical limits, compress nerves and irritate tendons.

Static posture involves working with your body or (part of) a limb in one position for a long time. This includes constant standing or sitting or holding your arm, neck or shoulder in one position. Doing this can restrict blood flow and damage muscles.

Examples of posture hazards include:

- working with arms above your head (awkward; also static if it lasts)
- working with bent joints (awkward; also static if it lasts)





- standing or kneeling for a while (static)
- working with your neck cricked to see the computer screen (awkward and static)

Repetition:

This means doing the same motion over and over, without adequate rest -- even mini- breaks. Repetition overuses the same muscles, tendons, and other soft tissues. It can irritate tendons and increase pressure on nerves and may cause permanent damage.

Examples of repetition include:

- traditional assembly line work
- data entry
- piecework sewing

Work environment:

These hazards are part of the general work environment; as energy sources, they also are physical hazards such as humidity, temperature, noise and light.

People working in cold temperatures can get stiff and sore; they may drop things. Noise causes deafness and interferes with our ability to hear and understand people's words and other sounds. Poor lighting can lead to trips or falls and poor postures as we try to read things (e.g. with glare).



Examples of ergonomic work environment hazards include:

- working with cold objects
- outdoors work during the summer
- working indoors with low or high humidity
- work with or near loud machinery or equipment
- poor lighting (too much or little)

Stressors/work organisation:

These hazards "stress us out". But it is not easy to see these invisible aspects of work.

Stressors include:

- how much say or control we have about our work;
- how people and technology work together to produce a product or provide a service;
- too much or too little workload or demands on our body and mind; and
- the amount of respect and support we (don't) get on the job.

Job-related stressors are the result of choices those in authority make. They cover "technical aspects" of work -- production methods, technology -- and the "people aspects" -- how people will use the technology, how our skills and knowledge are used (or not), social interactions, etc.

Stressors or work organization hazards that are important in ergonomic issues include:

- pace of work
- workload
- staffing levels
- hours of work
- supervision style
- production quotas
- deadlines
- number and length of rest breaks
- flexibility allowed for family and other responsibilities
- violence (including harassment and discrimination)

Work organization hazards/stressors are at the center of the ergonomic hazards chart. That's because they are often the "why?" behind many other hazards. Studies also tell us that "stress" sets us up for MSIs in the neck, shoulders and lower back.

For example, if the speed of a job is increased, workers may have more repetitive motions, perhaps in more static postures. Deadlines or production quotas can cause muscles to tense up, adding to "wear and tear" on soft tissues and leading to MSIs.

To figure out how stressors and other ergonomic hazards are connected, try asking:

1. *But why? (up to five times);* or
2. *What makes the symptoms worse?*