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COMPLIANCE SOLUTIONS

CAL/OSHA MANUAL FOR MEDICAL OFFICES

Prepared in Consultation with Cal/OSHA Experts and Medical Professionals.

Note: This manual provides extensive coverage of various safety regulations for medical facilities mandated by Cal/OSHA. The information has been mainly collected from California Division of Occupational Safety and Health (Cal/OSHA) and Occupational Safety and Health Administration (OSHA). Additional information has been collected from the National Institute of Safety and Health (NIOSH) and the Center for Disease Control (CDC). It is our intention to make CAL/OSHA compliance easy for all facilities. The manual has comprehensive information for training purposes only. A training outline and an OSHA test can be found in the welcome kit to assist in training your employees. Cal/OSHA mandates employers to complete safety plans under various standards. The documentation kit accompanying this manual has all the plans. Please complete them for compliance.

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v2026.A

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Chapter 1: Introduction to OSHA and Cal/OSHA

Congress passed the Occupational Safety and Health Act (OSH Act) of 1970 "to assure so far as possible every working man and woman in the Nation safe and healthful working conditions and to preserve our human resources." Under the OSH Act, OSHA was established within the Department of Labor and was authorized to regulate health and safety conditions for all employers, with few exceptions.

Exceptions to OSH Act include:

- the self-employed,
- family farms where only immediate family members of farm employers are employed,
- worker conditions that are regulated under worker safety or health requirements of other federal agencies, and
- employees of state and local governments (some states have their own occupational safety and health plans that cover these workers).

Purpose of OSH Act

Under the OSH Act, OSHA was created to:

- encourage employers and employees to reduce workplace hazards and to implement new or improve existing safety and health standards,
- provide for research in occupational safety and health and develop innovative ways of dealing with occupational safety and health problems,
- establish "separate but dependent responsibilities and rights" for employers and employees for the achievement of better safety and health conditions,
- maintain a reporting and recordkeeping system to monitor job-related injuries and illnesses,
- establish training programs to increase the number and competence of occupational safety and health personnel, and
- develop mandatory job safety and health standards and enforce them effectively.

State Plans

Section 18 of the Occupational Safety and Health Act of 1970 (the Act) encourages States to develop and operate their own job safety and health programs. OSHA approves and monitors State plans.

There are currently 22 States and jurisdictions operating complete State plans (covering both the private sector and State and local government employees) and 5 - Connecticut, Illinois, New Jersey, New York and the Virgin Islands - cover public employees only. (Eight other States were approved at one time but subsequently withdrew their programs).

Alaska Arizona California Connecticut Hawaii Illinois	Indiana Iowa Kentucky Maryland Michigan	Minnesota Nevada New Mexico New Jersey New York	North Carolina Oregon Puerto Rico South Carolina Tennessee	Utah Vermont Virgin Islands Virginia Washington Wyoming

One of the principal requirements of Section 18 of the OSH Act is that the States must institute job safety and health standards that are "at least as effective as" comparable to federal standards. (Most States adopt standards identical to federal ones.) States also have the option to promulgate standards covering hazards not addressed by federal standards.

When a State prepares its own health and safety plan, they are expected to conduct inspections to enforce its standards, cover public (State and local government) employees, and operate occupational safety and health training and education programs. In addition, most States provide free on-site consultation to help employers identify and correct workplace hazards. Such consultation may be provided either under the plan or through a special agreement under section 21(d) of the OSH Act.

Process of Instituting a State Plan

To gain OSHA approval for a developmental plan - the first step in the State plan process - a State must assure OSHA that within a certain time frame it will have in place all the structural elements necessary for an effective occupational safety and health program. These elements include: appropriate legislation; regulations and procedures for standards setting, enforcement, appeal of citations and penalties; a sufficient number of qualified enforcement personnel.

Once a State has completed and documented all its developmental steps, it is eligible for certification. Certification renders no judgment as to actual State performance, but merely attests to the structural completeness of the plan.

At any time after initial plan approval, when it appears that the State is capable of independently enforcing standards, OSHA may enter into an "operational status agreement" with the State. This commits OSHA to suspend the exercise of discretionary federal enforcement in all or certain activities covered by the State plan. There are eight states with such operational status agreement signed with OSHA. They are California, Washington, Vermont, Michigan, Puerto Rico, New Mexico and Oregon.

The ultimate accreditation of a State's plan is called final approval. When OSHA grants final approval to a State under section 18 (e) of the Act, it relinquishes its authority to cover occupational safety and health matters covered by the State. After at least one year following certification, the State becomes eligible for final approval if OSHA determines that it is providing, in actual operation, worker protection "at least as effective" as the protection provided by the federal program. The State also must meet 100 percent of the established compliance staffing levels (benchmarks) and participate in OSHA's computerized inspection data system before OSHA can grant final approval.

Employees finding workplace safety and health hazards can file a formal complaint with the appropriate State agency or with the appropriate OSHA regional administrator. Complaints will be investigated and should include the name of the workplace, type(s) of hazard(s) observed and any other pertinent information.

Anyone finding inadequacies or other problems in the administration of a State's program may file a Complaint about State Program Administration (CASPA) with the appropriate OSHA regional administrator as well. The complainant's name is kept confidential. OSHA investigates all such complaints, and where complaints are found to be valid, requires appropriate corrective action on the part of the State.

California Plan: Introduction

The State of California, under an agreement with OSHA, operates an occupational safety and health program in accordance with Section 18 of the Occupational Safety and Health Act of 1970. Initial approval of the California State Plan was published on May 1, 1973, and certification for completing all developmental steps was received on August 19, 1977.

The California State Program is administered by the California Department of Industrial Relations, Division of Occupational Safety and Health, (Title 8, Code of California Regulations, Chapter 3.2). The Division of Occupational Safety and Health (DOSH) is the principal executor of the plan which oversees enforcement and consultation. The California Health and Safety Program have other arms.

They are:

- an independent Standards Board responsible for the promulgation of state safety and health standards and the review of variances;
- an Appeals Board to adjudicate contested citations; and
- the Division of Labor Standards Enforcement to investigate complaints alleging discriminatory retaliation in the workplace.

The central office for DOSH is located in Oakland, CA. The Division has various regional and field offices located throughout the state. The DOSH program establishes policy and technical guidance, writes standards, develops internal and external training, monitors and evaluates DOSH programs, conducts inspections, and provides consultative services. Their address is:

California Department of Industrial Relations

Division of Occupational Safety and Health
1515 Clay Street, Suite 1901
Oakland, CA 94612
PH: (510) 286-7000
FAX: (510) 286-703

California Department of Industrial Relations (DIR)

The California Department of Industrial Relations (DIR) is a department of the government of the state of California which was initially created in 1927. It is currently part of the Cabinet-level California Labor and Workforce Development Agency. It is currently headquartered at the Hiram W. Johnson State Office Building in San Francisco.

California Occupational Safety and Health Act (Cal/OSHA)

The purpose of the program is to provide safe and healthful working conditions for California workers. Cal/OSHA covers virtually all California workplaces including state and local government agencies. It does not cover federal workplaces, which are covered by Federal OSHA laws (29 CFR 1900).

The Purpose and Functions of Cal/OSHA

Purpose

The purpose of the program is to provide safe and healthful working conditions for California workers. Cal/OSHA covers virtually all California workplaces including state and local government agencies. It does not cover federal workplaces, which are covered by Federal OSHA laws (29 CFR 1900).

Functions

Cal/OSHA adopts and enforces workplace safety and health standards to protect workers from work-related injuries and illnesses. The Compliance Office conducts inspections in response to employee complaints or as part of a targeted inspection program initiated by Cal/OSHA to ensure that workers and the public

are protected from safety hazards. Cal/OSHA's Standards Board sets standards relating to specific hazards such as noise, chemicals and electrical safety as well as standards that describe an employer's general legal obligation to provide a safe and healthful workplace (Title 8, CCR, Chapter 3.4). Cal/OSHA also has a Consultation Program. The Consultation Program provides employers with free on-site assistance.

The Division is headed by a Chief, who has two Deputy Chiefs under him. There are several local district offices throughout the state and each is headed by a District Manager.

General Industrial Safety Orders (GISO)

GISOs are promulgated, as part of the social public policy fabric of the State of California, for the guidance of employers and employees. They are set forth in Article XX, Section 21 of the Constitution and they aim to secure safety in places of employment. The primary goal of these GISOs is to reduce workplace injuries through compliance although they may not eliminate injuries or illnesses at the workplace altogether. Employers must make these orders available for supervisors to read so they can be familiar with them.

GISOs establish minimum safety standards for the employers and apply to all employers in California and places of employment in California. The equivalent of GISOs in Washington is called Washington Administrative Codes or WAC. At the federal level, it is the 29 CFR 1900s.

T8 CCR§3203 is a sample GISO which reads as Title 8 Code of California Regulation General Safety Industrial Order Section §3203. (The symbol § means "located at or directed at".) Apart from General Industrial Safety Order, there are Electrical Safety Orders for High Voltage and Low Voltage (ESO), Mine Safety Orders (MSO), Construction Safety Orders (CSO), Agricultural Safety Orders (ASO), etc.

Employer's responsibilities under Cal/OSHA

The responsibilities of employers under Cal/OSHA may look similar to the responsibilities of employers under federal OSHA with a few exceptions. Principal among them is the Injury and Illness Prevention Program (IIPP). Here is a look at some of them:

- Establish, implement and maintain an Injury and Illness Prevention Program (IIPP) and update it periodically to keep employees safe.
- Inspect workplace(s) to identify and correct unsafe and hazardous conditions.
- Make sure employees have and use safe tools and equipment and properly maintain this equipment.
- Use color codes, posters, labels or signs to warn employees of potential hazards.
- Establish or update operating procedures and communicate them so employees follow safety and health requirements.
- Provide medical examinations and training when required by Cal/OSHA standards.
- Report immediately by telephone or fax to the nearest Cal/OSHA Enforcement Unit district office any serious injury or illness, or death, of an employee occurring in a place of employment or in connection with any employment as required by section 342(a), Title 8, California Code of Regulations (T8CCR). Serious injury or illness is defined in section 330(h), T8CCR.
- Keep records of work-related injuries and illnesses, and post a copy of the totals from the last page of the log 300 during the entire month of February each year, if the employer has 11 or more employees.
- Post, at a prominent location within the workplace, the Cal/OSHA poster informing employees of their rights and responsibilities.
- If required to keep one, provide employees, former employees and their representatives' access to the Log and Summary of Occupational Injuries and Illnesses, Cal/OSHA form 300, at a reasonable time and in a reasonable manner.
- Provide access to employee medical records and exposure records to employees or their authorized representatives.

- Provide the Cal/OSHA enforcement personnel with names of authorized employee representatives who may be asked to accompany enforcement personnel during an inspection.
- Do not discriminate against employees who exercise their rights under the California OSH Act.
- Post Cal/OSHA citations at or near the work area involved. Each citation must remain posted until the violation has been corrected, or for three working days, whichever is longer. Post abatement verification documents or tags.
- Correct cited violations by the deadline set in the Cal/OSHA citation and submit required abatement verification documentation.

Employees' Rights under Cal/OSHA

- Safe and healthful working conditions.
- Get training from the employer on workplace hazards and workers' rights.
- Request information from the employer on Cal/OSHA standards, worker injuries and illnesses, job hazards and workers' rights.
- Request action from the employer to correct hazards or violations of Cal/OSHA standards.
- File a complaint with Cal/OSHA regarding violations of Cal/OSHA standards or serious workplace hazards.
- Be involved in a Cal/OSHA workplace inspection by participating in the walk around.
- Find out the results of the Cal/OSHA inspection.
- Get involved in meetings or hearings to discuss any employer objections to Cal/OSHA citations or changes to abatement deadlines.
- File a formal appeal of deadlines for hazard correction.
- File a Cal/OSHA discrimination or whistleblower complaint with the state labor commissioner.
- Request from the National Institute for Occupational Safety and Health a research investigation of workplace health hazards.
- File a petition to the Occupational Safety and Health Standards Board for a new standard.
- Participate in the development of new standards.

Employees Responsibilities include:

- Following all workplace safety and health rules and regulations, and wearing/using prescribed protective equipment while working.
- Reading at the job site the Cal/OSHA poster Safety and Health Protection on the Job.
- Being aware of Cal/OSHA standards, calling the local district office for information.
- Reporting hazardous conditions to the employer.
- Reporting any job-related injury or illness to the employer and seeking prompt treatment.
- Cooperating with Cal/OSHA enforcement personnel during an inspection if they inquire about safety and health conditions in the workplace.
- Exercising worker rights under the California Occupational Safety and Health Act.

Report of a Workplace Fatality or Serious Injury

Every employer must report to the nearest District Office of the Division of Occupational Health and Safety, the death or serious injury of an employee occurring in the place of employment or in connection with the employment. The report has to be made within eight hours after the employer knows. This period can be extended to 24 hours if the employer can demonstrate exigent circumstances. The report must have the following details:

a) Time and date of accident.
b) Employer's name, address and telephone number.
c) Name and job title, or badge number of person reporting the accident.
d) Address of site of accident or event.
e) Name of person to contact at site of accident.
f) Name and address of injured employee(s).
g) Nature of injury.

During 2016-2017 inspections, Cal/OSHA fined offices of physicians (under industry classification 6211) $2500 for failure to report fatalities/ hospitalizations, under 342(a).

h) Location where injured employee(s) was (were) moved to.
i) List and identity of other law enforcement agencies present at the site of accident.
j) Description of accident and whether the accident scene or instrumentality has been altered.

If an employer does not report the accident as listed above, it will result in a failure-to-report violation under T8 CCR Section 342(a).

Cal/OSHA Poster

Every employer is required to post the Cal/OSHA Notice of Employee Protections and Obligations entitled "Safety and Health Protection on the Job," poster published by the Division of Occupational Safety and Health, Department of Industrial Relations, State of California, containing information on pertinent safety laws, regulations and certain rights of employees under the California Labor Code. This poster must be displayed at a very prominent location.

The poster will have the following mandatory information:

- address and telephone number of the nearest Division of Occupational Safety and Health office
- inform the employees of their rights to report any unsafe working condition at the workplace
- Right of an employee to request an inspection by DOSH for unsafe conditions
- Information that no employees can be laid off for reporting unsafe working conditions or for refusing to perform work when a hazard exists

Mandatory Cal/OSHA Posting Requirements [T8 CCR §340]

- Job Safety and Health Protection (Cal/OSHA) poster informing employees and employers of their rights and obligations under the law
- Annual summary of injuries and illnesses, OSHA 300-A, during the months of February through April (for employers with 11 or more employees).
- Any current citation and notice, any verification of abatement by the employer, and any appeal correspondence.
- Correspondence on requests for abatement date extensions (if available).
- Application for a variance and related correspondence (if there has been a request for variance made).

A fine of $1000 will be imposed on employers who fail to post "Safety and Health Protection on the Job" poster.

Conducting Preliminary Investigation for all Serious Injuries

A team consisting of the following will proceed to conduct a preliminary investigation of the accident:

- A person designated by the employer.
- The immediate supervisor of the injured employee.
- Witnesses.
- An employee representative or any other person chosen by the employees to represent them.
- Any other person who has the experience and skills.

The preliminary investigation will address the following questions:

- Where did the accident or incident occur?
- What time did it occur?
- What people were present?
- What was the employee doing at the time of the accident or incident?
- What happened during the accident or incident?

This documentation of the preliminary investigation must be clearly documented for purposes of formal investigation.

Who can file a Complaint?

In accordance with Section 6309 of the California Labor Code, any employee or representative of employees, who in good faith believes that a violation of a safety or health standard exists, may file a complaint with Cal/OSHA requesting an inspection of the workplace. The complaint can be made by contacting the District office of California Department of Occupational Safety and Health or by filling out the "Notice of Alleged Safety and Health Hazards-Web Complaint" form 11/00 available on Cal/OSHA website. The complaint will have the following elements:

- Detailed explanation of the grounds for the complaint.
- Submitted in writing.
- Signed by one of the following:
  - A current employee at the workplace.
  - A representative of employees. This includes any of the following:
    - An immediate family member of the employee.
    - An individual or organization who has written authorization to act on behalf of an employee.
    - The legal representative of a deceased or legally incapacitated employee.
    - A recognized or certified collective bargaining agent of an employee.
    - The elected labor organizations representing employees at a specific worksite.
    - Employee-elected representatives on a specific workplace safety committee for the employee in question.

Cal/OSHA will investigate within 3 days after the receipt of the complaint if it's a serious violation, within 14 days if it's not a serious violation.

Serious Complaint

A complaint is serious if there is a substantial probability that death or serious physical harm could result from a work condition, practice, operation or process.

Non-Serious Complaint

A complaint is non-serious if there is no substantial probability that death or serious physical harm could result from a work condition, practice, operation or process.

Formal Complaint

Complaint is formal if it is made by a current employee or a former employee, currently employed at or near the first employer's workplace, who has been exposed to workplace hazards from the first employer. Complaints from employee representatives, attorneys of employees, Health or Safety Professionals, Union Representatives, State or local prosecutor and from other government agencies are also determined to be formal.

Non-formal Complaint

Complaints are non-formal if they are from former employees who are not currently employed; and from employees and their representatives who do not wish to reveal the names.

A Referral

A referral is distinguished from a complaint solely by the source providing the information about the potentially hazardous workplace condition. Usually referrals can come from the print or electronic news organization and other non-governmental entities. If the source of the information is a governmental agency, then it is a complaint.

Cal/OSHA Responses to Complaints

After receiving a written complaint from an employee or employee representative, Cal/OSHA reviews the allegations, classifies as inspection or no inspection and responds in the following manner:

If the complaint does not warrant an inspection (non-serious):

- Call the employer to discuss the complaint.
- Set a deadline for the employer to respond in writing (within 14 days).
- Fax or mail a complaint notification letter to the employer. Before the complaint is faxed or mailed, the following names will be removed unless specific permission is given to include them:
    - The name of the person submitting the complaint.
    - The names of any employees identified in the complaint.
- Evaluate the employer's response, and do one of the following:
    - Close the complaint because the issues have been addressed and the response from the employer was satisfactory, and send a copy of the employer's response to the person filing the complaint OR
    - Inspect the workplace.

If the complaint warrants an inspection

- Issue a citation and notice that shows one of the following:
    - Violations found.
    - No violations were found.
    - Send a letter to the person filing the complaint with inspection results.

Invalid Complaint

DOSH considers a complaint invalid under the following circumstances:

- Too vague or unsubstantiated;
    - Lacks specificity.
    - Abatement pending from the previous inspection.
    - No Division jurisdiction.

- Willful harassment of the employer. This determination is made by the District Manager based on the credibility of the complaint. Often times complaints are made just to annoy or irritate the employer.

If a Cal/OSHA Inspector Shows Up at Your Doorstep

If a Cal/OSHA compliance officer contacts anyone at the facility via phone or mail, contact the employer or supervisor. The supervisor will assist the facility in determining what steps, if any, need to be taken. If a compliance officer arrives at your facility to conduct an inspection, the compliance officer will present their credentials that will consist of a State of California photo identification card and Division of Occupational Safety and Health business card. After verifying the credentials, you may:

- ask whether the compliance officer has a warrant for the inspection. Do not demand a warrant, simply inquire whether or not one exists; and
- ask the compliance officer to wait while you assemble the appropriate people for the opening conference.

Before an inspection, the compliance officer will conduct an opening conference, during which the officer explains why he or she is there and what he or she wishes to do.

After the opening conference, the compliance officer will conduct a walk-around inspection. The employer or designated supervisor must accompany the compliance officer during the inspection.

After the inspection, the employer or designated supervisor and the concerned department representatives will meet to discuss the outcome and plan for action, as needed.

If a notice of violation is received, it must be posted at a prominent place for at least **three days**.

In order to have the most "effective" inspection, the following suggestions should be considered:

- answer any questions truthfully, without directly admitting guilt;
- never knowingly give false statements or intentionally mislead a compliance officer;
- if you do not know the answer to a question, explain that you are not certain and that you will look into the matter further, as necessary;
- do not offer information unless asked for it;
- do not talk about accidents or incidents that have occurred in the past unless specifically asked to do so;
- do not discuss political views regarding Cal/OSHA or the state government; and
- be courteous. Do not be rude to the compliance officer or argue with him or her.

Types of Inspections

Programmed High-Hazard Inspections (Targeted) — Cal/OSHA establishes programs of inspection aimed at specific high-hazard industries, occupations, or health hazards. Workplaces are selected for inspection on the basis of death, illness, and injury rates; employee exposure to toxic substances, and the like. It is usually initiated by an inspection schedule.

Unprogrammed Inspections conducted by CAL/OISHA are listed below:

Imminent Hazards

Imminent hazard situations are given top priority. An imminent hazard is any condition where there is reasonable certainty that a danger exists that can be expected to cause death or serious physical harm immediately or before the danger can be eliminated through normal enforcement procedures. Another definition of imminent hazard is when toxic substances are present and exposure to them will shorten life or substantial reduction in health or mental efficiency. For an imminent hazard to be present there must be a substantial belief that death or serious injury will occur before Cal/OSHA can investigate. When an imminent hazard situation is found, the compliance officer will ask the employer

to voluntarily abate the hazard and to remove endangered employees from exposure. Should the employer refuse, Cal/OSHA will apply to the nearest state court for legal action to correct the situation.

Order Prohibiting Use (Yellow Tag)

Compliance personnel are authorized to place conspicuously a yellow tag indicating the presence of a hazardous situation. The employer can request a hearing by Cal/OSHA after being issued an order prohibiting use. The hearing is held within 24 hours of the request.

The yellow tag may not be removed until the hazardous condition no longer exists or the required safeguards and safety devices are installed. Only an authorized Cal/OSHA engineer or industrial hygienist can remove a yellow tag.

Catastrophic and Fatal Accidents (Serious Accidents)

Investigation of fatalities and catastrophes resulting in hospitalization of any employee.

Employee Complaints

Each employee has the right to request a Cal/OSHA inspection when the employee feels that he or she is in imminent danger from a hazard or when he or she feels that there is a violation of an Cal/OSHA standard that threatens physical harm. If the employee so requests, Cal/OSHA will withhold the employee's name from the employer.

Agency Referrals

Referrals of hazard information from other federal, state, or local agencies, individuals, organizations, or the media receive consideration for inspection.

Follow-up Inspections (Re-inspections)

Establishments cited for alleged serious violations may be re-inspected to determine whether the hazards have been corrected.

Order of Priority for Inspections by DOSH

Given below is the order of priority for inspections by the DOSH. Deviations from this priority list are allowed so long as they are justifiable, lead to efficient use of resources, and contribute to the effective protection of workers.

Priority	Category
1st	Imminent Hazard/fatality/Catastrophe
2nd	Accident involving a serious injury; all formal complaints
3rd	Non-formal serious complaints
4th	Programmed Inspections
5th	Follow-up inspections of non-serious violations, Informal non-serious complaints and non-serious referrals.

Onsite Inspections

Preparation

Before conducting an inspection, Cal/OSHA Inspector researches the inspection history of a worksite using various data sources and review the operations and processes in use and the standards most likely to apply. They gather appropriate personal protective equipment and testing instruments to measure potential hazards.

Presentation of Credentials

The onsite inspection begins with the following statements and presentation of the compliance inspector's credentials, which include both a California ID and a Cal/OSHA identification.

Opening Conference

The compliance inspector will outline in general terms the scope of the inspection, including private employee interviews, possible expansion of the inspection from partial to comprehensive, physical inspection of the workplace and records, possible referrals, discrimination complaints, and the closing conference(s). The employer then selects a representative (typically highest-ranking representative) to accompany the inspector during the inspection. An authorized representative of the employees, if any, also has the right to go along. In any case, the compliance officer will consult privately with a reasonable number of employees during the inspection. The opening conference must be kept as brief as possible, normally not to exceed one hour.

Here is a summary of things that will be held at an opening conference:

- Present credentials.
- Obtain consent for the inspection.
- Request employer and employee representatives
- State the scope and purpose of the inspection visit
- Explain Cal/OSHA Inspection Procedures
- Explain the compliance role (possibility of citation and penalties).
- Discuss standards, posters and logs
- Explain the confidentiality of trade secrets
- Explain the walk around procedure
- Examine the written Injury and Illness Prevention Program (IIPP)
- Request written programs and logs
- Explain that interviews of employees will be conducted in private
- Identify any safety rules or PPE issues necessary to conduct the inspection in a safe manner
- Explain a closing conference will be held

Walk Around

Following the opening conference, the inspector and the representatives will walk through the portions of the workplace covered by the inspection, inspecting for hazards that could lead to employee injury or illness. The compliance officer will also review worksite injury and illness records and posting of the official Cal/OSHA poster. During the walk around, compliance officers may point out some apparent violations that can be corrected immediately. While the law requires that these hazards must still be cited, prompt correction is a sign of good faith on the part of the employer. Compliance officers try to minimize work interruptions during the inspection and will keep confidential any trade secrets they observe.

During a walk around, the inspector will:

- Become familiar with facility or worksite processes.
- Collect information on hazards.
- Observe employees' activities and interview them as appropriate.
- Document the work activities inspected, hazards involved and violations observed, safety controls implemented, and interviews conducted or relevant statements made.
- In addition to other documentation to support a violation, digital or film-based photographs and/or videotapes will be taken (for instance, unlabeled containers, equipment without proper guards, etc.).

Closing Conference

After the walk around, the compliance officer holds a closing conference with the employer and the employee representatives to discuss the findings. The compliance officer discusses possible courses of action an employer may take following an inspection, which could include an informal conference with Cal/OSHA or contesting citations and proposed penalties. The compliance officer also discusses consultation and employee rights.

Here are some of the elements that Enforcement Staff will include in the closing conference:

- The staff will inform the employer of any violations that may result in penalties.
- Options for hazard correction procedures and interim methods of control will be discussed.
- The Staff will note any employer or employee comments on the violation worksheet and obtain input for establishing correction dates.
- Even when an employer is in compliance, sampling results and any recommendations on good safety and health practices would be discussed with the employer and employee representatives.

Abatement Verification

During the closing conference, the inspector will discuss any alleged violations of standards and the abatement verification requirements at length. Abatement is usually required within no more than 30 calendar days for general violations and seven days for serious violations. Employers must provide documentation with regard to the actions taken to abate the violations noted by the staff. The employer's physical proof of abatement must be submitted along with each willful, each repeated, and each designated serious violation. If a violation is cited for written program deficiencies, a copy of the written program must be submitted by the employer and reviewed by the inspector.

Informal conference

Following receipt of a citation or notice, an employer may request a discussion with the Cal/OSHA district manager. An informal conference is conducted within 10 working days of citation issuance. If an appeal is filed, the conference may be held any time prior to the scheduled date of an appeal.

The employer may discuss requests for extension of abatement dates, and presentation of evidence which indicates that no violation exists, or that the proposed penalties are inappropriate.

During an inspection, the Cal/OSHA enforcement engineer or industrial hygienist may issue any of the following:

Special Order (Cal/OSHA Form 3)

A Special Order is an order written by the Chief of the Division of Occupational Safety and Health, or his or her authorized representative, to remedy an unsafe condition, device, or place of employment which poses a threat to the health or safety of an employee, and which cannot be made safe under an existing Title 8 Safety Order. This is very similar to federal OSHA's General Duty Clause where the inspector has substantial leeway in citing the employer if there is a hazard situation for which there are no known regulations.

This determination is made during the course of an inspection or investigation by the compliance personnel. Prior to issuing the Special Order, the compliance personnel must inform the District Manager about the hazardous condition that exists at the facility for which there is no Title 8 regulations.

No civil penalties are imposed by the Division in conjunction with issuance of the Special Order. However, the employer is required to:

- Post the Special Order at or near the referenced site of the hazardous condition giving rise to the Order;
- Position the Special Order so as to be easily read by employees working nearby; and
- Maintain the posting for a period of three working days or until the unsafe condition is abated, whichever is longer.

The employer has the right to appeal the action ordered by the Division in the Special Order, the abatement periods specified by the Division in the Order, or the reasonableness of the corrective changes required by the Division in the Order by notifying the Occupational Safety and Health Appeals Board in Sacramento within 15 working days of receipt of the Special Order.

Notice (Cal/OSHA Form 4)

A notice is issued when compliance personnel determine that there is a violative condition that does not have an immediate or direct relationship to employee safety and health and is of a general nature. Examples of such violative conditions are:

- Location of an eye wash station with a travel time of 12 seconds not 10 seconds.
- Exit Signs with letters that are not of the required sizes.

If the employer refuses to accept the Notice, then the compliance personnel will issue a citation. Employers have to comply with the abatement requirements on the Notice and also waive the right to Appeal.

Information Memorandum (Cal/OSHA Form 5)

An Information Memorandum is issued when the compliance personnel during the course of an inspection direct the employer's attention to a workplace condition that has the potential of becoming a hazard to the employees.

Compliance personnel can obtain information by:

- Examining past medical and exposure records;
- Interviewing employees and their representatives; and
- Observing the employee exposure at the workplace during the walkaround-sometimes the exposure is unobserved.

Order to Take Special Action

This order is issued by the compliance personnel where a safety order exists, either stating that Cal/OSHA may require an employer to take certain additional action if circumstances warrant, or prescribing a specific manner in which the employer must comply with the safety order. In other words, this order is made to remedy an unsafe workplace condition which poses a threat to the health or safety of an employee, and which can be made safe under an existing Title 8 Safety Order only if the Division requires that the employer take a specific action in furtherance of the intent of the applicable Safety Order.

Results of Inspection

Citations

- A **regulatory violation** is cited when an employer fails to comply with record keeping, posting or permit requirements.
- A **general violation** is cited when an accident or occupational illness resulting from violation of a standard would probably not cause death or serious physical harm, but would have a direct or immediate relationship to the safety or health of employees.
- A **serious violation** is cited where there is substantial probability that death or serious physical harm could result from a condition which exists—or from practices, operations or processes at the workplace.
- A **willful violation** is when evidence shows that the employer committed an intentional and knowing violation—as distinguished from inadvertent or accidental or ordinarily negligent—and the employer is conscious of the fact that what they are doing constitutes a violation, or is aware that a hazardous condition exists and no reasonable effort was made to eliminate the hazard.
- A **repeat violation** is when a recurrence of the previously cited standard, regulation, order, or condition is found within three years of the previous violation becoming a final order. Repeat violations differ from willful violations in that they may result from an inadvertent, accidental or ordinarily negligent act. If a repeat violation is also willful, a citation for willful violation is issued.
- **Failure-to-Abate** is issued when an employer has not abated a condition previously cited by Cal/OSHA. If an employer has not corrected an alleged violation for which a citation has been issued, the violation is classified as failure-to-abate serious or general.

Penalties

Civil

Civil penalties are issued for cited violations and failure to abate a violation.

Regulatory Violation

Any employer who commits any Regulatory violation will be assessed a civil penalty of up to $16,285 for each such violation.

The proposed penalty will be adjusted for Size, Good Faith, and History; however, an abatement credit will not be granted.

General Violation

Any employer who violates any occupational safety and health standard, order or special order and such violation is determined to be a General may be assessed a civil penalty of up to $16,285 for each such violation.

Serious Violation

Any employer who violates any occupational safety and health standard, order, or special order, and such violation is determined to be a Serious violation will be assessed a civil penalty of up to $25,000 for each such violation. Because of the extreme gravity of a serious violation an initial base penalty of $18,000 will be assessed.

Willful Violation

The penalty for any willful violation is up to $162,851.

Repeat Violation

The maximum civil penalty for repeat violation is up to $162,851.

Failure to Abate

Penalties of up to $15,000 per day may be proposed for each failure to correct a violation by the abatement date shown on the citation.

For Failure to Report Serious Injury or Illness, or Death of an Employee

Any employer who fails to timely report an employee's injury or illness, or death, in violation of section 342(a) of Title 8 of the California Code of Regulations, will be assessed a minimum penalty of $5,000.

Criminal Penalties

A willful violation that causes death or permanent or prolonged impairment of the body of any employee results, upon conviction, in a fine of up to $250,000 or imprisonment up to three years, or both— and if the employer is a corporation or limited liability company, the fine may not exceed $1.5 million.

Anyone convicted of making a false statement or certification on records or other documents required under the Cal/OSHA program is subject to a fine of up to $70,000 or imprisonment up to six months, or both. The law also contains misdemeanor provisions relating to matters such as knowingly or negligently violating a workplace safety and health regulation, repeatedly violating a regulation, or refusing to comply with a regulation, and thereby creating an employee hazard. Criminal penalties are enforced by the local district attorney.

Appeals

Employers may appeal a citation and notification of penalty, notification of failure to abate, special order, or order to take special action. An employer has 15 working days from receipt of one of these documents within which to appeal.
If an appeal is filed after the deadline of 15 working days, the appeals board may accept the appeal only upon a showing of good cause for the late filing. Good cause generally means circumstances beyond one's control which could not have been reasonably anticipated.

An employer may contest the existence of the violation alleged in a citation, the reasonableness of the abatement date, the reasonableness of the changes required by DOSH, and the amount of any proposed civil penalty.

Employees have the right to participate as third parties in an appeal filed by an employer.

An appeal may be started by calling the appeals board in Sacramento or mailing an appeal form stating the statutory grounds upon which the appeal is based, the reasons for the appeal, and the issues to be raised. If the appeal is initiated by phone or fax, a completed appeal form must be sent within 10 days in order to perfect the appeal.

Employer's Abatement Responsibilities

The employer must certify abatement of any citation, regardless of classification, which has become a Final Order of the Appeals Board within ten (10) working days after the date fixed for abatement.

Certification Information Required from Employer for All Violations Types

- Employer name and address;
- Inspection, citation and items number to which the abatement certification relates;
- Date of abatement;
- Methods or equipment utilized for abatement;
- Statement by the employer that affected employees and their representatives have been informed of the abatement;
- Statement that all submitted abatement information is accurate; and
- Signature of the employer or the employer's representative.

All Serious Violations

For all serious violations, the employer is also required to include a statement that all information on the certification of abatement is submitted under penalty of perjury.

Designated Serious Violations

The employer is required to provide documentation proving that the cited violation has been abated, e.g., receipts for the purchase or repair of equipment, photographs or videos showing abated conditions or other appropriate written records, but only if the District indicates on the citation that such abatement documentation is required.

For Willful and Repeat Violations

For all willful and repeat violations, the employer is required to provide documentation proving that the cited violation has been abated, e.g., receipts for the purchase or repair of equipment, photographs or videos showing abated conditions or other appropriate written records.

Employee Notification and Posting

- The employer is required to inform all employees affected by the cited violation and their representatives of the abatement by posting a copy of each abatement document (or a summary of the documents) submitted to the Division near the place where the cited violation occurred.

EXCEPTION: If posting near the place where the cited violation occurred does not effectively inform employees, then the employer is required either to post the documents or a summary in a location where it will be readily observable or take other steps to communicate the information.

- The employer is required to inform all employees affected by the cited violation and their representatives of their right to examine and copy all abatement documents submitted to the Division.

- The employer is required to ensure that the abatement information is provided at the same time or before the information is provided to the Division.
- The employer is required to ensure that the documents are posted for three working days after submission to the Division and that they are not altered, defaced or covered by other materials.

Mandatory Participation Notice

An employer must notify employees of an appeal and of the employees' right to participate in the appeal. The participation notice and a copy of the docketed appeal form must be posted at or near the site of the alleged violation or other conspicuous place where it will be readily observed and easily read by employees. Following posting, an employer must file with DOSH proof of certification of posting of the participation notice and docketed appeal. The employer must serve these documents on any employee who suffered a serious injury and on the representative of union employees or on the representative of any employee who was killed.

Communications with the Appeals Board

After an appeal is docketed, communications with the appeals board by a party is prohibited unless all other parties to the appeal (e.g., DOSH, the employer, and any third parties) are notified of the communication. Service of a document on another party to an appeal may be made by personal delivery, by first class mail, or by overnight delivery. Proof of service on the other party may be made by a declaration, by a written statement, or by a letter of transmittal. A proof of service must accompany all documents or writings filed with the appeals board.

Withdrawal and settlement

An employer may withdraw its appeal and terminate the proceedings. DOSH may also withdraw its enforcement actions. An employer may agree to settle the case with DOSH. Settlement agreements must be submitted to the appeals board for its approval.

- Toll-free number: (877) 252-1987

- Telephone number: (916) 274-5751
- Fax number: (916) 274-5785
- Address: 2520 Venture Oaks Way, Suite 300, Sacramento, CA 95833

Roles and Responsibilities

Department

- Determine which Cal/OSHA regulations or standards apply to areas or functions of your department. Supervisor may assist in this determination, using this safety manual.
- Review the status of the applicable health and safety programs and regulatory compliance within the department.
- Develop an action plan to address any deficiencies or problems.
- Ensure supervisors understand and enforce the requirements of the applicable standards.
- Periodically conduct self-audits of the safety programs within the department.
- Contact the designated supervisor if a Cal/OSHA inspector calls or arrives for inspection.

Reporting a Work-Related Accident for Employers

Employers must immediately report to Cal/OSHA any work-related death or serious injury or illness. Employers are encouraged to obtain the Cal/OSHA's telephone number by entering their zip code in the box provided here[1].

The office is open 24 hours a day, 7 days a week. You must provide as much information as possible.

As required by Title 8 regulations, section 342, employers must include the following information in their call, if available:

- Time and date of accident/event
- Employer's name, address and telephone number

[1] http://www.dir.ca.gov/dosh/report-accident-or-injury.htmlProcess Safety Management

- Name and job title of the person reporting the accident
- Address of accident/event site
- Name of person to contact at accident/event site
- Name and address of injured employee(s)
- Nature of injuries
- Location where injured employee(s) was/were taken for medical treatment
- List and identity of other law enforcement agencies present at the accident/event site
- Description of accident/event and whether the accident scene or instrumentality has been altered.

Supervisors

- Become familiar with the program and regulatory requirements for operations under your supervision.
- Enforce any requirements.
- Periodically conduct self-audits of the safety programs under your supervision.
- Report all safety concerns to the departmental safety manager.

Individual Employee

- Follow all health and safety guidelines and procedures.
- Wear personal protective equipment (PPE), where needed.
- Report all health and safety concerns to supervisors and departmental safety managers.
- Coordinating and cooperating with all other employees to try to eliminate workplace injuries and illnesses.
- Applying the principles of accident prevention to the daily work.
- Using proper safety devices and protective equipment as required by the job or employer.
- Not wearing torn or loose clothing while working around machinery.
- Promptly reporting hazards, injuries and illnesses to a supervisor.
- Not removing, interfering with or damaging any safety device, work practice, notice or warning provided to make the workplace safe.

- Doing everything reasonably necessary to protect the lives and safety of employees.

Variances from Cal/OSHA Standards

A variance is an exception to compliance with some part of a safety and health standard granted by Cal/OSHA Standards Board to an employer. For example, sometimes employers may not be able to comply fully and on time with a new safety or health standard because of a shortage of personnel, materials, or equipment. Or employers may prefer to use methods, equipment, or facilities that they believe protect employees as well as or better than Cal/OSHA standards.

There are two types of variances.

- Temporary variance
- Permanent variance

Temporary Variance [CA Labor Code § 6450 (a)]

A temporary variance allows employers a short-term exemption from a standard when they cannot comply with Cal/OSHA requirements by the prescribed date because the necessary construction or alteration of the facility cannot be completed in time or when technical personnel, materials, or equipment are temporarily unavailable.

To be eligible for a temporary variance, an employer must implement an effective compliance program as quickly as possible. In the meantime, the employer must demonstrate to Cal/OSHA that all available steps are being taken to safeguard employees. Inability to afford compliance costs is not a valid reason for requesting a temporary variance.

Interim Order [CA Labor Code § 6450 (b)]

An interim order permits an employer to continue operating under existing conditions while Cal/OSHA considers the employer's request for a variance, whether temporary, permanent, or both. If the interim order is granted, employers must inform workers by giving a copy to authorized employee representatives and posting a copy prominently in the workplace.

Permanent Variance

A permanent variance grants an exemption from a standard to employers who can prove that their methods, conditions, practices, operations, or processes provide workplaces that are as safe and healthful as those that follow the Cal/OSHA standards. When applying for a permanent variance, employers must let employees know they have filed the application and that the employees have the right to request a hearing.

To decide whether to grant a permanent variance, Cal/OSHA reviews the employer's evidence and, if appropriate, visits the workplace to confirm the facts provided in the application. If the request has merit, Cal/OSHA may grant a permanent variance. Final variance orders detail the employer's specific responsibilities and requirements and explain exactly how the employer's method varies from the Cal/OSHA requirement.

Applying for a Variance

Forward variance applications to:

Occupational Safety and Health Standards Board
2520 Venture Oaks Way, Suite 350
Sacramento, CA 95833

Discrimination

Cal/OSHA offers protections for employees, who have been discriminated by employers, for

- complaining about safety or health conditions or practices.
- instituting or causing to be instituted any proceeding relating to the employee's rights to safe and healthful working conditions, or testifying in any such proceeding.
- participating in an occupational health and safety committee.

Locations to file the Complaint:

For locations North of Bakersfield

Division of Labor Standards Enforcement
Retaliation Complaint Investigation Unit
2031 Howe Ave., Ste. 100
Sacramento, CA 95825
For locations South of Bakersfield

Division of Labor Standards Enforcement

Retaliation Complaint Investigation Unit
605 W. Santa Ana Blvd. Bldg. 28, Room 625
Santa Ana, CA 92701

Unfavorable Personnel Actions

The employer may be found to have retaliated against the employee if the protected activity was a contributing or motivating factor in its decision to take unfavorable personnel action against the employee.

Unfavorable personnel actions may include:

- firing or laying off,
- blacklisting,
- demoting,
- denying overtime or promotion,
- disciplining,
- denying benefits,
- failing to hire or rehire,
- intimidation,
- reassignment affecting promotion prospects, and
- reducing pay or hours.

Cal/OSHA determines whether retaliation took place through investigations. An employer has violated whistleblower laws if the findings reveal that:

- the employee engaged in protected activity,
- the employer knew about the protected activity,
- the employer took an adverse action, and
- the protected activity was the motivating factor (or under some laws, a contributing factor) in the decision to take the adverse action against the employees.

Protecting the Identity of the Source of Confidential Information

Under this section, the Enforcement Officer responsible for enforcing Cal/OSHA must:

- Not reveal the source of information when a promise has been made to keep the identity of the source confidential.
- Not disclose information that would reveal the source's identity, whenever a file contains an investigative report or information from a source under a promise of confidentiality.
    - The contents of an investigative report may be withheld only to the extent necessary to conceal the identity of the source.
    - When information is withheld, the records officer must give a general characterization of the information withheld, but must not reveal the identity of the information's source.

Cal/OSHA Consultation Service

Cal/OSHA provides consultative assistance to employers and employees through a variety of services including:

- On-site Visits
- Offsite Consultation (Telephone Support)
- Educational Materials (Publications and eTools)
- Educational Outreach
- Partnership Programs
- High Hazard Employer Program

Onsite Visits

Employers may phone to request onsite assistance, which is provided only through the employer's invitation. Employers and employee groups may phone to request consultation away from the job site. An important part of an onsite consultation is evaluating and suggesting improvements in workplace safety and health programs. Employers receive a written report on the onsite visit. Typically, an onsite visit includes the following:

- opening conference
- review of employer safety records
- program review
- walk-around hazard identification
- training and abatement assistance
- closing conference

Opening conference

consultant explains the process, and management decides whether to proceed.

Review of employer safety records

Consultant helps identify hazards by analyzing past injuries and illnesses to suggest improvements and prevent future incidents.

Program review

Consultant reviews all written safety and health programs including documents/records, and assesses how effectively the programs are put into practice.

Walk-Around Hazard Identification

Consultant conducts a walk-around inspection and helps you identify and correct unsafe conditions and work practices.

Training and Abatement Assistance

The consultant may also provide formal or informal training to employers and employees on safe work practices and other subjects during or after the onsite visit.

Closing Conference

At the end of the onsite visit, the consultant will summarize the findings and timeframes for correcting serious hazards with a written report to follow.

The written report provides guidance for setting-up an effective IIP and other programs, a hazard summary, and other helpful information.

Onsite consultation visits do not result in citations or penalties. However, in return for receiving the free onsite assistance the employer must agree to timely correction of hazards identified that could potentially lead to the injuries or illnesses or death.

Offsite consultation

Cal/OSHA also provides consultation to employers and employees away from the worksite via telephone, email, or office-meetings.

High Hazard Employer Program

This program identifies high hazard establishments for inspection through the regional targeting plan or through accident and complaint referrals, and focuses on implementing an effective Injury and Illness Prevention (IIP) Program.

Providing educational materials

Cal/OSHA provides educational materials including eTools to help reduce/eliminate workplace injuries and illnesses. Many of these are available in Spanish and some in various languages. The publications are available for download at http://www.dir.ca.gov/dosh/PubOrder.asp and eTools are available at http://www.dir.ca.gov/dosh/etools. Printed materials can be picked up at Cal/OSHA offices, when available.

Partnership Programs

Cal/OSHA administers partnership programs where industry, labor and Cal/OSHA work as partners. These partnerships recognize workplace safety and health programs that effectively prevent and control injuries and illnesses. Cal/OSHA offers four programs: Cal/VPP, SHARP, Golden Gate, and Alliance.

Outreach Assistance

Cal/OSHA conducts and participates in workplace safety and health seminars, conferences, workshops, and other outreach activities with employers and employees. These outreach activities are focused on high-hazard industries, processes and occupations

- Consultation is provided from the following offices:
- Fresno – Central Valley | (559) 454-1295
- Oakland – San Francisco Bay Area | (510) 622-2891
- Sacramento – Northern California | (916) 263-0704
- San Bernardino – Inland Empire | (909) 383-4567
- San Diego – Imperial Valley | (619) 767-2060
- San Fernando Valley – Santa Barbara & NW LA Co. | (818) 901-5754
- Santa Fe Springs LA Metro Area/Orange Co. | (562) 944-9366

Resources

1. 'User's Guide to Cal/OSHA', California Occupational Safety and Health Program, Cal/OSHA Consultation Service, Division of Occupational Safety and Health, Revised November 2012.
2. Division of Occupational Safety and Health Policy and Procedures Manual, Cal/OSHA Publication, Department of Industrial Relations.
3. All about OSHA. OSHA Publication, OSHA 3302, 2006.
4. Employer Rights and Responsibilities Following an OSHA Inspection. OSHA Publication, OSHA-3000, 2005.
5. Employee Workplace Rights. OSHA Publication, OSHA-3021, 2003.
6. Job Safety and Health Fact Sheet. OSHA Publication, 2002.
7. What to Expect during OSHA's visit. OSHA Publication, 1997.
8. Federal Employer Rights & Responsibilities Following an OSHA Inspection. OSHA Publication, 1996.
9. 'Employer Rights and Responsibilities following an OSHA Inspection', OSHA Publication, OSHA 3000, 2005.

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Chapter 2: Recordkeeping Requirements under T8 CCR §14300

All employers covered by Cal/OSHA are covered by this standard. However, most employers do not have to keep injury and illness records unless Cal/OSHA, OSHA, or the Bureau of Labor Statistics (BLS) informs them in writing that they must keep records. For example, employers with ten or fewer employees and business establishments in certain industry classifications are partially exempt from keeping injury and illness records. Listed in Appendix A to Section 14300.2, all medical/healthcare and dental employers in California are exempt from recordkeeping requirements of this standard irrespective of the number of employees.

Employers, who are exempt from recordkeeping under this standard, among others, are [14300.2]:

- Offices of Medical Clinics
- Offices of Dental Clinics
- Offices of Osteopathic Clinics
- Offices of other Health Practitioners
- Medical and Dental Laboratories
- Health and Allied Services, Not Otherwise Classified

Importance of Recordkeeping

- Keeping track of work-related injuries and illnesses can help prevent them in the future.
- Using injury and illness data helps identify problem areas. The more you know, the better you can identify and correct hazardous workplace conditions.
- You can better administer company safety and health programs with accurate records.
- As employee awareness about injuries, illnesses, and hazards in the workplace improves, workers are more likely to follow safe work practices and report workplace hazards.

Recordkeeping Forms

Log of Work-Related Injuries and Illnesses (OSHA Form 300)

The OSHA 300 log is used to classify work-related injuries and illnesses and to note the extent and severity of each case. When an accident occurs, use the log to record specific details about what happened and how it happened.

Employers must keep a log for each establishment or site. If you have more than one establishment, you must keep a separate log and summary for each physical location that is expected to be in operation for one year or longer.

According to Public Law 91-596 and 29 CFR Part 1904, OSHA's recordkeeping rule, you must keep this form on file for five years following the year to which it pertains.

Summary of Work-Related Injuries and Illnesses (OSHA Form 300A)

OSHA 300A shows the totals for the year. At the end of each year, count the number of incidents in each category and transfer the totals from the log to the summary. Then post the summary in a visible location so that your employees are aware of the injuries and illnesses occurring in their workplace. Form 300A has a worksheet (found on the reverse) to help you fill out the summary.

If your company has more than one establishment or site, you must keep separate records for each physical location that is expected to remain in operation for one year or longer.

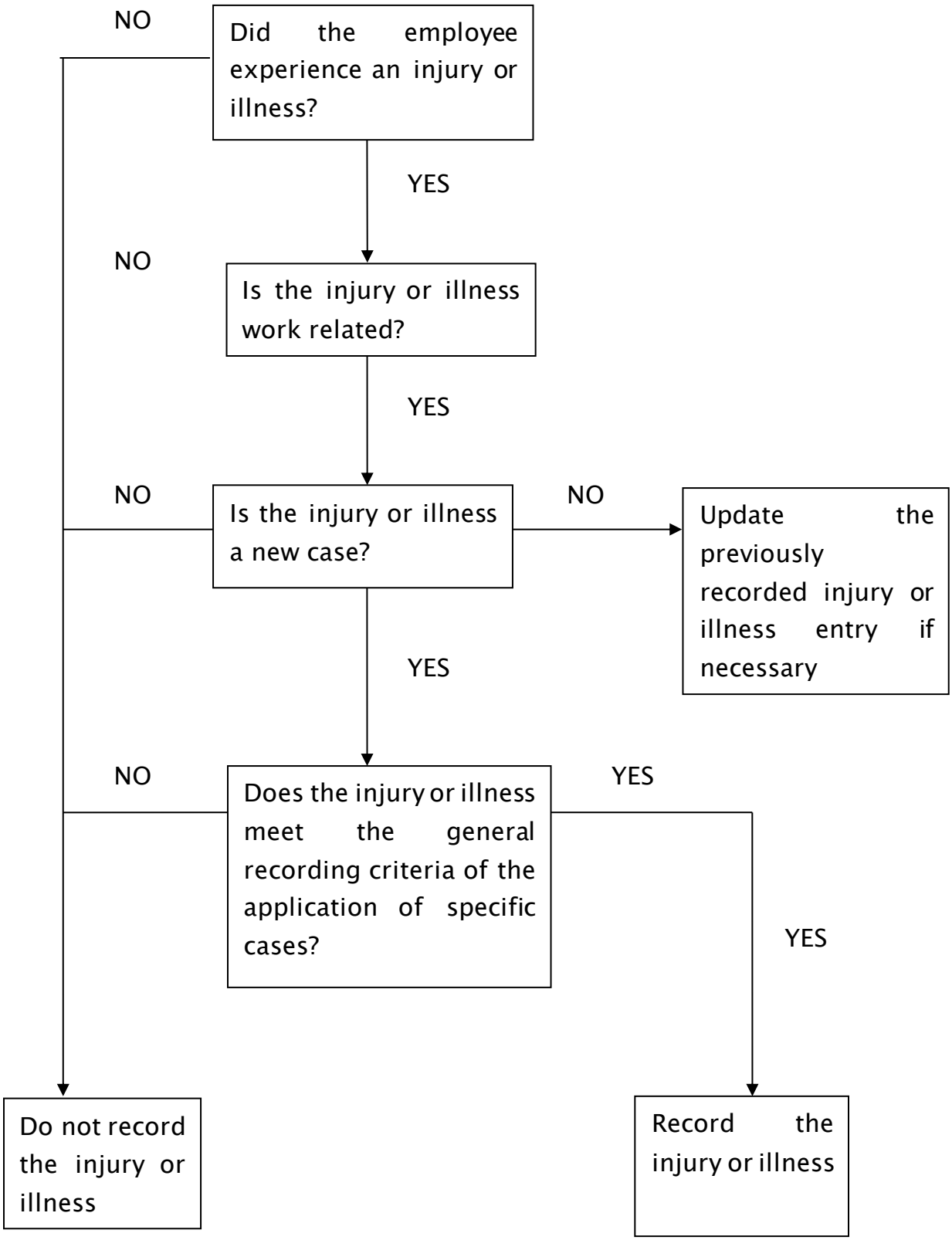
You don't post the log. You post only the summary at the end of the year, between February 1 and April 30 of each year.

The log and summary must be kept on file for a period of five years. Never send the completed forms to Cal/OSHA unless specifically asked to do so.

Injury and Illness Incident Report (OSHA Form 301)

The Injury and Illness Incident Report is one of the first forms you must fill out when a recordable work-related injury or illness has occurred. Together with the log of work-related injuries and illnesses and the accompanying summary, these forms help the employer and Cal/OSHA develop a picture of the extent and severity of work-related incidents.

The decision tree for recording work-related injuries and illnesses below shows the steps involved in determining if the illness or injury is recordable.


NO
Did the employee experience an injury or illness?
YES
NO
Is the injury or illness work related?
YES
NO
Is the injury or illness a new case?
NO
Update the previously recorded injury or illness entry if necessary
YES
NO
Does the injury or illness meet the general recording criteria of the application of specific cases?
YES
YES
Do not record the injury or illness
Record the injury or illness

Procedure for Recording Injuries [T8 CCR §14300.6]

- Within seven calendar days after you receive information about a case, decide if the case is recordable under the Cal/OSHA recordkeeping requirements.
- Determine whether the incident is a new case or a recurrence of an existing one.
- Establish whether the case was work-related.
- If the case is recordable, decide which form you will fill out as the injury and illness incident report.

You may use OSHA's Form 301, Injury and Illness Incident Report, or an equivalent form. Some state workers' compensation, insurance, or other reports may be acceptable substitutes, as long as they provide the same information as the OSHA 301.

According to Public Law 91-596 and 29 CFR Part 1904, OSHA's recordkeeping rule, you must keep this form on file for five years following the year to which it pertains.

How to Work with the Log (OSHA Form 300)

- Identify the employee involved unless it is a privacy concern.
- Identify when and where the case occurred.
- Describe the case, as specifically as you can.
- Classify the seriousness of the case by recording the most serious outcome associated with the case, with column G (death) being the most serious and column J (other recordable cases) being the least serious.
- Identify whether the case is an injury or illness. If the case is an injury, check the injury category. If the case is an illness, check the appropriate illness category.
- You must complete an Injury and Illness Incident Report (OSHA Form 301) or equivalent form for each injury or illness recorded on this form.

Employee Involvement

- Your employees and their representatives must be involved in the recordkeeping system in several ways. You must set up a way for employees to report work-related injuries and illnesses promptly.
- You must inform each employee of how he or she is to report an injury or illness to you.
- You must provide limited access to your injury and illness records for your employees and their representatives. An authorized representative is any person that the employee or former employee designates as such, in writing, or the legal representative of a deceased or legally incapacitated employee or former employee.
- When an employee, former employee, personal representative, or authorized employee representative asks for copies of your current or stored OSHA 300 or OSHA 301 for an establishment the employee or former employee has worked in, you must give the requester a copy of the relevant logs or forms by the end of the next business day. The employer is not authorized to remove the names. However, to protect the privacy of the injured and ill employees, you may choose not to record the employee's name on the OSHA 300 log for certain "privacy concern cases."

Exceptions for Not Entering Employee's Name on the OSHA Form 300

The following types of injuries or illnesses may be privacy concern cases:

- an injury or illness to an intimate body part or to the reproductive system;
- an injury or illness resulting from a sexual assault;
- a mental illness;
- a case of HIV infection, hepatitis, or tuberculosis;
- a needlestick injury or cut from a sharp object that is contaminated with blood or other potentially infectious material; and
- other illnesses, if the employee independently and voluntarily requests that his or her name not be entered on the log.

Do not enter the employee's name on the OSHA log for these cases. Instead, write "privacy case" in the space normally used for the employee's name. You must still keep a separate, confidential list of the case numbers and employee names for

the establishment's privacy concern cases so that you can update the cases and provide information to the government if asked to do so.

If you have a reasonable basis to believe that information describing the privacy concern case may be personally identifiable, even though the employee's name has been omitted, you may use discretion in describing the injury or illness on both the OSHA 300 and 301 forms. Enter enough information to identify the cause of the incident and the general severity of the injury or illness, but do not include details of an intimate or private nature.

If the outcome or extent of an injury or illness changes after you have recorded the case, simply draw a line through the original entry or, if you wish, delete or white out the original entry. Then write the new entry where it belongs. Remember, you need to record the most serious outcome for each case.
Cases listed on the log of work-related injuries and illnesses are not necessarily eligible for workers' compensation or other insurance benefits. Listing a case on the log does not mean that the employer or worker was at fault or that an Cal/OSHA standard was violated.

Work-Related Injuries or Illnesses [T8 CCR §14300.5]

An injury or illness is considered work-related if an event or exposure in the work environment caused or contributed to the condition or significantly aggravated a pre-existing condition. Work-relatedness is presumed for injuries and illnesses resulting from events or exposures occurring in the workplace, unless an exception specifically applies. The work environment includes the establishment and other locations where one or more employees are working or are present as a condition of their employment.

Exceptions

- At the time of the injury or illness, the employee was present in the work environment as a member of the public rather than as an employee.
- The injury or illness involves signs or symptoms that surface at work but result solely from a non-work-related event or exposure that occurs outside the work environment.
- The injury or illness results solely from voluntary participation in a wellness program or in a medical, fitness, or recreational activity, such as blood donation, physical examination, flu shot, exercise class, racquetball, or baseball.
- The injury or illness is solely the result of an employee eating, drinking, or preparing food or drink for personal consumption (whether bought on the employer's premises or brought in). For example, if the employee is injured by choking on a sandwich while in the employer's establishment, the case would not be considered work-related. Note: If the employee is made ill by ingesting food contaminated by workplace contaminants, such as lead, or gets food poisoning from food supplied by the employer, the case would be considered work-related.

Employee choking on food during lunch is not work-related

- The injury or illness is solely the result of an employee doing personal tasks (unrelated to employment) at the establishment outside of the employee's assigned working hours.
- The injury or illness is solely the result of personal grooming, self-medication for a non-work-related condition, or is intentionally self-inflicted.
- The injury or illness is caused by a motor vehicle accident and occurs on a company parking lot or company access road while the employee is commuting to and from work.
- The illness is the common cold or flu. (Note: Contagious diseases, such as tuberculosis, brucellosis, hepatitis A, or plague, *are* considered work-related if the employee is infected at work.)
- The illness is a mental illness. Mental illness will not be considered work-related unless the employee voluntarily provides the employer with an opinion from a physician or other licensed healthcare professional with appropriate training and experience (psychiatrist, psychologist,

psychiatrist nurse practitioner, etc.) stating that the employee has a mental illness that is work-related.

Recordable Work-Related Injuries and Illnesses

Record those work-related injuries and illnesses that result in:

- death;
- loss of consciousness;
- days away from work;
- restricted work activity or job transfer; and
- medical treatment beyond first aid.
- A significant injury or illness diagnosed by a physician or other licensed health care professional.

You must also record work-related injuries and illnesses that are significant, as defined under Additional Criteria for Recordkeeping Injuries, or meet any of the additional criteria listed there.

Additional Criteria for Recording Injuries [T8 CCR §14300.7]

You must record the following conditions when they are work-related:

- any needlestick injury or cut from a sharp object that is contaminated with another person's blood or other potentially infectious material;
- any case requiring an employee to be medically removed under the requirements of a Cal/OSHA health standard;
- tuberculosis infection, as evidenced by a positive skin test or diagnosis by a physician or other licensed healthcare professional after exposure to a known case of active tuberculosis; and
- an employee's hearing test (audiogram) reveals that (1) the employee has experienced a standard threshold shift (STS) in hearing in one or both ears (averaged at 2000, 3000, and 4000 Hz) and (2) the employee's total hearing level is 25 decibels (dB) or more above audiometric zero (also averaged at 2000, 3000, and 4000 Hz) in the same ear(s) as the STS.

Any needle-stick injury or cut from a sharp object with another person's blood is recordable.

Record any significant work-related injury or illness that is diagnosed by a physician or other licensed healthcare professional. Also record any work-related case involving cancer, chronic irreversible disease, a fractured or cracked bone, or a punctured eardrum. If an employee is medically removed under the medical surveillance requirements due to a chemical exposure, the entry should be made on the 'poisoning' column of the OSHA 300 Log.

Definition of Medical Treatment [T8 CCR §14300.7(b)(5)(A)]

Medical treatment includes managing and caring for a patient for the purpose of combating disease or disorder. The following are not considered medical treatments and are NOT recordable:

- visits to a doctor or healthcare professional solely for observation or counseling;
- diagnostic procedures, including administering prescription medications that are used solely for diagnostic purposes; and
- any procedure that is labeled as first aid.

First Aid [T8 CCR §14300.7(b)(5)(B)]

If the incident required only the following types of treatment, consider it first aid. Do NOT record the case if it involves only:

- using non-prescription medications at non-prescription strength;
- administering tetanus immunizations;
- cleaning, flushing, or soaking wounds on the skin surface;
- using wound coverings, such as bandages, adhesive bandages, gauze pads, etc., or using steri-strips or butterfly bandages;
- using hot or cold therapy;
- using any totally non-rigid means of support, such as elastic bandages, wraps, non-rigid back belts, etc.;
- using temporary immobilization devices while transporting an accident victim (splints, slings, neck collars, or back boards);
- drilling a fingernail or toenail to relieve pressure, or draining fluids from blisters;
- using eye patches;

- using simple irrigation or a cotton swab to remove foreign bodies not embedded in or adhered to the eye;
- using irrigation, tweezers, cotton swab, or other simple means to remove splinters or foreign material from areas other than the eye;
- using finger guards;
- using massages; and
- drinking fluids to relieve heat stress.

Restricted Work

Restricted work activity occurs when, as the result of a work-related injury or illness, an employer or healthcare professional keeps or recommends keeping an employee from doing the routine functions of his or her job or from working the full workday that the employee would have been scheduled to work before the injury or illness occurred.

How to Calculate the Number of Restricted Work Activity Days or Days Away from Work

Count the number of calendar days the employee was on restricted work activity or was away from work as a result of the recordable injury or illness. Do not include the day on which the injury or illness occurred. Begin counting days from the day *after* the incident occurs. If a single injury or illness involved both days from work and days of restricted work activity, enter the total number of days for each. You may stop counting days of restricted work activity or days away from work once the total of either or the combination of both reaches 180 days.

An injury is any wound or damage to the body resulting from an event in the work environment. Examples include:

- cut
- puncture
- laceration
- abrasion
- fracture
- bruise
- contusion
- chipped tooth
- amputation
- insect bite
- electrocution
- thermal, electrical, or radiation burn
- Note: Sprain and strain injuries to muscles, joints, and connective tissues are classified as injuries when they result from a slip, trip, fall, or other similar accidents.

Classifying Illnesses

Skin Diseases or Disorders

Skin diseases or disorders are illnesses involving the worker's skin caused by work exposure to chemicals, plants, or other substances.

Examples of Skin Diseases or Disorders: Contact dermatitis, eczema, or rash caused by primary irritants and sensitizers or poisonous plants; oil acne; fraction blisters, chrome ulcers; inflammation of the skin.

Respiratory Conditions

Respiratory conditions are illnesses associated with breathing hazardous biological agents, chemicals, dust, gases, vapors, or fumes at work.

Examples of Respiratory Conditions: Silicosis, asbestosis, pneumonitis, pharyngitis, rhinitis, or acute congestion; farmer's lung, beryllium disease, tuberculosis, occupational asthma, toxic inhalation injury; etc.

Poisoning

Poisoning includes disorders evidenced by abnormal concentrations of toxic substances in blood, other tissues, other bodily fluids, or the breath that are caused by the ingestion or absorption of toxic substances into the body.

Examples of Poisoning: Poisoning by lead, mercury, cadmium, arsenic, or other metals; poisoning by carbon monoxide, hydrogen sulfide, or other gases; poisoning by benzene, benzol, carbon tetrachloride, or other organic solvents; poisoning by insecticide sprays, such as parathion or lead arsenate; poisoning by other chemicals, such as formaldehyde.

Hearing Loss

Noise-induced hearing loss is defined for recordkeeping purposes as a change in hearing threshold relative to the baseline audiogram of an average of 10 dB or more in either ear at 2000, 3000, and 4000 hertz, and the employee's total hearing level is 25 decibels (dB) or more above audiometric zero (also averaged at 2000, 3000, and 4000 hertz) in the same ear(s).

All Other Illnesses

Examples include (but are not limited to) heatstroke, sunstroke, heat exhaustion, heat stress, and other effects of environmental heat; freezing, frostbite; effects of ionizing radiation (isotopes, x-rays, radium); effects of non-ionizing radiation (welding flash, ultra-violet rays, lasers); anthrax; bloodborne pathogenic diseases, such as AIDS, HIV, hepatitis B or hepatitis C; brucellosis; malignant or benign tumors; histoplasmosis; coccidioidomycosis.

Multiple Business Establishments [T8 CCR §14300.30]

For multiple business establishments, each establishment must maintain recordkeeping forms. Records of all the multiple locations can be kept at a central location, if the information regarding the injury and illness can be transmitted to that location within seven days.

Recordkeeping Requirements under T8 CCR §3204

Employers covered by Cal/OSHA are required to provide access to Medical and Exposure records to employees, their designated representatives and authorized representatives of the Chief of Division of Occupation Safety and Health. This access is necessary to assist the agency in enhancing their efforts to detect, treat and prevent occupational diseases. A physician or other healthcare personnel may be authorized by the employer to preserve these records, but the ultimate responsibility of keeping these records safely wrest with the employer.

An Employee Exposure Record may include any form of these under mentioned exposure records:

- Environmental (workplace) monitoring or measuring as well as related collection and analytical methodologies, calculations, and other background data relevant to interpretation of the results obtained;
- Biological monitoring results which directly assess the absorption of a toxic substance or harmful physical agent by body systems (e.g., the level of chemical in the blood, urine, breath, hair, fingernails, etc.) but not including results which assess the biological effect of a substance or agent or which assess an employee's use of alcohol or drugs;
- Safety data sheets indicating that the material may pose a hazard to human health; or
- A chemical inventory or any other record, which reveals the identity (e.g., chemical, common, or trade name) of a toxic substance or harmful physical agent and where and when the toxic substance or harmful physical agent was used.

A Medical Record is a record concerning the health status of an employee which is made or maintained by a physician, nurse, or other health care personnel, or technician. They include:

- Medical and employment questionnaires or histories (including job description and occupational exposures);
- The results of medical examinations (pre-employment, pre-assignment, periodic, or episodic) and laboratory tests (including chest and other X-ray examinations taken for the purposes of establishing a base-line or detecting occupational illness, and all biological monitoring not defined as an "employee exposure record");
- Medical opinions, diagnoses, progress notes, and recommendations;
- First-aid records;
- Descriptions of treatments and prescriptions; and
- Employee medical complaints.

Preservation of Records

Employee Medical Records must be maintained for the duration of employment plus a period of thirty years. Some records are not required to be preserved. They are:

- First aid records (not including medical histories) of one-time treatment and subsequent observation of minor scratches, cuts, burns, splinters, and the like which do not involve medical treatment, loss of consciousness, restriction of work or motion, or transfer to another job, if made on-site by a non-physician and if maintained separately from the employer's medical program and its records worked for less than a year;
- Health insurance claims records maintained separately from the employer's medical program and its records;
- The medical records of employees who have worked for less than (1) year for the employer need not be retained beyond the term of employment if they are provided to the employee upon the termination of employment.

Transfer of Records

The employers are obligated to transfer the records to the successor employer if the business is sold or transferred to another ownership. If the business chooses to close down, then the employer must notify affected employees of their rights of access to records at least three (3) months prior to the cessation of the employer's business. Prior to disposing the records, the employer is required to

- Transfer the records to the Director of the National Institute for Occupational Safety and Health (NIOSH); or
- Notify the Director of NIOSH in writing of the impending disposal of records at least three (3) months prior to the disposal of the records.

Employers choosing to dispose of records on a regular basis and that are required to be preserved for thirty years must notify NIOSH on an annual basis of their intention to do so.

Whenever an employee or designated representative requests a copy of a record, the employer must ensure that:

- A copy of the record is provided without cost to the employee or designated representative;
- The necessary mechanical copying facilities (e.g. photocopying) are made available without cost to the employee or designated representative for copying the record; or
- The record is loaned to the employee or designated representative for a reasonable time to enable a copy to be made.

In the case of an original X-ray, the employer may restrict access to on-site examination or make other suitable arrangements for the temporary loan of the X-ray. Employer may charge reasonable, non-discriminatory administrative costs (i.e., search and copying expenses but not including overhead expenses) for copying the records if the employees request additional copies of their records.

Resources

1. California Code of Regulations. Title 8, Section 3204, Regulatory Text, Cal/OSHA, California Department of Industrial Relations.
2. California Code of Regulations, Title 8, Section 14300, Regulatory Text, Cal/OSHA, California Department of Industrial Relations.
3. 'Employer Records of Occupational Injury or Illness', Chapter 7, Subchapter 1, Article 2, California Department of Industrial Relations.
4. Record-keeping Handbook. OSHA-3245, OSHA Publication, 2005.
5. OSHA 300, 301, 300A Forms, OSHA-300, OSHA Publication, 2003.
6. OSHA Record-keeping, "It's new, it's improved, it's easier…" OSHA Publication, OSHA-3169, 2001.

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Chapter 3: Injury and Illness Prevention Program (IIPP) [T8 CCR §3203]

Injury and Illness Prevention Program (IIPP) is based on the belief that employers through a systematic approach to recognizing and correcting workplace hazards can reduce workplace injuries and fatalities significantly. IIPP saves lives and money. On average, costs per injury can add up to more than $50,000.00 for a back injury, $62,000.00 for a slip and fall injury, and $40,000.00 for a Carpal Tunnel or Repetitive Motion Injury. Besides medical treatment, employers will be faced with a litany of higher worker's compensation insurance premiums, indemnity, and litigation. These costs do not include additional indirect costs associated with injuries and illnesses such as lost productivity, re-training, hiring new employees, administrative time, repair and replacement of equipment, etc. ,

Cal/OSHA fined offices of Physicians (industry classification-6211) 1,375 in 2017-2018 inspections for violations under the IIPP standard. Most of it coming under violating 3203(a) of the standard.

Under this standard, all employers are required to have an Injury and Illness Prevention Program. The most frequently cited Cal/OSHA violation is for not establishing an IIPP [T8 CCR §3203(a)]. Similar programs exist in a few states. Washington calls it the Accident Prevention program (APP). There is no such program for federal OSHA although campaign to introduce an IIPP standard is afoot.

Characteristics of an Injury and Illness Prevention Program

This is a formal program that must be outlined in writing. It must be tailored to the needs of your particular workplace or operation and to the types of hazards involved

Make sure your Injury and Illness Prevention Program contains at least the following elements:

- The name and address of the person responsible for conducting the IIPP.

- A safety orientation including communication of the program to employees. A description of your total safety and health program will include on-the-job orientation showing employees what they need to know to perform their initial job assignments safely.
- Assessment of various hazards in the workplace to eliminate accidents or near misses.
- Procedures to investigate accidents or exposure at the workplace
- Hazard correction is the commitment shown by the employer that any hazard found will be corrected timely. If the hazard cannot be eliminated, then PPE at no cost to the employees must be provided.
- Training and Instruction
    - How and when to report on-the-job injuries including instruction about the location of first-aid facilities in your workplace.
    - What to do in an emergency, including how to exit the workplace.
    - Identification of hazardous gases, chemicals, or materials used on-the-job and instruction about the safe use and emergency action to take after accidental exposure.
- Documentation of all the mandated records including medical and exposure records, BBP exposure control plan, Hazard Communication Plan, etc. are necessary to have an effective safety and health program at the workplace.

Communicating IIPP to Employees [T8 CCR §3203(a)(3)]

Employers must ensure that the program is effectively communicated to the employees. They must also encourage employees to inform the employer of hazards at the worksite without fear of reprisal. Compliance to this section can be met by organizing meetings, training programs, posting, written communications, a system of anonymous notification by employees about hazards, labor/management safety and health committees, or any other means that ensures communication with employees.

According to T8 CCR §3203(7), all employers on the non-hazard list (medical and dental employers are on the non-hazard list) and who have a Worker's Compensation Experience Modification Rate (ExMod) of 1.1% with less than 20 employees during the calendar year can limit their IIPP to the following elements:

- The identity of the person(s) with authority and responsibility for program implementation as required by T8CCR §3203 (a)(1),
- Scheduled periodic "inspections" to identify unsafe conditions and work practices as required by T8CCR §3203 (a)(4),
- Training and instruction provided to employees as required by T8CCR 3203 (a)(7).

A comprehensive documentation of the above must be maintained to fulfill the mandatory requirements of this section.

Employers with fewer than 10 employees can communicate the IIPP orally about general work practices with respect to hazards they face.

A copy of the IIPP is provided in the Documentation Kit.

Resources

1. Code of California Regulations, Title 8, Section 3203, Regulatory Text, Cal/OSHA, Department of Industrial Relations.

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PPE is an item or items used to protect the eyes, face, head, body, arms, hands, legs, and feet such as goggles, helmets, head covers, gloves, rubber slickers, disposable coveralls, safety shoes, protective shields, and barriers. According to Cal/OSHA, the employer must provide PPE to each employee required to use the PPE, and each failure to provide PPE to an employee may be considered a separate violation.

Cal/OSHA fined offices of Physicians (industry classification-6211) $375 in 2017-2018 inspections for violations under Personal Protective Equipment standard.

Employers must constantly look for and identify hazards or potential hazards in your workplace and determine if PPE is necessary on the job. PPE alone should not be relied on to provide protection for your employees. PPE should be used after all other reasonable means of reducing hazards have been carried out. Identifying hazards in your workplace should be built into your regular routine. You should take active steps to get rid of all identified hazards. For example, you can:

- Consider other ways to get hazardous jobs done.
- Reduce hazardous materials or processes.
- Apply engineering controls such as use of safety needles to reduce or eliminate hazards.

Hazard Assessment for PPE

Verify that a hazard assessment for PPE has been done at your workplace and complete a written certification (paper or electronic format) that includes the:

- Name of the workplace.
- Address of the workplace you inspected for hazards.
- Name of person certifying that a workplace hazard assessment was done.
- Date(s) the workplace hazard assessment was done.

Failure to assess the workplace for hazards to determine the selection and use of PPE is a violation.

Statement identifying the document as the certification of hazard assessment for PPE for the workplace must also be completed. **Hazard Assessment for PPE form is available in the Documentation Kit.**

According to this Standard, all employers must keep PPE in safe and good condition. They must also make sure all PPE is safe for the work to be performed and must be

- Durable
- Fit snugly
- Not interfere with the employee's movements
- Make sure PPE is used and maintained in a clean and reliable condition.
- Defective equipment MUST NOT be used
- Make sure if employees provide their own PPE that it is adequate for the workplace hazards, and maintained in a clean and reliable condition

Train employees in proper use of PPE

Employers must:

- Communicate PPE selection decision to each at-risk employee.
- Provide training to each employee who is required to use PPE on the job.
- Each affected employee must be trained to know at least the following:
  - When PPE is necessary
  - What PPE is necessary
  - How to put on, take off, adjust, and wear PPE
  - Limitations of PPE
  - Proper care, maintenance, useful life, and disposal of PPE
- Make sure before an employee is allowed to perform work requiring the use of PPE that the employee can:
  - Demonstrate an understanding of the training specified above; and
  - Demonstrate the ability to use PPE properly.

Retrain Employees to Use PPE, if necessary

Employers must retrain an employee when there is a reason to believe the understanding, motivation, and skills required to use the PPE has not been retained. Circumstances where retraining is required include:

- Changes in the workplace that make previous training out of date.
- Changes in the types of PPE to be used make previous training out of date.
- Work habits or demonstrated knowledge indicate that the employee has not retained the necessary understanding, skill, or motivation to use PPE.

Document PPE Training

Employers must document in writing that each employee using PPE has received and understood the required training. This documentation must include:

- Name of each employee.
- Date(s) of training.
- Subject of the training.

Documentation may be stored on a computer as long as it is available to safety and health personnel from the department of labor and industries.

Resources

1. 'Personal Protective Equipment', Code of California Regulations, Title 8, Section 3380, Regulatory Text, Cal/OSHA, Department of Industrial Relations.

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Chapter 5: Bloodborne Pathogen Standard [T8 CCR §5193]

This is the most frequently requested and referenced Cal/OSHA standard affecting medical and dental offices. Below are seven basic requirements of the OSHA bloodborne pathogens standard.

1. A written exposure-control plan (ECP) to be updated annually, which covers:
   a. The exposure determination;
   b. use of universal precautions;
   c. sharps injury prevention program;
   d. use of engineering and work practice controls;
   e. use of appropriate personal protective equipment (gloves, face and eye protection, gowns);
   f. housekeeping procedures.

2. Provision of hepatitis B vaccine to exposed employees at no cost.

Cal/OSHA fined offices of Physicians (industry classification-6211) $15,555 In 2017-2018 and $5,960 in 2016-2017 inspections for violations under BBP standard.

3. Medical follow up in the event of an exposure incident.

4. Use of labels or color-coding for items such as sharps disposal boxes and containers for regulated waste, contaminated laundry, and certain specimens.

5. Bloodborne Pathogen training

6. Recordkeeping, including:
   a. training records;
   b. medical records;
   c. sharps injury log; and
   d. Hepatitis B Vaccine Declination Form (mandatory).

7. Proper containment of all regulated waste.

According to T8 CCR§5193 (a), the bloodborne pathogen standard is applicable to all occupational exposure to blood or other potentially infectious material (OPIM).

Definitions

Occupational exposure is defined as "reasonably anticipated skin, eye, mucous membrane, or parenteral contact with blood or other potentially infectious materials that may result from the performance of an employee's duties."

Blood — Human blood, human blood components, and products made from human blood.

Bloodborne Pathogens — Pathogenic microorganisms that are present in human blood that can cause disease in humans. These pathogens include, but are not limited to, hepatitis B virus (HBV), hepatitis C virus (HCV) and human immunodeficiency virus (HIV).

Exposure incident means a specific eye, mouth, other mucous membrane, nonintact skin or parenteral contact with blood or other potentially infectious material (OPIM) that results from the performance of an employee's duties.

Examples of nonintact skin include skin with dermatitis, hangnails, cuts, abrasions, chafing, or acne.

Parenteral contact occurs when mucous membranes or skin is pierced by needlesticks, human bites, cuts, or abrasions.

Other Potentially Infectious Materials (OPIM)

These include:

- the following human body fluids: semen, vaginal secretions, cerebrospinal fluid, synovial fluid, pleural fluid, pericardial fluid, peritoneal fluid, amniotic fluid, saliva in dental procedures, any body fluid that is visibly contaminated with blood, and all body fluids in situations where it is difficult or impossible to differentiate between body fluids;

- any unfixed tissue or organ (other than intact skin) from a human (living or dead);
- HIV-containing cell or tissue cultures, organ cultures, and HIV- or HBV-containing culture medium or other solutions; and
- blood, organs, or other tissues from experimental animals infected with HIV or HBV.

Although any employee can be exposed to bloodborne pathogens unexpectedly from a work environment, OSHA has provided a list of employees who can be exposed to bloodborne pathogens while discharging their duties. They are:

- Physicians, dentists and physicians' assistants.
- Nurses, nurse practitioners, dental hygienists, and other health care employees in clinics and offices.
- Employees of clinical, dental, and diagnostic laboratories.
- Housekeepers in health care facilities.
- Staff in laundries that provide service to health care facilities.
- Tissue bank personnel.
- Employees in blood banks and plasma centers who collect, transport, and test blood.
- Freestanding clinic employees (for example, hemodialysis clinics, urgent care clinics, health maintenance organization (HMO) clinics, and family planning clinics).
- Employees in clinics in industrial, educational, and correctional facilities.
- Staff of institutions for the developmentally disabled.
- Hospice employees.
- Home health care workers.
- Staff of nursing homes and long-term care facilities.
- HIV and HBV research laboratory and production facility workers.
- Medical equipment service and repair personnel.
- Emergency medical technicians, paramedics, and other emergency medical service providers.
- Nuclear medical technologists.

There are other occupations outside health care whose employees can be exposed to bloodborne pathogens. They are:

- Fire fighters, law enforcement personnel, and correctional officers.
- Workers in laundries that service public safety institutions.
- Employees assigned to provide emergency first aid by their employer (as either a primary or secondary duty).
- Employees who handle or pick up regulated waste.
- Hotel/motel employees that clean up blood or OPIM.
- Employees of funeral homes and mortuaries.

Epidemiology

Healthcare workers are at risk for occupational exposure to bloodborne pathogens, including hepatitis B virus (HBV), hepatitis C virus (HCV), and human immunodeficiency virus (HIV). Exposures occur through needlesticks or cuts from other sharp instruments contaminated with an infected patient's blood or through contact of the eye, nose, mouth, or skin with a patient's blood. Important factors that may determine the overall risk for occupational transmission of a bloodborne pathogen include the number of infected individuals in the patient population, the chance of becoming infected after a single blood contact from an infected patient, and the type and number of blood patients.

Most exposures do not result in infection. Following a specific exposure, the risk of infection may vary with factors, such as the:

- pathogen involved;
- type of exposure;
- amount of blood involved in the exposure; and
- amount of virus in the patient's blood at the time of exposure.

Steps to Be Taken by the Employee after Exposure

1. Immediately following an exposure to blood:
   a. wash needlesticks and cuts with soap and water;
   b. flush splashes to the nose, mouth, or skin with water; and
   c. irrigate eyes with clean water, saline, or sterile irrigants.

2. Following any blood exposure, you should report the exposure to the department or supervisor (e.g., occupational health, infection control) responsible for managing exposures. Prompt reporting is essential because, in some cases, post-exposure treatment may be recommended and it should start as soon as possible.
3. Discuss the possible risks of acquiring HBV, HCV, and HIV and the need for post-exposure treatment with the provider managing your exposure. You should have already received hepatitis B vaccine, which is extremely safe and effective in preventing HBV infection.

Risk of Infection After Exposure

HBV

Risk of hepatitis B for an unvaccinated person is 6 – 30%.

Healthcare workers who have received Hepatitis B vaccine and have developed immunity to the virus are at virtually no risk for infection. For an unvaccinated person, the risk from a single needlestick or a cut exposure to HBV-infected blood ranges from 6-30% and depends on the hepatitis B e- antigen (HBeAg) status of the source individual. Individuals who are both hepatitis B surface antigen (HBsAg) positive and HBeAg positive have more viruses in their blood and are more likely to transmit HBV.

HCV

Risk of infection after needle – stick to hepatitis C is 1.8 %.

Based on limited studies, the risk for infection after a needlestick or cut exposure to HCV-infected blood is approximately 1.8%. The risk following a splash is unknown but is believed to be very small; however, HCV infection from such an exposure has been reported.

HIV

The average risk of HIV infection after a needlestick or cut exposure to HIV-infected blood is 0.3% (i.e., three-tenths of one percent, or about 1 in 300). Stated another way, 99.7 % of needlestick/cut exposures do not lead to infection.

The risk after exposure of the eye, nose, or mouth to HIV-infected blood is estimated to be, on average, 0.1% (1 in 1000).

Risk of HIV infection after needlestick is 0.3%.

The risk after exposure of the skin to HIV-infected blood is estimated to be less than 0.1%. A small amount of blood on intact skin probably poses no risk at all. There have been no documented cases of HIV transmission due to an exposure involving a small amount of blood on intact skin (a few drops of blood on skin for a short period of time). The risk may be higher if the skin is damaged (for example, by a recent cut) or if the contact involves a large area of skin or is prolonged (for example, being covered in blood for hours).

Treatment for the Exposure

HBV

Hepatitis B vaccine has been available since 1982 to prevent HBV infection. All healthcare workers who have a reasonable chance of exposure to blood or body fluids should receive hepatitis B vaccine. Vaccination ideally should occur during the healthcare worker's training period. Workers should be tested one to two months after the vaccine series to make sure that the vaccination has provided immunity to HBV infection.

Hepatitis B vaccine must be administered to all employees at no cost within 10 days of employment.

Hepatitis B immune globulin (HBIG) is effective in preventing HBV infection after an exposure. The decision to begin treatment is based on several factors.

- Whether the source individual is positive for hepatitis B surface antigen.
- Whether you have been vaccinated.
- Whether the vaccine provided you immunity.

HCV

There is no vaccine against hepatitis C and no treatment after an exposure that will prevent infection. Immune globulin is not recommended.

HIV

There is no vaccine against HIV. However, results from a small number of studies suggest that the use of zidovudine after certain occupational exposures may reduce the chance of HIV transmission. Post-exposure treatment is not recommended for all occupational exposures to HIV because most exposures do not lead to HIV infection and because the drugs used to prevent infection may have serious side effects. Taking these drugs for exposures that pose a lower risk for infection may not be worth the risk of the side effects. You should discuss the risks and side effects with a healthcare provider before starting post-exposure treatment for HIV.

Post-exposure treatment is not recommended for all exposures to HIV.

Rapid HIV Antibody Testing

According to the federal BBP standard, the source individual's blood must be tested as soon as feasible after an exposure incident and after consent. At the current time, there are at least four FDA-approved tests available for "rapid HIV antibody testing," which usually can confirm negative HIV status in less than an hour after blood is drawn from a source individual. They are widely available, easy to use, and inexpensive. Standard enzyme immunoassay (EIA) testing can take a much longer time, especially if facilities to perform the tests are not available locally.

It is considered a violation if an employer fails to do rapid HIV testing on a source individual.

Recommended Drugs for Post-Exposure Treatment

HBV

If you have not been vaccinated, then hepatitis B vaccination is recommended for any exposure, regardless of the source person's hepatitis B status. HBIG and/or hepatitis B vaccine may be recommended depending on your immunity to hepatitis B and the source individual's infection status.

HCV

Currently, there is no recommended post-exposure treatment that will prevent HCV infection.

HIV

Post-exposure treatment for HIV involves the course of two drugs for most HIV exposure.

The public health service recommends a four-week course of two drugs, zidovudine and lamivudine, for most HIV exposures, or zidovudine and lamivudine plus a protease inhibitor (indinavir or nelfinavir) for exposures that may pose a greater risk for transmitting HIV, such as those involving a larger volume of blood with a large amount of HIV or a concern about drug-resistant HIV. Differences in side effects associated with the use of these drugs may influence which drug is selected in a specific situation.

These recommendations are intended to provide guidance to clinicians and may be modified on a case-by-case basis. Determining which drugs and how many drugs to use or when to change a treatment regimen is largely a matter of judgment. Whenever possible, consulting an expert with experience in the use of antiviral drugs is advised, especially if a recommended drug is not available, if the source patient's virus is likely to be resistant to one or more recommended drugs, or if the drugs are poorly tolerated.

Post-exposure treatment for HBV must begin within 24 hours of exposure.

Post-exposure treatment for HBV should begin as soon as possible after exposure, preferably within 24 hours and no later than seven days. Treatment for HIV should be started promptly, preferably within hours, as opposed to days, after the exposure. Although animal studies suggest that treatment is not effective when started more than 24-36 hours after exposure, it is not known if this period is the same for humans. Starting treatment after a longer period (e.g., one to two weeks) may be considered for the highest-risk exposures; even if HIV infection is not prevented, early treatment of initial HIV infection may lessen the severity of symptoms and delay the onset of AIDS.

The Federal Drug Administration (FDA) has approved hepatitis B vaccine and HBIG, while it has not approved HIV drugs for the treatment to prevent infection. The FDA, however, has approved HIV drugs for the treatment of existing HIV infections. Physicians may prescribe any approved drug when, in their professional judgment, the use of the drug is warranted.

Side Effects

HBV

Hepatitis B vaccine is very safe. There is no information that the vaccine causes any chronic illnesses. Most illnesses reported after an HBV vaccination are often related to other causes and not the vaccine. However, you should report any unusual reaction after a hepatitis B vaccination to your healthcare provider.

Women who are pregnant or breast-feeding can be vaccinated against HBV infection and/or get HBIG. Pregnant women who are exposed to blood should be vaccinated against HBV infection because infection during pregnancy can cause severe illness in the mother and a chronic infection in the newborn. The vaccine does not harm the fetus.

HIV

All of the antiviral drugs for HIV have been associated with side effects. The most common side effects include upset stomach (nausea, vomiting, and diarrhea), tiredness, or headache. The few serious side effects reported in healthcare workers are kidney stones, hepatitis, and suppressed cell production. Protease inhibitors (indinavir and nefinavir) may interact with other medicines and cause serious side effects and should not be used in combination with certain other drugs, such as prescription antihistamines. It is important to inform the healthcare provider managing your exposure about any medications you are currently taking, if you need to take antiviral drugs for an HIV exposure.

All of the antiviral drugs for HIV have associated side effects.

Pregnancy should not rule out the use of post-exposure treatment when it is warranted. If you are pregnant, you should understand what is known and not

known regarding the potential benefits and risks associated with the use of antiviral drugs in order to make an informed decision about treatment.

Post-Exposure Follow-Up

HBV

Because post-exposure treatment is highly effective in preventing HBV infection, the Center for Disease Control (CDC) does not recommend routine follow-up after treatment. However, any symptoms suggesting hepatitis (e.g., yellow eyes or skin, loss of appetite, nausea, vomiting, fever, stomach or joint pain, extreme tiredness) should be reported to your healthcare provider.

HCV

You should have an antibody test for hepatitis C virus and a liver enzyme test (alanine aminotransferase activity) as soon as possible after the exposure (baseline) and at four to six months after the exposure. Some clinicians may also recommend a HCV RNA test to detect HCV infection four to six weeks after the exposure. Report any symptoms suggesting hepatitis to your healthcare provider.

HIV

You should be tested for HIV antibody as soon as possible after exposure (baseline) and periodically for at least six months after the exposure (e.g., at six weeks, 12 weeks, and six months).

If you take antiviral drugs for post-exposure treatment, you should be checked for drug toxicity by having a complete blood count and kidney and liver function tests just before starting treatment and two weeks after starting treatment.
You should report any sudden or severe flu-like illness that occurs during the follow-up period, especially if it involves fever, rash, muscle aches, tiredness, malaise, or swollen glands. Any of these may suggest HIV infection, drug reaction, or other medical conditions.

You should contact the healthcare provider managing your exposure if you have any questions or problems during the follow-up period.

Precautions:

During the follow-up period, especially the first six to 12 weeks, when most infected persons are expected to show signs of infection, you should follow recommendations for preventing transmission of HIV. These include not donating blood, semen, or organs and not having sexual intercourse. If you choose to have sexual intercourse, using a condom consistently and correctly may reduce the risk of HIV transmission. In addition, women should consider not breast-feeding infants during the follow-up period to prevent exposing their infants to HIV in breast milk.

Exposure Control Plan [T8 CCR §5193(c)(1)]

Each employer having at least one employee with occupational exposure must establish a written exposure-control plan designed to eliminate or minimize employee exposure.

The exposure control plan, at a minimum, should contain the following elements:

- The exposure determination;
- use of universal precautions;
- sharps injury prevention program including sharps injury log;
- use of engineering and work practice controls;
- use of appropriate personal protective equipment (gloves, face and eye protection, gowns);
- involving employees in reviewing and updating the ECP with respect to their work areas;
- an effective procedure for documenting patient safety determinations in engineering control matters;
- housekeeping procedures.

The plan must be accessible to employees.

Annual Review and Update [T8 CCR §5193(c)(1)(D)]

The plan must be reviewed and updated at least annually and whenever necessary to reflect new or modified tasks and procedures that affect exposure and to reflect new or revised employee positions with exposure. To review and evaluate the exposure incidents which occurred since the previous update and to review and respond to information indicating that the Exposure Control Plan is deficient in any area. This plan can be stored on a computer provided the exposed employees are familiar with the computer and how to access it. Make sure a copy of the plan is provided to the employee or their representative within 15 days of their request for a copy.

Exposure Determination [T8 CCR §5193(c)(3)]

A determination of the duties, tasks, and scope of the employees' work must be done by the employer to assess whether employees have reasonably anticipated exposure to blood or OPIM; it includes the following:

- a list of all job classifications in which all employees have occupational exposure;
- a list of job classifications in which some employees have occupational exposure; and
- a list of all tasks and procedures in which occupational exposure occurs and that are performed by employees in job classifications.

Job Classifications

The following is a list of all job classifications in which all employees have occupational exposure:

Job Title	Department / Location
Physicians	Exam Room/Surgical Theater
Nurses	Exam Room/Treatment Room
Nursing Assistants	Exam Room
Phlebotomists	Clinical Lab

The following is a list of job classifications in which some employees have occupational exposure. Included is a list of tasks and procedures, or groups of closely related tasks and procedures, in which occupational exposure may occur for these individuals.

Job Title	Department / Location	Task / Procedure
Housekeeper	Environmental services	Handling regular waste

A sample list of tasks and procedures that have occupational exposure:

Job Classification	Tasks/Procedures in These Jobs That Have Occupational Exposure
Dietary Employees	Handling food contaminated with vomitis, blood, or OPIM
Field Service Technicians	Doing maintenance/repairs on medical equipment contaminated with blood or OPIM
Housekeepers	Handling regulated waste, cleaning up spills or equipment
Medical Assistants	Administering injections, cleaning rooms, disinfecting equipment
Patient Escort/Transport	Transporting patients, responding to incidents
Physical Therapists	Conducting exams, providing patient therapy

Methods of Compliance

The standard describes various methods of compliance that the employer must take to protect employees from exposure to bloodborne pathogens and other potentially infected materials (OPIM). These methods include

- Universal Precautions
- Sharps Injury Prevention Program
- Engineering and Work Practice Controls
- Personal Protective Equipment (PPEs)
- Housekeeping

Universal Precautions

Under this approach, all human blood and certain body fluids are treated as if known to be infectious for HIV, HBV, and other bloodborne pathogens.

Universal precautions are the infection-control techniques that were recommended following the AIDS outbreak in the 1980s.[2] Every patient is treated as if infected, and therefore precautions are taken to minimize risk. Essentially, universal precautions are good hygiene habits, such as hand washing and the use of gloves and other barriers, correct sharps handling, and aseptic techniques.

> Medical facilities failing to adhere to universal precautions would be in violation of section Cal/OSHA's 8 CCR 5193(b)(5), unless the facility is observing a more stringent set of guidelines.

Bloodborne Pathogen Standard Requirements

- Employees must observe universal precautions to prevent contact with blood or other potentially infectious materials (OPIM).
- Under circumstances in which differentiation between body fluid types is difficult or impossible, all body fluids must be considered potentially infectious materials.
- Treat all blood and other potentially infectious materials with appropriate precautions.

[2] http://en.wikipedia.org/wiki/Universal_precautions

- Use gloves, masks, and gowns if blood or OPIM exposure is anticipated.
- Use engineering and work practice controls to limit exposure.

Sharps Injury Prevention Program

Introduction

Prevention of percutaneous injuries and other blood exposures is an important step in preventing the transmission of bloodborne viruses to healthcare personnel. The CDC estimates that each year, 385,000 needlesticks and other sharps-related injuries are sustained by hospital-based healthcare personnel—an average of 1,000 sharps injuries per day. The exact data of all percutaneous injuries is not available because information has not been gathered on the frequency of injuries among healthcare personnel working in other settings (e.g., long-term care, home healthcare, private medical offices).

Cost of Percutaneous Injuries

Although occupational HIV and hepatitis seroconversion is relatively rare, the risks and costs associated with a blood exposure are serious and real. Costs include the direct costs associated with the initial and follow-up treatment of exposed healthcare personnel, which are estimated to range from $71 to almost $5,000, depending on the treatment provided. Costs that are harder to quantify include the emotional cost associated with fear and anxiety from worrying about the possible consequences of an exposure, direct and indirect costs associated with drug toxicities and lost time from work, and the societal cost associated with an HIV or HCV seroconversion. The latter includes the possible loss of a worker's services in patient care, the economic burden of medical care, and the cost of any associated litigation.

Infections Transmitted via Sharps Injuries during Patient Care (PC) and/or Laboratory/Autopsy (L/A)

Infection	PC	L/A
Blastomycosis		✓
Cryptococcosis		✓
Diphtheria		✓
Ebola		✓
Gonorrhea		✓
Hepatitis B	✓	
Hepatitis C	✓	
HIV	✓	
Herpes	✓	
Leptospirosis		□
Malaria	✓	
M. tuberculosis	✓	
Rocky Mountain		□
Spotted Fever		□
Scrub typhus		□
Streptococcus pyogenes		□
Syphilis		□

Source: Workbook for Designing. Implementing, and Evaluating a Sharps Injury Prevention Program, page 4, Center for Disease Control, 2008.

An effective sharps injury prevention program has several components to it. A proactive approach is needed to prevent injuries before they happen. Quality data on both reported injuries and injury hazards are important sources of information for prevention planning.

Implement a Culture of Safety

Features to include:

- management commitment to safety;
- healthcare worker involvement in safety decisions;
- method of handling of safety hazards in the work environment;
- feedback on safety improvements; and
- promotion on individual accountability.

A culture of safety is the shared commitment of management and employees to ensure the safety of the work environment. A culture of safety permeates all aspects of the work environment. It encourages every individual in an organization to project a level of awareness and accountability for safety.

Management can communicate a commitment to safety indirectly by modeling safe attitudes and practices. Healthcare professionals in positions of leadership send important messages to subordinates when they:

- handle sharp devices with care during procedures,
- take steps to protect co-workers from injury, and
- properly dispose of sharps after use.

Similarly, managers should address sharps hazards in a non-punitive manner as soon as they are observed and discuss safety concerns with staff on a regular basis. This will positively reflect the organization's commitment to safety and build safety awareness among staff.

Procedures for Sharps Injury Reporting

Information on reported injuries and injury hazards is necessary for prevention planning. To effectively monitor injuries for sharps injury prevention planning purposes, a sharps injury log must be maintained at your facility and must include:

- unique identification number for the incident (records should be maintained in a way that protects the confidentiality of the healthcare worker);
- date and time of the injury;

- occupation of the worker;
- department or work area where the exposure incident occurred;
- type of device involved in the injury;
- presence or absence of an engineered sharps injury prevention feature on the device involved;
- brand of the device;
- purpose or procedure for which the sharp device was being used; and
- when and how the injury occurred.

Employees must understand reporting procedures and be motivated to always report exposures.

Analyze Injury Data

Sharps injury data must be compiled and analyzed if it is to be used for prevention planning. Data on sharp injuries can be compiled by hand or with a computerized database. In small healthcare organizations (e.g., private medical or dental clinics) or those where fewer than 10 injuries are reported in a given year, a computerized system may not be practical. These facilities can participate in a professional organization's regional or state data-collection network that allows several facilities to contribute to descriptive data. Although this system does not exist, it would be made mandatory in the future.

How to Select Safer Devices

Selecting safer devices involves a multi-pronged approach at various levels in the organization. The selection process includes collecting information that will allow the organization to make informed decisions about which devices to implement.

Organize a product selection and evaluation team

A product selection and evaluation team that coordinates with the clinical and infection control team, purchasing department, etc., will ensure a successful outcome.

Set priorities for product consideration

It will be appropriate to consider one device at a time unless the devices being considered have different purposes (e.g., intravenous catheters and finger/heel stick lancet).

1. **Gather information on use of the conventional device.** Key information to obtain from clinical areas includes:
    a. frequency of use and purchase volume of the conventional devices;
    b. most commonly used sizes;
    c. purpose(s) for which the device is used;
    d. other products the device is used with that might pose compatibility concerns;
    e. unique clinical needs that should be considered; and
    f. clinical expectations for device performance.
2. **Determine selection criteria.** Product selection is based on two types of criteria:
    a. Design criteria that specify the physical attributes of a device, including required features for clinical needs and desired characteristics of the safety feature, and
    b. Performance criteria that specify how well a device functions for its intended patient care and safety purposes.
3. Obtain information on available products
    a. Information can be sought from the purchasing department, colleagues in other facilities, and websites, such as: http://www.isips.org/
4. Obtain device samples
    a. Invite manufacturers' representatives to give a presentation and request information about availability of the product in sufficient volumes and sizes. Check with them to see if products are available for free evaluation.
5. Develop a product evaluation form
    a. The form used to survey healthcare personnel who evaluate the trial device must collect information necessary to make informed decisions for final product selection.
6. Develop and implement a product evaluation plan

b. A plan that features the duration of evaluation, location, and staff involved in the evaluation and in-house training, etc. Training should be tailored to the audience needs and should include discussion as to why the change is being proposed.

7. Tabulate and analyze results
    a. Several factors can have a positive or negative influence on the outcome of a product evaluation. These include:
        i. staff experience with and preference for the conventional device;
        ii. attitudes toward involvement in the product-evaluation process;
        iii. influence of opinion leaders;
        iv. staff opinion of product-evaluation team members and manufacturers' representatives;
        v. perceived need for devices with safety features; and
        vi. patient concerns.
8. Select and implement preferred product
    a. The evaluation team should make a product selection based on user feedback and other considerations established by the selection team, model the process for implementing the selected device after the pilot evaluation process, and coordinate training with product replacement.
9. Monitor post-implementation
    a. Once a new device is implemented, assess continued satisfaction with the product through follow-up monitoring and respond to those issues not identified or considered during the evaluation period.

Educate and Train Facility Personnel

Another important element of a sharps injury prevention program is the education and training of healthcare personnel in sharps injury prevention.

Training must include:

- initial orientation;
- annual bloodborne pathogen training;
- staff development training on procedures; and
- introduction of new devices.

Training may include a description of injuries reported by the facility's personnel, including:

- number of sharps injuries reported in the last year or several years;
- occupations, devices, and procedures involved; and
- the most common ways injuries occur in the facility.

Training should also be on the hierarchy of controls and how this concept is applied in the facility:

- strategies to reduce or eliminate the use of needles (e.g., needle-free IV delivery systems);
- devices with engineered sharps injury prevention features that have been considered and/or implemented in the facility;
- introduction of other engineering controls (e.g., rigid sharps disposal containers);
- work practices that can be used to reduce injury risks; and
- whether any personal protective equipment is available to reduce injury risks (e.g., Kevlar gloves for surgery and autopsy, leather gloves for maintenance personnel).

Information regarding the administrative activities designed to decrease sharps injuries must also be disseminated, including:

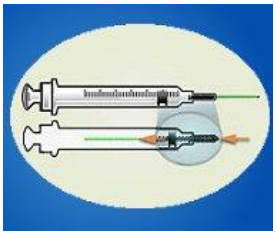
- development of a sharps injury prevention team;
- changes or improvements in exposure reporting procedures; and
- safety culture initiatives.

If the training is primarily in a lecture format, there are methods to make the training more interesting

- Presentation of case studies of exposures (protect the confidentiality of workers involved). At the end of the case presentation, the trainer might engage the audience in a discussion of how to prevent the injury.
- Facilitating a discussion of audience perceptions of sharps safety in the facility and suggestions for improvement.

Identification, Evaluation, and Selection of Effective Engineering and Work Practice Controls

Employer must **solicit input** from non-managerial employees responsible for direct patient care who are potentially exposed to injuries from contaminated sharps in the identification, evaluation, and selection of effective engineering and work practice controls and must document the solicitation in the Exposure Control Plan.



Safety Syringe

The requirement for evaluation and selection of a safety device is a performance-oriented provision that depends greatly on the specific medical device and medical procedure(s) in question. Devices must be evaluated for their ability to prevent occupational exposures to blood or other potentially infectious materials (OPIM) in each procedure. The final determination of what safer device is selected for use is a responsibility of the employer; however, when evaluating and selecting safer devices, employers must solicit input from non-managerial employees responsible for direct patient care who are potentially exposed to injuries from contaminated sharps. The input from affected employees must be factored into the employer's judgment of the appropriateness for use of a particular safety device.

During an inspection, if it is determined that an employer did not evaluate and select appropriate and effective devices, the employer may be cited.

Note: If a safer medical device compromises patient safety, worker safety, or the medical integrity, its use would not be required.

Copy of the Evaluation Form by employees is available in the Documentation Kit.

Engineering and Work Practices to control employee exposure [T8 CCR §5193(d)(2)]

Contaminated needles and other sharps must not be bent, recapped, removed, sheared, or broken

- Engineering and work practice controls must be used to eliminate or minimize employee exposure. Where occupational exposure remains after institution of these controls, personal protective equipment must be used.
- Employer should provide hand-washing facilities. If not feasible, employer must provide antiseptic hand cleaners. When antiseptic hand cleaners are used, wash hands with soap and running water as soon as possible.
- Employer should provide an eye-wash station. In case of blood splatter into the eyes, the eyes must be flushed for several minutes to remove any blood, and medical attention should be sought. Contact lens, if any, must be removed first before the eyes are irrigated.
- Wash hands and skin and flush membranes immediately or as soon as feasible following contact of such areas with blood or OPIM.
- Wash hands immediately or as soon as feasible after removal of gloves or other PPE.
- Contaminated needles and other sharps must not be bent, recapped, removed, sheared, or broken.
- Contaminated, reusable sharps must be placed in appropriate containers until properly reprocessed.
- Eating, drinking, smoking, applying cosmetics or lip balm, and handling contact lenses is prohibited in work areas where there is reasonable likelihood of occupational exposure.
- Do not keep food and drink in refrigerators, freezers, shelves, cabinets, or on countertops or bench tops where blood or OPIM are present.
- Perform procedures involving blood or OPIM in such a manner as to minimize splashing, spraying, spattering and generation of droplets of these substances.
- Mouth pipetting or suctioning of blood or OPIM is prohibited.
- Place specimens of blood or OPIM in a container that prevents leakage during collection, handling, processing, storage, transport, or shipping.

- Examine equipment that may become contaminated with blood or OPIM prior to servicing or shipping and decontaminate as necessary.

Sharps with Engineered Sharps Injury Protections (SESIPs)

Congress passed the Needlestick and Prevention Act in 2001, which is a revision of the Bloodborne Pathogen Standard of 1991. This is one of the important legislations to prevent needlestick injuries among healthcare workers. Employers are mandated to use safety needles and syringes even if there has not been a case of needlestick injury at the facility and even if it's too costly to implement.

The key to the prevention of needlesticks is using engineering controls to remove the hazard of a contaminated needle from the workplace. Congress acknowledged these preventative steps and purposely added the two key methods of doing this to the definition section of the standard: *needleless systems* and *sharps with engineered sharps injury protection*.

Ideally, the most effective way of removing the hazard of a contaminated needle is to eliminate the needle completely by converting to needleless systems. If this is not possible, removal of the hazard as soon as possible after contamination is required. This is best accomplished by using a "sharp with engineered sharps injury protection (SESIP)," which shields the sharp from exposure as soon as it is withdrawn from the patient.

OSHA's Bloodborne Pathogen Standard, 29 CFR 1910.1030, states at (d)(2)(i) that, "Engineering and work practice controls shall be used to eliminate or minimize employee exposure...." Citations will be issued to any employer that has not implemented engineering controls, including SESIPs, where feasible.

Sharps with Engineered Sharps Injury Protections (SESIPs) is a term that includes non-needle sharps or needle devices containing built-in safety features that are used for collecting fluids or administering medications or other fluids, or other procedures involving the risk of sharps injury. This description covers a broad array of devices, including:

- syringes with a sliding sheath that shields the attached needle after use;
- needles that retract into a syringe after use;

- shielded or retracting catheters intravenous medication (IV) delivery systems that use a catheter port with a needle housed in a protective covering.

Employers must evaluate, select, and use appropriate engineering controls (e.g., sharps with engineered sharps injury protection). Solicitation of input from non-managerial employees who are potentially exposed to sharps injuries is an important component of the selection and implementation of safety devices. Managers can also add their input to the safety sharps selection process. The evaluation process must be recorded.

Exceptions to the Use of SESIPs

- Market Availability. The engineering control is not required if it is not available in the marketplace.
- Patient Safety. The engineering control is not required if a licensed healthcare professional directly involved in a patient's care determines, in the reasonable exercise of clinical judgment, that use of the engineering control will jeopardize the patient's safety or the success of a medical, dental or nursing procedure involving the patient. The determination must be documented.
- Safety Performance. The engineering control is not required if the employer can demonstrate by means of objective product evaluation criteria that the engineering control is not more effective in preventing exposure incidents than the alternative used by the employer.
- Availability of Safety Performance Information. The engineering control is not required if the employer can demonstrate that reasonably specific and reliable information is not available on the safety performance of the engineering control for the employer's procedures, and that the employer is actively determining by means of objective product evaluation criteria whether use of the engineering control will reduce the risk of exposure incidents occurring in the employer's workplace.

According to OSHA, there are still 600,000 to 800,000 injuries occurring each year, many of which occur immediately after use and prior to placement in a sharps box.

Hand Washing Facilities [T8 CCR §5193(d)(3)(I)]

- Employers must ensure that employees wash hands and any other skin with soap and water or flush mucous membranes with water as soon as feasible after contact with blood or other potentially infectious materials.
- Employers must provide readily accessible hand-washing facilities and ensure that employees wash their hands immediately or as soon as feasible after removal of gloves.
- When provision of hand-washing facilities is not feasible, the employer must provide either an appropriate antiseptic hand cleanser in conjunction with clean cloth/paper towels or antiseptic towelettes. When antiseptic hand cleansers or towelettes are used, hands must be washed with soap and running water as soon as feasible. An appropriate waterless antiseptic hand rub product is one that contains a 60-95% alcohol solution (isopropanol or ethanol).

Personal Protective Equipment (PPE) [T8 CCR §5193(d)(4)]

PPE must be used if occupational exposure remains after instituting engineering and work-practice controls, or if those controls are not feasible.

- Employer must provide appropriate personal protective equipment (PPE), such as gowns, gloves, laboratory coats, face shields, masks, and eye protection, at no cost to the employees, Employers must ensure that employees use appropriate PPE.
- Employer must ensure that PPE is available in the appropriate sizes and is readily accessible or issued to employees, Employer must clean, launder, dispose of, repair, or replace PPE at no cost to employees.
- Garments or other PPE penetrated by blood must be removed immediately or as soon as feasible. All PPE must be removed prior to leaving the work area.
- Gloves must be worn when reasonably anticipated that employee may have had contact with blood or OPIM when handling contaminated items or surfaces.

PPE must be made available to employees free of cost and at appropriate

- When personal protective equipment is removed, it must be placed in an appropriately designated area or container for storage, washing, decontamination, or disposal.

Note:

Under T8 CCR§5193(d)(4)(B), in rare and extraordinary circumstances, employees can briefly and temporarily choose not to use PPE if, in their professional judgment, they believe that using PPE would prevent the delivery of health care or public safety services or pose an increased hazard to themselves or coworkers.

If the employee makes this judgment, the employer must investigate and document to determine if changes can be made to prevent future occurrences of the same situation.

Glove Requirements [T8 CCR §5193(d)(4)(G)]

- Gloves must be worn when it can be reasonably anticipated that the employee may have had contact with blood, other potentially infectious materials, mucous membranes, and non-intact skin; when performing vascular access procedures; and, when handling or touching contaminated items or surfaces.
- Disposable (single use) gloves, such as surgical or examination gloves, must be replaced as soon as practical when contaminated or as soon as feasible if they are torn, punctured, or when their ability to function as a barrier is compromised.
- Disposable (single use) gloves must not be washed or decontaminated for re-use.
- Utility gloves may be decontaminated for re-use if the integrity of the glove is not compromised. However, they must be discarded if they are cracked, peeling, torn, punctured, or exhibit other signs of deterioration or when their ability to function as a barrier is compromised.
- If an employer in a volunteer blood donation center judges that routine gloving for all phlebotomies is not necessary, then the employer must:
    - periodically reevaluate this policy;

- make gloves available to all employees who wish to use them for phlebotomy;
- not discourage the use of gloves for phlebotomy; and
- require that gloves be used for phlebotomy in the following circumstances:
  - when the employee has cuts, scratches, or other breaks in his or her skin;
  - when the employee judges that hand contamination with blood may occur, for example, when performing phlebotomy on an uncooperative source individual; and
  - when the employee is receiving training in phlebotomy.

Masks, Eye Protection, and Face Shields [T8 CCR §5193(d)(4)(H)]

Masks, in combination with eye protection devices, such as goggles or glasses with solid side shields or chin-length face shields, must be worn whenever splashes, spray, spatter, or droplets of blood or other potentially infectious materials may be generated and eye, nose, or mouth contamination can be reasonably anticipated. Surgical caps or hoods and/or shoe covers or boots must be worn in instances when gross contamination can reasonably be anticipated (e.g., autopsies, orthopedic surgery)

Gowns, Aprons, and Other Protective Body Clothing

- Appropriate protective clothing, such as but not limited to, gowns, aprons, lab coats, clinic jackets, or similar outer garments must be worn in occupational exposure situations. The type and characteristics will depend upon the task and degree of exposure anticipated.
- Surgical caps or hoods and/or shoe covers or boots must be worn in instances when gross contamination can reasonably be anticipated (e.g., autopsies, orthopedic surgery).

Resuscitator Pieces

Employers must make resuscitator (emergency ventilation) devices are readily available and accessible to employees who can reasonably be expected to perform resuscitation procedures. Some of the resuscitation devices are:

- Masks
- Mouthpieces
- Resuscitation bags
- Shields/overlay barriers

Housekeeping [T8 CCR §5193(d)(3)(H)]

Employers must ensure that the worksite is maintained in a clean and sanitary condition. Determine and implement an appropriate written schedule for cleaning and methods of decontamination. This written schedule must be based on the:

- location within the facility;
- type of surfaces to be cleaned;
- type of soil present; and
- the tasks or procedures to be performed in the area.

Housekeeping staff faces the risk of exposure to blood or other potentially infectious materials (OPIM) through a contaminated work environment. Cal/OSHA requires clean and sanitary work environments to prevent contact with blood or OPIM. The CDC states that hepatitis B virus can survive for at least one week in dried blood on environmental surfaces or contaminated needles and instruments.

HBV virus survives one week in dried blood on environmental surfaces.

Cleaning and Disinfecting Strategies for Environmental Surfaces in Patient-Care Areas

- Select EPA-registered disinfectants.
- Do not use high-level disinfectants/liquid chemical sterilants for disinfection of either noncritical instruments/devices or any environmental surfaces.
- Follow manufacturers' instructions for cleaning and maintaining noncritical medical equipment.

- In the absence of a manufacturer's cleaning instructions, follow certain procedures.
    - Clean noncritical medical equipment surfaces with a detergent/disinfectant. This may be followed by an application of an EPA-registered hospital disinfectant with or without a tuberculocidal claim (depending on the nature of the surface and the degree of contamination).
    - Do not use alcohol to disinfect large environmental surfaces.
    - Use barrier protective coverings as appropriate for noncritical surfaces that are:
        - touched frequently with gloved hands during the delivery of patient care;
        - likely to become contaminated with blood or body substances; and
        - difficult to clean (e.g., computer keyboards).
- Keep housekeeping surfaces (e.g., floors, walls, tabletops) visibly clean on a regular basis and clean up spills promptly.
    - Use a one-step process and an EPA-registered hospital detergent/disinfectant designed for general housekeeping purposes in patient-care areas where:
        - uncertainty exists as to the nature of the soil on the surfaces (e.g., blood or body fluid contamination versus routine dust or dirt); or
        - uncertainty exists regarding the presence of multidrug-resistant organisms on such surfaces.
    - Detergent and water are adequate for cleaning surfaces in nonpatient-care areas (e.g., administrative offices).
    - Clean and disinfect high-touch surfaces (e.g., doorknobs, bed rails, light switches, and surfaces in and around toilets in patients' rooms) on a more frequent schedule than minimal-touch housekeeping surfaces.
    - Clean walls, blinds, and window curtains in patient-care areas when they are visibly dusty or soiled.
- Do not perform disinfectant fogging in patient-care areas.
- Avoid large-surface cleaning methods that produce mists or aerosols, or disperse dust in patient-care areas.

- Follow proper procedures for effective uses of mops, cloths, and solutions.
    - Prepare cleaning solutions daily or as needed, and replace with fresh solution frequently according to facility policies and procedures.
    - Change the mop head at the beginning of each day and also as required by facility policy, or after cleaning up large spills of blood or other body substances.
    - Clean mops and cloths after use and allow to dry before reuse; or use single-use, disposable mop heads and cloths.
    - After the last surgical procedure of the day or night, wet vacuum or mop operating room floors with a single-use mop and an EPA-registered hospital disinfectant. Do not use mats with tacky surfaces at the entrances to operating rooms or infection-control suites.

Disinfecting Contaminated Instruments and Equipment

According to the federal OSHA Standard, 29 CFR 1910.1030(d)(4)(ii), all equipment and environmental and working surfaces must be cleaned and decontaminated after contact with blood or other potentially infectious materials.

- Contaminated equipment, such as IV poles, require labels or tags in accordance with 29 CFR 1910.1030(g)(1)(i)(H). The labels must also identify which portions of the equipment are contaminated.
- Some equipment, if grossly contaminated, must be cleaned with a soap and water solution prior to decontamination, as some anti-microbial products will not work in the presence of blood, which interferes with the sterilizing process.

Cleaning Spills of Blood and Body Substances

Promptly clean and decontaminate spills of blood or other potentially infectious materials.

- Follow proper procedures for site decontamination of spills of blood or blood-containing body fluids.
    - Use protective gloves and other PPE appropriate for this task.

    - If the spill contains large amounts of blood or body fluids, clean the visible matter with disposable absorbent material and discard the used cleaning materials in appropriate, labeled containers.
    - Swab the area with a cloth or paper towels moderately wetted with disinfectant and allow the surface to dry.
- Use germicides registered by the EPA for use as hospital disinfectants and labeled tuberculocidal or registered germicides on the EPA Lists D and E (i.e., products with specific label claims for HIV or hepatitis B virus [HBV]) in accordance with label instructions to decontaminate spills of blood and other body fluids.
- An EPA-registered sodium hypochlorite product is preferred, but if such products are not available, generic sodium hypochlorite solutions (e.g., household chlorine bleach) may be used.
    - Use a 1:100 dilution (500—615 ppm available chlorine) to decontaminate nonporous surfaces after cleaning a spill of either blood or body fluids in patient-care settings.
    - If a spill involves large amounts of blood or body fluids or if a blood or culture spill occurs in the laboratory, use a 1:10 dilution (5,000—6,150 ppm available chlorine) for the first application of germicide before cleaning.

Protective Coverings

Protective coverings, such as plastic wrap or aluminum foil, must be removed and replaced as soon as possible when they become overtly contaminated, or at the end of a work shift if they may have become contaminated during the shift.

Reusable Containers

All bins, pails, cans, and similar receptacles intended for reuse which have a reasonable likelihood for becoming contaminated with blood or other potentially infectious material must be inspected and decontaminated on a regularly scheduled basis and cleaned and decontaminated immediately or as soon as feasible upon visible contamination.

Glassware

Broken glassware that may be contaminated must not be picked up directly with hands; use mechanical means, such as use a brush and dustpan, tongs, or forceps.

Note: Some healthcare facilities that rent or lease medical equipment or devices from third parties or other institutions need to be aware that these devices may not be properly cleaned, disinfected, and/or sterilized prior to delivery to the healthcare facility.

Laundry [T8 CCR §5193(d)(3)(J)]

Laundering must be performed by a designated person at a certain designated location. The following laundering requirements must be met:

- handle contaminated laundry as little as possible, with minimal agitation;
- contaminated laundry must not be sorted or rinsed in the location of use and must be transported to the laundry for decontamination in bags or containers labeled or color-coded;
- use either red bags or bags marked with the biohazard symbol for this purpose; and
- wear an appropriate PPE when handling and/or sorting contaminated laundry.

OSHA-Recommended Good Practices for Handling Laundry

- Use melt-away bags for the bagging process. Melt-away bags can be thrown directly into washers without having to unload or remove contaminated laundry from bags.
- Rinsing soiled laundry in utility rooms is acceptable if it is not contaminated with blood, OPIM, or does not contain sharps.
- The ergonomic stressors that can occur with lifting, reaching, rinsing, and transporting wet, heavy laundry

According to Cal/OSHA, it is unacceptable for contaminated PPE to be laundered at home by employees.

must also be addressed. A lift or transfer device for the lifting of these materials is recommended.

- To avoid punctures from improperly discarded syringes/sharps, do not hold contaminated laundry bags close to the body or squeeze when transporting.

Regulated Waste

General Requirements for Sharps Containers

Sharps containers must be:

- closable, puncture resistant, and leak proof on sides and bottom and labeled or color-coded;
- easily accessible to personnel and located as close as is feasible to the immediate area where sharps are used or can be reasonably anticipated to be found (e.g., laundries);
- maintained upright throughout use; and
- replaced routinely and not be allowed to overfill.

When moving containers of contaminated sharps from the area of use, the containers must be:

- closed immediately prior to removal or replacement to prevent spillage or protrusion of contents during handling, storage, transport, or shipping;
- placed in a secondary container if leakage is possible. The second container must be:
    - Closable;
    - Constructed to contain all contents and prevent leakage during handling, storage, transport, or shipping; and
    - Labeled or color-coded.

Reusable containers must not be opened, emptied, or cleaned manually or in any other manner that would expose employees to the risk of percutaneous injury.

Regulated waste must be placed in containers that are:

- closable;
- constructed to contain all contents and prevent leakage of fluids during handling, storage, transport, or shipping;
- labeled or color-coded; and
- closed prior to removal to prevent spillage or protrusion of contents during handling, storage, transport, or shipping.

If outside contamination of the regulated waste container occurs, it must be placed in a second container. The second container must be:

- closable;
- constructed to contain all contents and prevent leakage of fluids during handling, storage, transport, or shipping;
- labeled or color-coded;
- closed prior to removal to prevent spillage or protrusion of contents during handling, storage, transport, or shipping; and
- disposal of all regulated waste must be in accordance with applicable regulations of the United States and Territories and political subdivisions of States and Territories.

Mandatory Hepatitis B Vaccination

Hepatitis B vaccination series must be made available at no cost **after** initial employee training and within 10 days of initial assignment to all employees identified in the exposure determination section. The employer is not allowed to make participation in a prescreening program a prerequisite for receiving hepatitis B vaccination. Vaccination is encouraged unless:

- documentation exists that the employee has previously received the series;
- antibody testing reveals that the employee is immune; and
- medical evaluation shows that vaccination is contraindicated.

However, if an employee declines the vaccination, the employee must sign a declination form. Employees who decline may request and obtain the vaccination at a later date at no cost. Documentation of refusal of the vaccination must be kept at an assigned placed identified in the exposure-control plan. A sample of the 'HBV Declination Form' can be found in the documentation it

The employer should offer testing for the antibody to hepatitis B surface antigen one to two months after the completion of the three-dose vaccination series.

Employees who do not respond to the primary vaccination series must be offered a second three-dose vaccine series and retesting. Non-responders must be offered medical evaluation.
Vaccination must be provided by a licensed healthcare professional. Following the medical evaluation, a copy of the healthcare professional's written opinion will be obtained and provided to the employee within 15 days of the completion of the evaluation. It will be limited to whether the employee requires the hepatitis vaccine and whether the vaccine was administered.

Designated first aid providers who have occupational exposure are not required to be offered pre-exposure hepatitis B vaccine if the following conditions exist:

- The primary job assignment of such designated first aid providers is not the rendering of first aid.
- Any first aid rendered by such persons is rendered only as a collateral duty responding solely to injuries resulting from workplace incidents, generally at the location where the incident occurred.
- This exception does not apply to designated first aid providers who render assistance on a regular basis, for example, at a first aid station, clinic, dispensary, or other location where injured employees routinely go for such assistance, and emergency or public safety personnel who are expected to render first aid in the course of their work.

Medical follow-up in the event of an exposure incident [T8 CCR §5193(f)]

Incident Reporting

An employee must report any accidental exposure to his or her employer immediately. According to the U.S. Public Health Service, if HIV post-exposure prophylaxis is medically indicated, it should be initiated promptly, preferably within one to two hours after the exposure incident. Immediate reporting enables the employer to evaluate the circumstances surrounding the exposure incident to try to find ways to prevent such a situation from occurring again.

Referral to a Licensed Healthcare Professional

The employer is mandated to provide a confidential medical evaluation and follow up at no cost to an employee following an exposure incident. The employer is responsible for providing follow-up care, but is not required to perform the follow-up. The employer must refer the exposed employee to a licensed healthcare professional who will perform all medical evaluations and procedures in accordance with the most current recommendations of the U.S. Public Health Service.

Documentation

The employer must prepare a report of the exposure incident, including the route(s) of exposure, the circumstances under which the exposure incident occurred, and the identity of the source patient — **if known**, and if permitted by law. This report must be placed in the employee's confidential medical record. A copy also must be provided to the evaluating healthcare professional.

Information provided to HCP

The employer must provide the licensed healthcare professional with a copy of the bloodborne pathogens standard; a description of the employee's job duties as they relate to the incident; a report of the specific exposure incident, including routes of exposure and the circumstances under which exposure occurred; the results of the source patient's blood testing, if available; and relevant employee medical records, including vaccination status, which are the employer's responsibility to maintain. Multiple copies of the standard need not be given to the same healthcare professional (e.g., if a copy was provided to the healthcare professional in connection with an earlier exposure incident).

Identification and Testing of Source Patient's Blood

The employer must identify and document, in writing, the *source patient* in an exposure incident, unless this is not feasible. The employer must contact the source patient, if known, and ask for his or her consent to be tested for HBV and HIV infectivity and to disclose the test results to the exposed employee. If consent is not obtained and is required by local law, the employer must document that

fact in writing as part of the report of the exposure incident. If consent is obtained, or if it is not legally required and the source patient's blood is available, the source patient's blood must be tested as soon as feasible. The results of the testing must be made available to the exposed employee and he or she must be informed of applicable laws and regulations concerning further disclosure of the identity and infectious status of the source patient.

Collection and Testing of Employee's Blood

If the employee consents, the healthcare professional will, as soon as feasible, collect the exposed employee's blood and conduct baseline testing to establish the employee's HBV and HIV serological status. Baseline testing allows the healthcare professional to determine whether any subsequently diagnosed disease was acquired because of the exposure incident.

The employee has the right to decline testing or to delay testing of the collected blood for up to 90 days. If the employee consents to baseline blood collection but does not give consent for HIV testing at that time, the sample must be preserved for at least 90 days. If, within 90 days of the exposure incident, the employee elects to have the baseline sample tested, such testing must be done by the healthcare professional as soon as feasible.

The healthcare professional must notify the employee of all test results. All laboratory tests must be performed by an accredited laboratory at no cost to the employee. The following medical services must be provided free of charge during this phase:

- counseling;
- post-exposure prophylaxis; and
- evaluation of reported illnesses.

Counseling — Counseling is a vital component of the required post-exposure follow-up procedures. The healthcare professional will counsel the employee concerning his or her infectious status, including results and interpretation of all tests, and will discuss with the employee the potential risk of infection and the need for post-exposure prophylaxis and the protection of personal contacts.

Post-Exposure Prophylaxis — The licensed healthcare professional must prescribe appropriate prophylactic measures, when medically indicated, as recommended by the U.S. Public Health Service. It may involve several follow-up visits for the employee for serial blood tests, monitoring of medications (if prescribed), etc. For example, for employees who have not received the HBV vaccine series, the HBV vaccine (and in some circumstances hepatitis B immune globulin) is to be offered as soon as possible after the exposure incident, but no more than seven days after the incident.

Evaluation of Reported Illnesses — The healthcare professional must also evaluate any reported illnesses of the exposed employee to determine if the symptoms may be related to HBV or HIV infection. This provision ensures that exposed employees will have the benefit of early medical evaluation and recommended treatment and prophylaxis in a timely manner.

Healthcare Professional's Written Opinion [T8 CCR §5193(f)(5)]

After the healthcare professional completes the evaluation, he or she is required to send the employer a written opinion. The standard requires that the healthcare professional's written opinion contain only documentation that the exposed employee was informed of the test results of the evaluation and the need for further follow-up. If HBV vaccination is provided as part of the post-exposure prophylaxis, the opinion should also state whether HBV vaccine was indicated for the employee and if the employee was vaccinated. All other findings or diagnoses must remain confidential and must not be included in the written report.

The employer must provide a copy of the evaluating healthcare professional's written opinion to the exposed employee within 15 days of the completion of the evaluation. The original document should be placed in the employee's confidential medical record.

Medical Recordkeeping

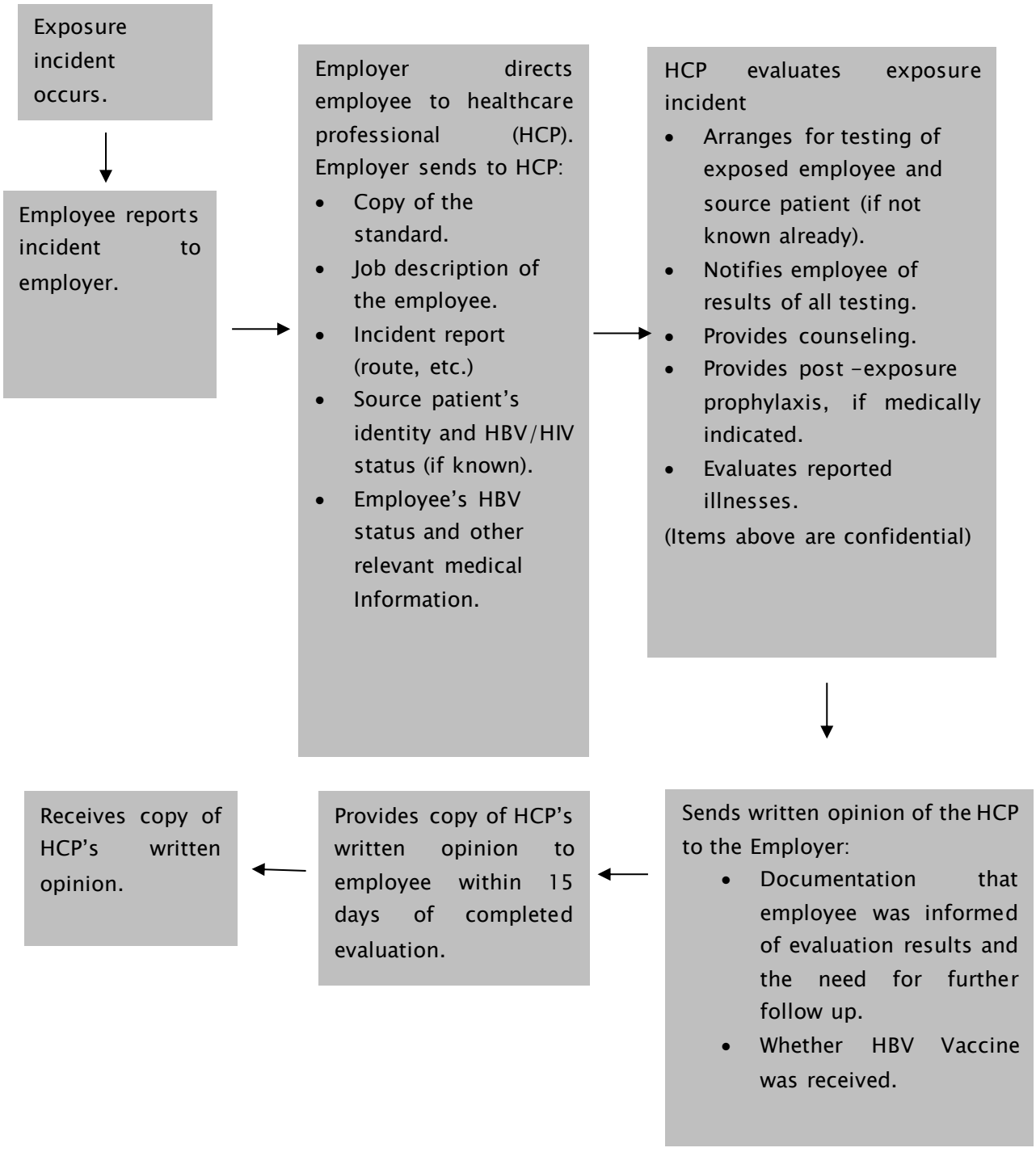
The employer must establish and maintain medical records in a confidential manner. The standard does not require the employer to maintain possession of the records. If the medical records are left in the possession of the HCP who provides the follow-up protocol, it is the employer's responsibility to arrange

with the HCP to maintain and keep the records confidential in accordance with the standard.

Records must be maintained for the duration of employment plus 30 years in accordance with Cal/OSHA's standard on Access to Employee Exposure and Medical Records.

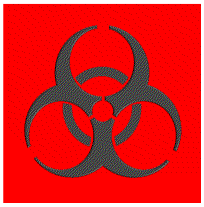
Under the standard, employers may have to rely on the healthcare professional to carry out certain OSHA obligations, such as maintaining employee medical records in a confidential manner, retaining the records for the duration of employment plus 30 years, and providing appropriate post-exposure evaluation and follow-up services. The employer has an obligation to ensure compliance with the standard. However, he or she will not generally be held liable for violations resulting from the healthcare professional's actions if the employer has acted in good faith to contract with a responsible entity and has no reason to foresee that the contractor will not fulfill its obligations.

Medical Follow-up in the Event of an Exposure Incident (Flow Chart)



Use of Labels/ Labeling Requirements

Designate a responsible person or department for labeling contaminated equipment, laundry, and/or containers for wastes. Warning labels, such as a biohazard symbol, are affixed or red bags are used as required if regulated waste or contaminated equipment is brought into the facility. Employees must notify the designated person if they discover regulated waste containers, refrigerators containing blood or OPIM, contaminated equipment, etc., without proper labels.



Biohazard Symbol

General Requirements

- Labels must be fluorescent orange or orange-red or predominantly so, with lettering and symbols in a contrasting color.
- Labels must be affixed as close as feasible to the container by string, wire, adhesive, or other method that prevents their loss or unintentional removal.
- Red bags or red containers may be substituted for labels except for sharp containers or regulated waste red bags.
- Labels are required for contaminated equipment and must also state which portions of the equipment remain contaminated.
- Labels are required for refrigerators, freezers or any containers used to store blood or OPIM, laundry bags, containers.

Labeling Exception for Blood Products

- Individual containers of blood, blood components, or products that are labeled as to their contents and have been released for transfusion or other clinical use need not be labeled as hazardous.
- Individual containers of blood or OPIM need not be labeled if placed in a labeled container for storage, transport, shipment, or disposal.
- Regulated waste that has been decontaminated need not be labeled or color-coded.

Red bags or red containers may be substituted for labels as long as they are:

- Covered in the exposure control plan.
- Communicated to all affected employees (including employees of laundry services, disposal services, and transport companies) whether they are your employees or not.
- The label does not always need to be attached to each individual container.
- For example, a cart carrying specimen container could be labeled, rather than each individual container.

Bloodborne Pathogen Training [T8 CCR §5193(g)(2)]

According to **the Standard**, Cal/OSHA specifies that bloodborne pathogen training must be provided to the employees at the time of initial assignment and thereafter at annual intervals at no cost to them. The training should be conducted within the completion of one year of the previous training. This section also clarifies that additional training must be provided when changes such as modification of tasks or procedures or institution of new tasks or procedures affect the employee's occupational exposure. Additional training is limited to the newest information or change in procedure or policy and does not have to cover all the topics included in the initial training. Although Cal/OSHA has not specified about the length of the training, it has stipulated the following conditions for the training program:

- Make sure the content and vocabulary of your training materials are appropriate to the educational level, literacy, and language of your employees.
- Make sure the person conducting the required training is knowledgeable about the subject matter as it relates to your workplace.
- Make sure the training program contains at least the following elements:
    - An accessible copy of this chapter and an explanation of the contents.
    - A general explanation of the epidemiology and symptoms of bloodborne diseases.
    - An explanation of modes of transmission of bloodborne diseases.
    - An explanation of your exposure control plan and how the employee can obtain a copy of the written plan.

    - An explanation of how to recognize tasks and other activities that could involve exposure to blood and other potentially infectious materials (OPIM).
    - An explanation of the use and limitations of methods that will prevent or reduce exposure including:
        - Equipment and safer medical devices
        - Work practices
        - Personal protective equipment
- Information about personal protective equipment (PPE) including:
    - The types
    - Proper use and limitations
    - Selection
    - Location
    - Putting it on and taking it off
    - Handling
    - Decontamination
    - Disposal
- Information about the hepatitis B vaccine, including:
    - Information about its effectiveness
    - Safety
    - Method of administration
    - The benefits of being vaccinated
    - Offered at no cost to the employee for the vaccine and vaccination
- Information about what actions to take and persons to contact when exposure to blood or OPIM occurs outside of the normal scope of work
    - An explanation of the procedure to follow if an exposure incident occurs, including:
        - The method of reporting the incident.
        - The medical evaluation and follow-up that will be available.
- Information about the post-exposure evaluation and follow-up procedure following an exposure incident.
- An explanation of the signs and labeling or color-coding required by this chapter.
- An opportunity for interactive questions and answers with the trainer at the time of the training session.

Recordkeeping Requirements [T8 CCR §5193(h)]

Training Records

Training records must include:

- the dates of the training sessions,
- the contents or a summary of the training sessions,
- the names and qualifications of persons conducting the training, and
- the names and job titles of all persons attending the training sessions.

Employee training records must be provided upon request to the employee or the employee's authorized representative within 15 working days. All training records must be maintained for a period of three years.

Medical Records

Medical records must be maintained for each employee with occupational exposure.

Following are the requirements for record maintenance.

- Designate a responsible person for maintenance of the required medical records.
- Confidential records (those not disclosed without written permission of employee, except by law) must be kept at a prescribed location and must be made available for the duration of the employment plus 30 years.
- Records must be kept separate from other personnel records and must also include the employee's name and social security number, hepatitis B vaccination status, including the dates of vaccination and medical records related to the employee's ability to receive vaccinations.
- Employee's Hepatitis B Vaccine Declination Statement (if applicable).
- A copy of all results of examinations, medical testing, and follow-up procedures related to post-exposure evaluations.
- A copy of the healthcare professional's written opinion.
- A copy of the information provided to the healthcare professional as required.

Employee records must be provided upon request of the employee or to anyone having written consent of the employee within 15 working days.

Sharps Injury Log

In addition to the General Recordkeeping requirements, [T8 CCR §5193(c)(2)], all percutaneous injuries from contaminated sharps are also recorded in the sharps injury log. All incidences must include at least:

- Date and time of the exposure incident;
- Type and brand of sharp involved in the exposure incident;
- A description of the exposure incident that includes:
    - Job classification of the exposed employee;
    - Department or work area where the exposure incident occurred;
    - The procedure that the exposed employee was performing at the time of the incident;
    - How the incident occurred;
    - The body part involved in the exposure incident;
    - If the sharp had engineered sharps injury protection, whether the protective mechanism was activated, and whether the injury occurred before the protective mechanism was activated, during activation of the mechanism or after activation of the mechanism, if applicable;
    - If the sharp had no engineered sharps injury protection, the injured employee's opinion as to whether and how such a mechanism could have prevented the injury; and
    - The employee's opinion about whether any engineering, administrative or work practice control could have prevented the injury.
- Each exposure incident must be recorded on the Sharps Injury Log within 14 working days of the date the incident is reported to the employer.
- The information in the Sharps Injury Log must be recorded and maintained in such a manner as to protect the confidentiality of the injured employee.

This log must be reviewed as part of the exposure control plan annual program evaluation and maintained for at least five years following the end of the calendar year covered.

Hepatitis B Vaccine Declination (Mandatory)

The language is as follows:

I understand that due to my occupational exposure to blood or other potentially infectious materials, I may be at risk of acquiring hepatitis B virus (HBV) infection. I have been given the opportunity to be vaccinated with hepatitis B vaccine, at no charge to myself. However, I decline hepatitis B vaccination at this time. I understand that by declining this vaccine, I continue to be at risk of acquiring hepatitis B, a serious disease. If, in the future, I continue to have occupational exposure to blood or other potentially infectious materials and I want to be vaccinated with hepatitis B vaccine, I can receive the vaccine series at no charge to me.

Signed: (Employee Name) Date:

Proper Containment of Medical Wastes

Regulated medical wastes is defined as cultures and stocks of infectious agents, such as tissue culture materials, including human and primate cell lines, human blood and blood products, impure animal cell lines, preparations made from living organisms and their products, including vaccines, cultures, etc., intended for use in diagnosing, immunizing, or treating human beings or animals, or in research pertaining thereto. Medical waste includes:

"Infectious Agents," meaning any organisms, such as a virus or a bacterium, that cause disease or has an adverse health effect on humans.

Culture media, such as agar gel, nutrient broth, discarded media from cultures, and blood agar.

Clean-up materials, including absorbents, paper towels from culture/stock mixing.

Biologicals, including preparations made from living organisms and their products, such as serums, vaccines, antigens, and antitoxins.

Culture dishes, flasks, or other devices used to transfer, inoculate, and mix culture dishes, such as tissue culture plates, assay plates, test tubes, centrifuge tubes, cotton swabs, pipettes, pipette tips, stirring apparatus, flasks, vials, beakers, bottles, jars, spatulas, inoculation loops, wires, corks, stoppers, cell scrapers, cell lifters, paraffin sealing paper, foil, cotton, filters, mixing sticks, tubing, etc. that have been in contact with infectious materials.

Sharps, meaning discarded, unused sharps and sharps used in animal or human research. Examples include glassware, such as Pasteur pipettes, glass, glass culture dishes, blood vials, glass beakers, glass flasks, glass test tubes, slides, cover slips, etc. in contact with infectious materials. Plasticware, including broken rigid plastic items, broken plastic culture dishes/flasks, plastic pipettes, etc. that have been in contact with infectious materials. Syringes to include hypodermic needles and other materials capable of puncturing, such as scalpel blades, suture needles, surgical needles, lancets, staples, and instruments designed for cutting or puncturing: saws, tweezers, scissors, etc.

Animal waste, meaning discarded materials, includes carcasses, body parts, fluids, blood, or bedding originating from animals known to be contaminated with infectious materials.

The bloodborne pathogens standard defines *regulated waste* as liquid or semi-liquid blood or other potentially infectious material (OPIM); contaminated items that would release blood or OPIM in a liquid or semi-liquid state if compressed; items that are caked with dried blood or OPIM and are capable of releasing these materials during handling; contaminated sharps; and pathological and microbiological wastes containing blood or OPIM.

Here are the general rules for storage and handling of regulated medical wastes at the facility before disposal.

- Medical waste transporters provide cardboard biohazard box and a red liner biohazard plastic bag for the storage of regulated medical wastes.
- These containers that are for use of storing medical wastes must not be damaged by improper handling and storage. The transporters are prohibited, by regulations, from picking up damaged containers from the generators.
- All sharps, needles, and syringes must be stored in sharps containers.
- Sharps must not be discarded in the box containers. Sharps containers, after fill-up, must be placed in the box containers.

Biohazard Bag

- Regular trash should not be thrown into the box container. It is only for the storage of medical wastes.
- Chemotherapy and pathological wastes (if any) must be stored in a separate container clearly labeled. The medical waste transporter must be informed so he or she can provide separate containers for chemo/path wastes.
- Wastes must always be discarded in the red infectious liner bag lining the biohazard box.
- Medical wastes should not be thrown outside of the liner, as the box would be soiled and subsequently damaged. Make sure the liner is always in place.

Sharps Container

- Radioactive wastes or other chemical wastes should not be discarded in the containers earmarked for medical wastes.
- If wastes are mainly liquid, sufficient absorbent material must be used to absorb the liquid wastes.
- After fill-up, the red biohazard liner containing medical wastes must be tied using a bag tie in order to secure the contents and placed inside the biohazard box container. The flaps of the biohazard box must be closed and firmly locked up, exposing the box handle.

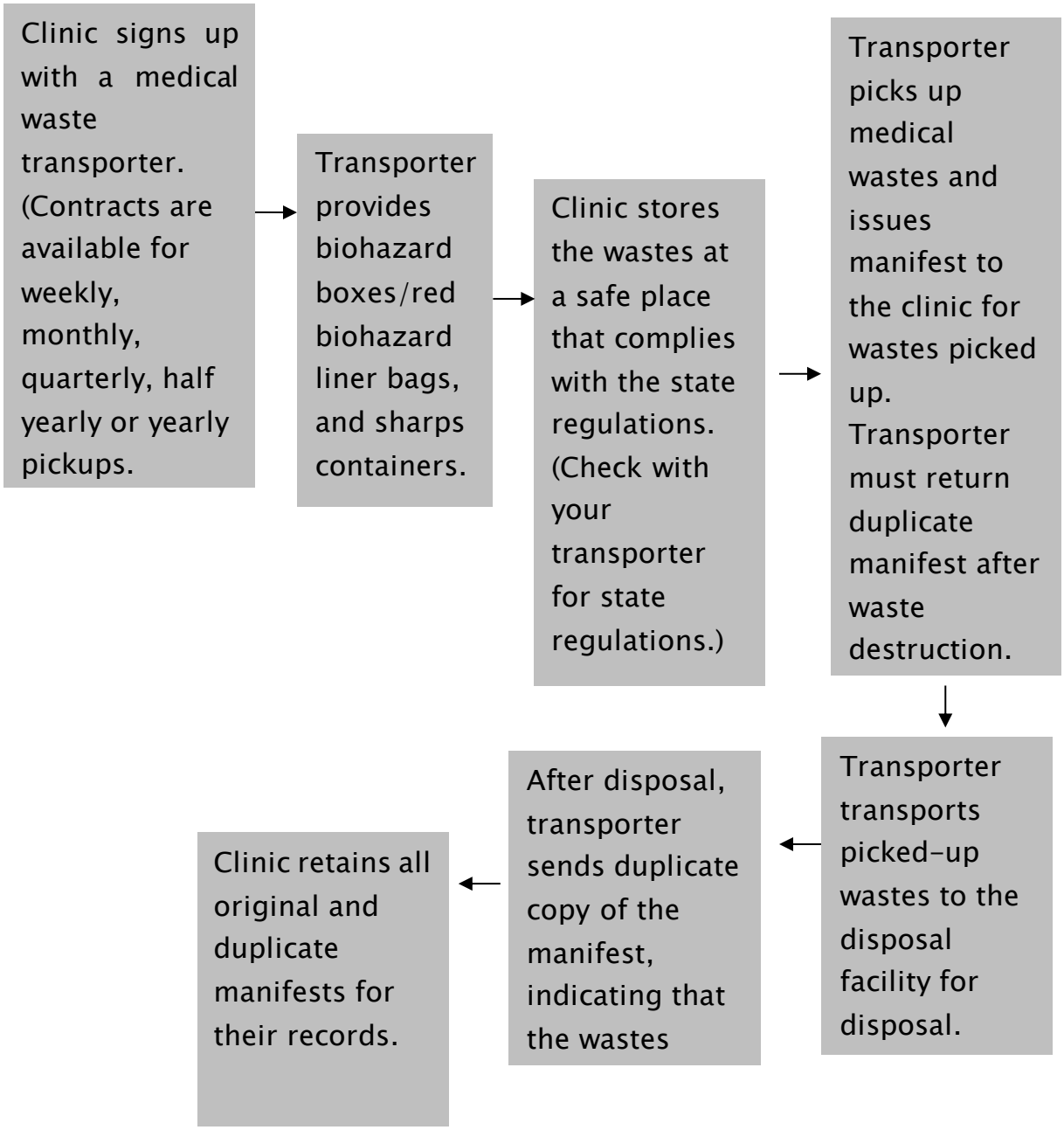
Storage of Medical Wastes at the Facility

Except for pharmaceutical waste, biohazardous or medical waste generated by small-quantity generators (less than 20 pounds per month) may be stored on-site at more than 0 degree Centigrade for 30 days. On-site storage for 90 days is allowed if the waste is kept at less than 0 degree Centigrade. Sharps waste must be collected within seven days after the container becomes full. Pharmaceutical waste may be stored on-site for up to one year if less than ten pounds of pharmaceutical waste is generated annually.

It is advisable for facilities to have a foot-operated biohazard waste container lined with a biohazard bag in each of the patient care rooms. At the end of the day, the housekeeping staff can remove these bags from the containers and discard the bags in the biohazard cardboard box provided by the medical waste transporter. Care must be taken to avoid spillage of medical wastes including leaking liquids during this bag removal. Since sharps may sometimes be discarded accidentally into these containers, the housekeeping staff must wear PPE like thick utility gloves, aprons and mask to protect themselves from contamination as well as needlestick or sharp injuries. Periodically, the containers must be de-contaminated to keep it clean.

Medical Waste Disposal

Flow Chart for Disposal of Regulated Medical Wastes



Medical wastes can also be disposed of via the US Postal Service. For clinics that are located in far-flung areas, federal and state regulations allow medical wastes to be disposed of by mail. To activate this service, you must sign up with a "sharps mail-back" provider, who in turn will send you the necessary containers suitable for mail-in. After receiving the container, the clinics are supposed to follow instructions in the manual provided by the service provider. The service provider, upon destruction of the wastes, must provide a destruction certificate to the clinics for records.

Resources

1. 'Bloodborne Pathogens', Code of California Regulations, Title 8, Section 5193, Regulatory Text, Cal/OSHA, Department of Industrial Relations.
2. Exposure to Blood: What Healthcare Personnel Need to Know. Dept. of Health and Human Services Document, Center for Disease Control, July, 2003.
3. OSHA Standard 29 CFR 1910.1030-Bloodborne Pathogen Regulatory Text.
4. OSHA STANDARD 29 CFR 1910.1030: Most frequently asked questions concerning the Bloodborne Pathogen Standard. OSHA Publication, 1993.
5. Personal Protective Equipment. OSHA Publication, OSHA-3151, 2003.
6. Medical & Dental Offices — A Guide to Compliance with OSHA Standards. OSHA Publication, OSHA 3197, 2003.
7. Hospital eTool-Healthcare Wide Hazards: Bloodborne Pathogens.
8. Workbook for Designing, Implementing, and Evaluating a Sharps Injury Prevention Program. Center for Disease Control, 2008.
9. Guidelines for Environmental Infection Control in Healthcare Facilities, Morbidity and Mortality Weekly Report, Center for Disease Control, June 06, 2003.

ATD standard does not cover medical and dental facilities that do not perform any procedures on patients identified as ATD cases or suspect ATS cases.

ATD standard is relatively new and was enacted in California on August 5, 2009. This measure was brought about due to the increasing incidences of diseases transmitted through the air in covered entities mainly at correctional facilities, homeless shelters, drug treatment programs and pathology laboratories. Aerosol Transmissible Diseases include SARS, Tuberculosis, measles or Pandemic Flu.

Cal/OSHA fined offices of Physicians (industry classification-6211) $1,925 in 2015-2016 inspections for violations under ATD standard. There were no known citations under ATD standard in 2016-2017.

The vast majority of health care employers, and certain other employers whose employees are likely to come into contact with persons infected with aerosol transmissible diseases, are required by the regulation to take affirmative steps to ensure that the diseases are contained as much as possible. Covered employers specifically include the following in the health care profession:

- Hospitals
- Skilled nursing facilities
- Clinics
- Medical offices
- Home healthcare services
- Long-term healthcare facilities
- Emergency service providers
- Medical transport

ATD Requirements

Cal/OSHA has classified the requirements for employers who refer cases to other facilities (referring employers) and employers who treat ATD cases. A Referring Employer provides initial treatment only, does not treat people with ATDs, but only screens them. A Referring Employer does not transport, house or provide airborne infection isolation to patients infected with suspected ATDs, but only refers them to facilities that do treat them.

All covered healthcare employers (including referring employers) must:

A. designate an administrator, who is in charge of establishing and maintaining procedures for infection control;
B. establish written source control procedures including a means of informing persons with whom employees will have contact about the infection control procedures;
C. establish procedures for screening persons who may have infectious diseases and for referring these persons to medical services if the employer is not a health care provider;
D. establish written procedures to communicate with employees about infectious disease status of referred patients; and
E. establish procedures to reduce the risk that the infected person might transfer the disease to other persons in the facility, including placing the person in a separate room and supplying respiratory protection to employees entering the room.

Designate an Administrator

The employer must designate a person as the administrator who will be responsible for the establishment, implementation and maintenance of effective written infection control procedures to control the risk of transmission of aerosol transmissible diseases. The administrator will have the authority to perform this function and should be knowledgeable in infection control principles as they apply specifically to the facility. The administrator should also identify in writing the job categories in which employees have occupational exposure to ATDs. When the administrator is not on site, there must be a designated person with full authority to act on his or her behalf. The infection control procedures should

include procedures for the cleaning and disinfection of work areas and equipment that may become contaminated with Aerosol Transmissible Pathogens (ATPs) and pose an infection risk to employees. The written procedures must be available at the worksite for employees to review.

Source Control Procedures

The employer should establish, implement, and maintain effective written source control procedures that include compliance with recommendations contained in the 'Respiratory Hygiene/Cough Etiquette in Health Care.' (Etiquettes are listed in the ATD Exposure Control Plan found in the Documentation Kit.) These procedures should include the method of informing persons with whom employees will have contact of the employer's source control measures.

Procedures for Screening persons who may have Infectious Diseases

Employers must transfer cases with ATD to appropriate facilities within five hours unless:

1. the initial encounter with the case or suspected case occurs after 3:30 p.m. and prior to 7 a.m., in which event the employer must ensure that transfer occurs no later than 11:00 a.m.; or
2. the employer has contacted the local health officer and determined that there is no facility that can provide appropriate Airborne Infection Isolation (AII).

Establish written procedures to communicate with employees about infectious disease status of referred patients

The employer should establish, implement, and maintain effective written procedures to communicate with employees, other employers, and the local health officer regarding the suspected or diagnosed infectious disease status of referred patients. These should include procedures to receive information from the facility to which patients were referred and to provide necessary infection control information to employees who were exposed to the referred person.

Establish procedures to reduce the risk that the infected person might transfer the disease to other persons in the facility

These procedures will include:

1. Placement of the person in a separate room or area.
2. Provision of separate ventilation or filtration in the room.
3. Use of respiratory protection for employees when entering the room or area in which the person with ATD or suspect ATD is located, if that person is not compliant with source control measures.

Medical Facilities, who perform high hazard procedures, and whose task is to treat ATD cases must implement additional safety measures to protect their employees from ATD exposure.

High hazard procedures are procedures performed on an individual with suspected or confirmed infectious tuberculosis or other confirmed significant airborne disease in which the potential for being exposed to M. tuberculosis or other significant infectious pathogens is increased due to the reasonably anticipated generation of aerosolized pathogens. These facilities are mandated to have the following requirements in place by Cal/OSHA. They are:

1. Aerosol Transmissible Diseases Exposure Control Plan
2. Engineering and Work Practice Controls and Personal Protective Equipment
3. Respiratory Protection
4. Medical Services
5. Training
6. Recordkeeping

Aerosol Transmissible Diseases Exposure Control Plan

ATD Exposure Control plan is similar to the Bloodborne Pathogen Exposure Control Plan. It incorporates measures taken to protect the employees from ATD. Following information must be included in an ATD exposure control plan:

A. The name(s) or title(s) of the person(s) responsible for administering the Plan. This person must be knowledgeable in infection control principles and practices as they apply to the facility.
B. A list of all job classifications in which employees have occupational exposure.

C. A list of all high hazard procedures performed in the facility and the job classifications and operations in which employees are exposed to those procedures.
D. A list of all assignments or tasks requiring personal or respiratory protection.
E. Specific control measures must be listed for each operation or work area in which occupational exposure occurs. These measures should include applicable engineering and work practice controls, cleaning and decontamination procedures, and personal protective equipment and respiratory protection.
F. A description of the source control measures to be implemented in the facility and the method of informing people entering the work setting of the source control measures.
G. The procedures the employer will use to identify, temporarily isolate, and refer or transfer Airborne Infectious Disease (AirID) cases or suspected cases to Airborne Infection Isolation (AII) rooms, areas or facilities. These procedures must include the methods the employer will use to limit employee exposure to these persons during periods when they are not in airborne infection isolation rooms or areas. These procedures must also include the methods the employer will use to document medical decisions not to transfer patients in need of AII.
H. The procedures the employer will use to provide medical services, including recommended vaccinations and follow-up. This must include the procedures the employer will use to document the lack of availability of a recommended vaccine.
I. The procedures for employees and supervisors to follow in the event of an exposure incident, including how the employer will determine which employees had a significant exposure.
J. The procedures the employer will use to communicate with its employees and other employers regarding the suspected or confirmed infectious disease status of persons to whom employees are exposed in the course of their duties.
K. The procedures the employer will use to communicate with other employers regarding exposure incidents, including procedures for providing or receiving notification to and from health care providers about the disease status of referred or transferred patients.

L. The procedures the employer will use to ensure that there is an adequate supply of personal protective equipment and other equipment necessary to minimize employee exposure to ATPs, in normal operations and in foreseeable emergencies.
M. The procedures the employer will use to provide initial and annual training to employees in categories where there is occupational exposure.
N. The procedures the employer will use for recordkeeping.
O. An effective procedure for obtaining the active involvement of employees in reviewing and updating the exposure control plan with respect to the procedures performed in their respective work areas or departments.
P. Surge procedures. Employers of employees who are designated to provide services in surge conditions, and employers of employees who are designated to provide services to persons who have been contaminated as the result of a release of a biological agent as described must include procedures for these activities in the plan. The plan must include work practices, decontamination facilities, and appropriate personal protective equipment and respiratory protection for such events. The procedures must include how respiratory and personal protective equipment will be stockpiled, accessed or procured, and how the facility or operation will interact with the local and regional emergency plan.

The ATD Plan should be reviewed at least annually by the program administrator, and by employees regarding the effectiveness of the program in their respective work areas. Deficiencies found must be corrected. The review(s) must be documented in writing. The Plan should be made available to employees, employee representatives, the Chief and NIOSH for examination and copying.

A copy of the ATD exposure plan (in detail) is provided in the Documentation Kit.

Engineering and Work Practice Controls

Engineering controls may include:

- Local exhaust ventilation to capture aerosolized pathogens at its source.
- General exhaust ventilation to create a negative pressure environment.
- Air purification via portable HEPA filters to extract droplet nuclei containing infectious aerosol pathogens.

- Booths or tents for high-risk procedures.

Appropriate maintenance of engineering controls must be done to prevent transmission of ATDs. Ventilation systems and fresh air exchanges in Airborne Infection Isolation Rooms or areas are controls that are used to manage the environment of patients with ATDs. Some of these required engineering controls are listed below:

- An isolation room must maintain an air rate of at least 12 air changes per hour during high-risk occupancy.
- Ventilation systems must be maintained by inspection and monitoring for exhaust and recirculation filter loading and leakage at least annually.
- Air from airborne isolation rooms and areas connected via plenums or other shared air spaces are exhausted directly outside, away from intake vents and people.
- Negative pressure rooms are to be used for patients with suspected or known airborne transmissible diseases. Negative pressure is visually demonstrated by smoke trails or other devices that show air is moving into the room instead of out of the room. Doors and windows of airborne isolation rooms are kept closed while in use except when doors are opened for entering and exiting.
- Smoke testing and documentation should be done daily when a room is actively used as an isolation room.
- Proper pressurization must be checked and documented daily when a room is occupied by a patient who requires airborne infection isolation
- When a suspected case vacates an isolation room or area, the room must be ventilated for a removal efficiency of 99% before permitting employees to enter without respiratory protection.
- Records must be kept for five years on all isolation room's engineering controls and measurements, including smoke testing.
- In leased buildings, the building owner must be made responsible for the proper maintenance of the engineering controls and custodial services.

Specific work practices are required to be used by employees to reduce the risk of potential exposure to aerosol transmissible diseases. Medical facilities that have been identified as high-risk are required to develop written source control and work practice control procedures. These procedures must include methods

to inform individuals entering the facility or otherwise in close contact with employees of the source control practices.

These work practices should include:

- Adhering to Universal Precautions, which assumes that every person is potentially infected with a pathogen that could be transmitted by airborne, droplet or contact transmission. Universal Precautions are designed to reduce the risk of transmission of microorganisms from both recognized and unrecognized sources of infection.
- Hand washing with an antimicrobial or non-antimicrobial soap and water alcohol-based hand rub, or antiseptic hand wash. Hand hygiene should be performed frequently, including before and after patient, and before putting on and upon removal of personal protective equipment, including gloves.
- Wearing personal protective equipment such as gloves, gown, facemasks and respirators when providing care to patients.
- Using cleaners and water to pre-clean surfaces prior to applying a registered-EPA disinfectant to frequently touched surfaces.
- Screening and triage of symptomatic patients and implementation of respiratory hygiene and cough etiquette. Symptomatic patients are to be transferred to an AII room or area within 5 hours of identification.
- Conduct high hazard procedures in airborne isolation rooms, booths or tents. When this is not feasible, wear appropriate personal protective equipment.
- Communicate information about patients with suspected, probable or confirmed aerosol infections to appropriate personnel before transfer to other departments or facilities. Have the patient wear a facemask if possible.
- Encourage and provide vaccinations, especially seasonal influenza, to all healthcare workers.
- Providing conveniently located masks, tissues and alcohol-based hand rubs for waiting areas and patient evaluation areas.

Respiratory Protection

An employer, who has employees whose occupational exposure is based on entering work settings to perform tasks that put them at risk for exposure to ATDs must have an effective written Respiratory Protection Program. This program may be incorporated with the Exposure Control plan.

Respirator Selection

Effective September 1, 2010, all employees who have exposure to ATD must be provided powered air purifying respirator (PAPR) with a High Efficiency Particulate Air (HEPA) filter(s). If the patient is placed in a booth, hood or other ventilated enclosure that effectively contains and removes the aerosols resulting from the procedure, and the employee remains outside of the enclosure, the employee may use a N95 filtering face piece respirator.

Respiratory protection procedures will be required in all high-risk work areas such as:

- An isolation room in which a confirmed or suspected infectious ATD patient is housed or a facility where an airborne infectious disease suspect or confirmed case is known to be present.
- In direct contact and close proximity of a patient undergoing high-risk procedures. Respiratory protection is not required in the exterior areas during such procedures if the patient is located within an enclosed room or booth.
- All isolation rooms in the facility.
- During decontamination procedures after the person has left the isolation room or area.
- In an area during the performance of aerosol generating procedures on patients suspected of, or confirmed as, being infected with airborne infectious pathogens.
- For employees who are repairing or maintaining air systems or equipment that may be anticipated to contain or generate aerosolized pathogens.

Medical Evaluation and Fit Testing

Employers must perform a medical evaluation on employees to determine their ability to use a respirator before they actually use them. A mandatory fit testing must be done by the employer for employees who are exposed to ATD cases. The employer must ensure that each employee who is assigned to use a filtering facepiece or other tight-fitting respirator passes the fit test:

- At the time of initial fitting;
- When a different size, make, model or style of respirator is used; and
- At least annually thereafter.

Employer or the program administrator must also conduct a fit testing of their employees whenever they notice changes in employee's physical condition that could affect respirator fit. Such conditions include, but are not limited to, facial scarring, dental changes, cosmetic surgery, or an obvious change in body weight.

The employer should also provide initial and annual training on how to use these respirators.

Medical Services

Under this requirement, all employees who are at risk of exposure to tuberculosis and other aerosol transmissible pathogens should be provided with medical surveillance or services including vaccinations. Vaccinations include MMR, Varicella, Tetanus, Diphtheria, and Pertussis (TDAP), and seasonal flu vaccines as required by this Plan. Identified employees who do not wish to receive TDAP or seasonal flu vaccinations must sign a declination form. Any new vaccines that may become required under the Aerosol Transmissible Diseases Standard must be made available to employees within 120 days of the issuance of new CDC guidelines and will be included in the facility's ATD Exposure Control Plan.

Exposure Incident Protocol and Communication Procedures

If a potentially significant exposure incident is suspected, it must be immediately reported to the Program Administrator. The administrator will then assist in conducting a formal investigation to help determine which employees had a significant exposure to the infected individual. The consultation will be

documented in writing and will include the names of employees who were included in the analysis.

The Administrator will be responsible for notifying staff members who were potentially exposed. Employees having significant exposure must be notified within 48 hours. Other employees must be notified, within 24 hours of the diagnosis, of the date, time and nature of the exposure and any other information that is necessary. Other employers must be informed so they can evaluate the potential exposure of his or her employees.

Post-Exposure Follow-Up Treatment

Post-exposure follow-up treatment for employees who have been significantly exposed to an aerosol transmissible disease will consist of the following:

- Appropriate vaccination and prophylaxis treatment for TB or other ATD pathogen, as recommended by the CDC.
- For exposure to active TB, a TB screening test is to be administered within seven days from the date of the notification of the exposure incident on all personnel who have been identified to be potentially exposed. If the initial test is negative, a second test will be administered 8-10 weeks post-exposure to determine if an infection has occurred.
- A chest x-ray, clinical evaluation, and counseling of personnel with TB conversion, post-exposure, and completion of an exposure incident questionnaire by personnel with a previously documented positive TB skin test. Clinical evaluation will not be required unless symptoms suggestive of TB occur.

NOTE: Employees who have previous positive TB tests or who have been exposed to MTB will be evaluated with a chest x-ray at the discretion of the HCP.
Medical evaluations must be offered to employees in the following circumstances:

- When an employee is found to have a positive TB test.
- When an employee has an annual or two-year approved TB test convert from negative to positive.
- Following an exposure incident to any other transmissible aerosol pathogen.

Employee Training

All identified employees under this Plan must participate in a training program at no cost to them and during working hours. Training must be provided at the time of initial assignment and at least every year thereafter. Material appropriate in content and vocabulary to the educational level, literacy and language of the employee must be prepared for use. Employers need not include all the provisions of the ATD standard for the annual training but only those sections that have not been covered in the previous training.

The training program must contain, at a minimum, the following elements:

- An explanation of the appropriate methods for recognizing tasks and other activities that may expose the employee to ATDs.
- An explanation of the basis for selection of personal protective equipment, its uses and limitations and the types, proper use, location, removal handling, cleaning, decontamination and disposal of the items of personal protective equipment employees will use.
- Information on the employer's surge plan as it pertains to the duties employees will perform.
- An explanation of this exposure control plan, including the employer's and employee's responsibility under this exposure control plan and the means by which an employee can obtain a copy of the written plan.
- Job titles and work tasks in their departments that are at-risk for occupational exposure to ATDs.
- The basic concepts of transmission and symptoms of aerosol transmissible diseases, including the differences between TB infection and active TB disease, and how to minimize infection risk factors. Information on available vaccines and the benefits of being vaccinated.
- Use and limitations of methods to prevent exposure, including the hierarchy of infection control measures focusing on source control, safe work practice habits and situations with increased risk of exposure to aerosol transmissible diseases, engineering controls and personal protective equipment. Site-specific control measures will be provided as needed.
- TB screening and chemoprophylaxis, including the significance of a positive result, the requirement for participating in the process, the

principles of drug therapy, the difficulty of treating drug-resistant TB, and the role of incomplete medical treatment in the development of drug-resistant TB.
- Information regarding appropriate actions to take in the event of an emergency or exposure incident.
- Information on available vaccines and that they will be offered free of charge.
- An explanation of the basis for selection of personal equipment in accordance with the Respiratory Protection under Section 5144 for those people whose assignments include use of respirators.
- An opportunity for interactive questions and answers with the person conducting the training session.

The person conducting the training must be knowledgeable in the subject matter covered in the training program as it relates to the workplace.

Recordkeeping

Medical Records

Employer must maintain accurate health records for all employees. Medical Records will include:

- The individual's name.
- The individual's TB test status, dates and results of testing.
- The individual's medical information concerning tuberculosis, or any other aerosol transmissible disease, and a record of all current vaccinations, titers and approved TB tests.
- A copy of all relevant information related to any exposure incident including dates, diseases to which the employees were exposed, name and job of the person doing the evaluation, date of evaluation, etc.

Medical records will be maintained for at least the duration of employment or assignment, plus 30 years, in accordance with applicable regulations.

All medical records are kept confidential and are not disclosed or reported without the employee's expressed written consent to any person within or

outside the workplace, except as required by law. Employees may obtain a copy of their medical record through the employer or the program administrator.

Training Records

The employer must maintain all ATD Exposure Control Plan training records. Training records will include the following information:

- Dates of training sessions.
- Course outline, content or summary of training sessions.
- Names and qualifications of instructors; and names and job categories of persons attending the training.

Resources

1. 'Aerosol Transmissible Diseases', Code of California Regulations, Title 8, Section 5199, Regulatory Text, Cal/OSHA, Department of Industrial Relations.

Chapter 7: Chemical Hazard Communication Standard [T8 CCR §5194]

Introduction

The hazard communication standard became effective in 1989, and revised in 2012 to align with global standards called the Globally Harmonized System (GHS), is based on a very simple concept: employees have both a need and a right to know and understand the hazards and the identities of the chemicals they are exposed to when working. The basic goal of an effective hazard communication program is to ensure employers and employees know the identities and hazards of chemicals in their workplaces. When employers and employees have such information, it can be used to design and implement appropriate protective measures to reduce the incidence of adverse effects. This standard is a **performance-oriented regulation** that mandates a program of evaluating potential hazards of chemicals, communicating information concerning hazards, and implementing appropriate protective measures for employees that use hazardous chemicals in a non-laboratory setting.

Cal/OSHA fined offices of Physicians (industry classification-6211) $420 in 2017-2018 inspections for violations under Hazard Communication standard.

The Chemical Hazard Communication Standard in California applies to all employers in California whose employees are exposed to hazardous chemicals, regardless of size.

Proposition 65 Initiative

Proposition 65 (formally titled "The Safe Drinking Water and Toxic Enforcement Act of 1986") is a California law passed by direct voter initiative in 1986 by a 63%-37% margin. Its primary goal is to regulate substances listed by California as causing cancer or birth defects chemicals.

The following warning language is standard on products sold in California if they contain chemicals on the Proposition 65 list and the amount of exposure caused by the product is not within defined safety limits.

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

Under Proposition 65, warnings are required for:

1. Consumer product exposures
2. Occupational exposures
3. Environmental exposures

All employers must post the above warning for their employees to see if Proposition 65 chemicals are used in their facility. Proposition 65 regulations do not apply to employers with ten or fewer employers.

The Right to Know

The purpose of the hazard communication and Proposition 65 regulations are to ensure that the hazards of all chemicals are communicated to employers and their employees to protect workers against chemical illnesses and injuries.

This chapter is divided into three sections:

Section 1: Specific Requirements and Responsibilities
Section 2: Required Employee Training
Section 3: Chemicals — Hazards and Emergency Response

(A summary of the hazards associated with the chemicals most commonly encountered by medical staff and emergency response actions to take in the event of the spill or exposure to a chemical agent.)

Worker Right-to-Know is the law. It is meant to protect the employees at work. If your employer does not follow the hazard communication rules, you have the right to file a complaint about violation of safety and health regulations with the California Division of Occupational and Health. Your confidentiality will be protected to the extent permitted by law.

Section 1: Specific Requirements and Responsibilities

Requirements

This rule applies to all employers engaged in businesses where chemicals are used, distributed, or produced for use or distribution. Contractors or subcontractors that work for employers engaged in businesses where chemicals are used, distributed, or produced for use or distribution are also subject to this rule.

Applicable Chemicals

It applies to all chemicals that are defined as hazardous by the standard and are used in the workplace in a manner in which employees may be exposed to the chemicals under conditions of use or foreseeable emergencies. A hazardous chemical is defined as any chemical that is a physical hazard or a health hazard.

Exceptions are:

- Tobacco or tobacco products.
- Wood or wood products that are not chemically treated and will not be processed, for example, by sawing and sanding.
- Food or alcoholic beverages.
- Some drugs, such as retail or prescription medications.
- Retail cosmetics.
- Ionizing and nonionizing radiation.
- Biological hazards.
- Any consumer product or hazardous substance when workplace exposure is the same as that of a consumer.
    - An example is the employee's exposure to household cleaners at the office. This exposure is considered to be equal to that of a consumer. Such products are exempt.

    - Retail products used in offices in the same manner and frequency used by consumers, can be termed “consumer products”, and include things such as: correction fluid, glass cleaner, and dishwashing liquid.
- Manufactured items that remain intact are exempt from this rule.
- Manufactured items that are fluids or in the form of particles are not exempt from this rule.

Examples of Physical and Health Hazards

1. Physical hazards include:
    a. combustible liquids
    b. compressed gases
    c. explosives
    d. flammables
    e. organic peroxides
    f. oxidizers
2. Chemicals considered health hazards fall into one of the following categories:
    a. carcinogen
    b. toxic or highly toxic
    c. reproductive toxin
    d. irritant
    e. corrosive
    f. sensitizer
    g. hepatotoxin
    h. nephrotoxin
    i. neurotoxin
    j. agents affecting the hematopoietic system
    k. agents that damage the lungs, skin, eyes or mucous membranes

Written Hazard Communication Program [T8 CCR §5194(e)]

The employer is required to develop and maintain a written hazard communication program that describes how it will meet the requirements of the standard. A copy of the program must be available for all employees to read and

understand and must be located at a place that is easily accessible for all employees.

A written hazard communication program ensures that all employers receive the information they need to inform and train their employees properly and to design and put in place employee protection programs. It also provides necessary hazard information to employees, so they can participate in, and support, the protective measures in place at their workplaces.

A fine totaling $1395 was collected under T8 CCR 5194 (e) in the year 2016-2017.

Employers, therefore, must develop, implement, and maintain at the workplace a written, comprehensive hazard communication program that includes provisions for container labeling, collection and availability of safety data sheets, and an employee-training program. It must also contain a list of the hazardous chemicals, the means the employer will use to inform employees of the hazards of non-routine tasks, and the hazards associated with chemicals in unlabeled pipes. If the workplace has multiple employers onsite (for example, the rule requires these employers to ensure that information regarding hazards and protective measures be made available to the other employers onsite, where appropriate. In addition, all covered employers must have a written hazard communication program to get hazard information to their employees through labels on containers, SDSs, and training.

The written program does not have to be lengthy or complicated, and some employers may be able to rely on existing hazard communication programs to comply with the above requirements. The written program must be available, upon request, to employees, their designated representatives, the division for occupational safety and health (DOSH), and the director of the National Institute for Occupational Safety and Health (NIOSH).

Chemical Inventory and Safety Data Sheets

The employer is required to compile a list of the hazardous chemicals present in the workplace, along with corresponding safety data sheets. All employees must have access to this information during their work shifts. A suggested chemical inventory form to compile the information and a sample SDS are provided in this chapter.

Labels [8CCR §5194(f)]

All containers of hazardous chemicals received by the employers must have the following information according to GHS:

- the identity of the hazardous chemical(s) or product identifier
- Signal word
- Hazard statement
- Pictogram
- Precautionary statement
- The name/address of the chemical manufacturer, importer, or other responsible party

A sample GHS label is provided below:

SAMPLE LABEL

PRODUCT IDENTIFIER

CODE _____
Product Name _____

SUPPLIER IDENTIFICATION

Company Name _____
Street Address _____
City, State _____
Postal Code, Country _____
Emergency Phone Number _____

PRECAUTIONARY STATEMENTS

Keep container tightly closed. Store in cool, well ventilated place that is locked. Keep away from heat/sparks/open flame. No smoking.
Only use non-sparking tools.
Use explosion-proof electrical equipment.
Take precautionary measure against static discharge.
Ground and bond container and receiving equipment.
Do not breathe vapors.
Wear Protective gloves.
Do not eat, drink or smoke when using this product.
Wash hands thoroughly after handling.
Dispose of in accordance with local, regional, nation, international regulations as specified.

In Case of Fire: use dry chemical (BC) or Carbon dioxide (CO_2) fire extinguisher to extinguish.

First Aid
If exposed call Poison Center.
If on skin (on hair): Take off immediately and contaminated clothing. Rinse skin with water.

HAZARD PICTOGRAMS

SIGNAL WORD

Danger

HAZARD STATEMENT

Highly flammable liquid and vapor. May cause liver and kidney damage.

SUPPLEMENTAL INFORMATION

Directions for use
_____
_____
_____
Fill weight: _____
Lot number: _____
Gross weight: _____
Fill Date: _____

Expiration Date: _____

Product identifier means the name or number used for a hazardous chemical on a label or in the Safety Data Sheet (SDS). It provides a unique means by which the user can identify the chemical.

Signal word means a word used to indicate the relative level of severity of hazard and alert the reader to a potential hazard on the label. The signal words used in this section are "danger" and "warning." "Danger" is used for the more severe hazards, while "warning" is used for the less severe.

Hazard statement means a statement assigned to a hazard class and category that describes the nature of the hazard(s) of a chemical, including, where appropriate, the degree of hazard.

Pictogram means a composition that may include a symbol plus other graphic element, such as a border, background pattern, or color, that is intended to convey specific information about the hazards of a chemical. Eight pictograms are designated under this standard for application to a hazard category.

Precautionary statement means a phrase that describes recommended measures that should be taken to minimize or prevent adverse effects resulting from exposure to a hazardous chemical, or improper storage or handling.

Exceptions to the Labeling Rule:

- Employers can post signs or placards that convey the hazard information if there are a number of stationary containers within a work area that have similar contents and hazards.
- Employers can substitute various types of standard operating procedures, process sheets, batch tickets, blend tickets, and similar written materials for container labels on stationary process equipment if they contain the same information and the written materials are readily accessible to employees in the work area.
- Employers are not required to label portable containers into which hazardous chemicals are transferred from labeled containers and that are intended only for the immediate use of the employee who makes the transfer.
- Employers are not required to label pipes or piping systems.

Training

Employers (supervisors) are also required to provide information and training to employees on this standard and the hazards of the chemicals used in the workplace. The deadline to train employees in the new GHS system that has significant differences in the labeling and Safety Data Sheet is December 1, 2013.

All employees must be familiar with the new pictograms and hazards under the new HCS Standard. These pictograms will be found on the GHS labels and SDS sheets of hazardous chemicals.

HCS Pictograms and Hazards under the new HCS standard

Health Hazard	Flame	Exclamation Mark
• Carcinogen • Mutagenicity • Reproductive Toxicity • Respiratory Sensitizer • Target Organ Toxicity • Aspiration Toxicity	• Flammable • Pyrophorics • Self-Heating • Emits Flammable Gas • Self-Reactives • Organic Peroxides	• Irritant (skin and eye) • Skin Sensitizer • Acute Toxicity (harmful) • Narcotic Effects • Respiratory Tract Irritant • Hazardous to Ozone Layer (Non Mandatory)
Gas Cylinder	Corrosion	Exploding Bomb
• Gases under Pressure	• Skin Corrosion/ burns • Eye Damage • Corrosive to Metals	• Explosives • Self-Reactives • Organic Peroxides
Flame over Circle	Environment (Non Mandatory)	Skull and Crossbones
• Oxidizers	• Aquatic Toxicity	• Acute Toxicity (fatal or toxic)

Responsibilities

Responsibility for implementing the hazard communication (HazCom) resides with each department where hazardous chemicals are utilized in a non-laboratory setting. The responsibility for implementing and fulfilling the mandates of the HazCom are as follows:

Supervisor Responsibilities

- Informing and training employees on potential hazards associated with the chemicals in their work area, and when new chemical hazards are introduced.
- Completing a Job Hazard Assessment to determine the personal protective equipment needed to protect the employees.
- Supervising employees in the implementation of engineering controls, safe work practices, and personal protective equipment (PPE) used to reduce potential exposure to the lowest practical level.
- Investigating and reporting incidents relating to the use of hazardous chemicals.
- Selecting chemicals, supervising the use and disposal of chemicals, and maintaining access to a current chemical inventory, and availability of the SDS of hazardous chemicals for all work locations under their direction.
- Maintaining training records of all those in the department that have attended training sessions relating to hazard communication (HazCom).

Employee Responsibilities

- Awareness of the hazards associated with the chemicals used and the methods of reducing exposures.
- Planning and using chemicals in accordance with established safe work practices and protocols.
- Using all of the appropriate PPE required for working with a chemical.
- Disposing of chemicals in an appropriate manner.
- Reporting unsafe conditions to their supervisor.
- Reporting incidents of hazardous chemical exposure to their supervisor.

Recordkeeping

- Chemical inventories will be maintained by each facility and maintained in the facility's chemical inventory/SDS system.
- Attendance records of HazCom sessions conducted by department supervisors are to be retained in employee files or in an office training file.
- Injuries or chemical exposures will be documented on the OSHA Log 300 form (if mandated).
- Medical records will be retained as established by the facility protocol.

Section 2: Required Employee Information and Training

The Cal/OSHA hazard communication standard requires that employees be informed of the requirements of the standard, the location of the written hazard communication plan, operations in the workplace involving hazardous chemicals, lists of hazardous chemicals used in the workplace, and the location of SDSs for these chemicals. Review of this program and completion of the attendance sheet and quiz meet the minimum requirement for awareness training. The supervisor must provide documented site-specific training to all staff on the chemicals used in the work area.

The facility must have a written hazard communication plan that is available to all employees.

Training [T8 CCR §5194(h)]

Required Training and Frequency of Training

The employer should provide employees with information and training to ensure they are mindful of the hazards of chemicals present in their work area. Awareness training should be available at new hire orientation before the employee's initial work assignment begins. Site-specific training must be provided at the initial job assignment.

Documentation of the training provided at new hire orientation and other sessions held by the facility will be maintained for a period of up to five years. Continuing employee training for special hazards in an employee's work area will be the responsibility of the supervisor.

A fine totaling $600 was collected under T8 CCR 5194 (h) in the year 2016-2017.

Retraining is required when a new hazard is introduced in a work area. Supervisors may request the assistance of the manufacturers of the chemicals with the periodic retraining for their employees.

Purpose and Content of Training

The purpose of hazard-communication training is to inform individuals of the risks and hazards associated with chemical use and what to do if an emergency occurs. An overview of the general-awareness training conducted by supervisors follows.

1. The existence of the hazard communication program and its requirements.
2. How to read and understand the material found on an SDS.
3. Methods to minimize employee exposure to hazardous chemicals.
4. Signs and symptoms associated with exposure to hazardous chemicals.
5. Methods and observations — such as visual appearance or smell — workers can use to detect the presence of a hazardous chemical to which they may be exposed.
6. Location and availability of known reference materials, including SDS, outlining the hazards, safe handling, storage, and disposal of hazardous chemicals.
7. Proper use and limitations of personal protective equipment (PPE).
8. Proper use of emergency equipment and the limitations of safety equipment.
9. Emergency procedures to follow in the event of a chemical spill.

Site-specific training needs to be provided at the employee's initial job assignment. Continuing employee training for special hazards in an employee's work area will be the responsibility of the supervisor.

Requirements of Retraining a New Hire

Additional training is to be done whenever a new physical or health hazard is introduced into the work area, not a new chemical. For example, if a new solvent is brought into the workplace, and it has hazards similar to existing chemicals for which training has already been conducted, then no new training is required. As with initial training, and in keeping with the intent of the standard, the employer must make employees specifically aware which hazard category (i.e., corrosive, irritant, etc.) the solvent falls within. The substance-specific data sheet must still be available, and the product must be properly labeled. If the newly introduced solvent is a suspect carcinogen, and there has never been a carcinogenic hazard in the workplace before, then new training for carcinogenic hazards must be conducted for employees in those work areas where employees will be exposed.

It is not necessary that the employer retrain each new hire if that employee has received prior training by a past employer, an employee union, or any other entity. General information, such as the rudiments of the HCS, could be expected to remain with an employee from one position to another. The employer, however, maintains the responsibility to ensure that their employees are adequately trained and are equipped with the knowledge and information necessary to conduct their jobs safely. It is likely that additional training will be needed, since employees must know the specifics of their new employer's programs, such as where the SDSs are located, details of the employer's internal labeling system, and the hazards of new chemicals to which they will be exposed. For example, the employees should be trained on the measures they can take to protect themselves from hazards, including specific procedures the employer has implemented, such as work practices, emergency procedures, and personal protective equipment to be used. An employer, therefore, has a responsibility to evaluate an employee's level of knowledge with regard to the hazards in the workplace, their familiarity with the requirements of the standard, and the employer's hazard communication program.

Reading and Interpreting SDSs [(T8 CCR §5194(g)]

The two key written materials that convey information on the hazards of chemicals are the safety data sheets (SDSs) and labels. The hazard communication standard requires that SDSs be available for all hazardous chemicals and that all containers of these chemicals be labeled.

Cal/OSHA Requirements for SDS

Employers must maintain a complete and accurate SDS for each hazardous chemical used in the facility. They are entitled to obtain this information automatically upon purchase of the material. When new and significant information becomes available concerning a product's hazards or ways to protect against the hazards, chemical manufacturers, importers, or distributors must add it to their SDS within **three months** and provide it to their customers with the next shipment of the chemical. Employers must have a manufacturer-specific SDS for each hazardous chemical used in the workplace.

Actions to Be Taken if the SDS Is Not Received from the Manufacturer

While SDSs are not required to be physically attached to a shipment, they must accompany or precede the shipment. When the manufacturer/supplier fails to send an SDS with a shipment labeled as a hazardous chemical, the employer must obtain one from the chemical manufacturer, importer, or distributor as soon as possible. Similarly, if the SDS is incomplete or unclear, the employer should contact the manufacturer or importer to get clarification or obtain missing information within **seven days**. A request for SDS made in the preceding twelve months to the manufacturer or the importer about a hazardous substance will make the employer compliant with the requirements of the SDS T8 CCR§5194(g)(12)(A) section of the Cal/OSHA Hazard Communication Standard.

If the SDS is requested by an agent or the Director of DOSH the employer should provide the copy of the inquiry made to the manufacturer within 25 days. If the SDS has been received from the manufacturer, the employer should make it available to the requestor within 15 days.

Most SDSs may not have Cal/OSHA permissible exposure limits (PELs) listed. In some cases, Cal/OSHA PELs are stricter than the OSHA PELs and other exposure

limits listed on the SDSs you receive. If this is the case, you must refer to the Cal/OSHA PEL table for the appropriate exposure limits to be covered during training.

When an employer is unable to obtain an SDS from a supplier or manufacturer, he or she should submit a written complaint, with complete background information, to the nearest Cal/OSHA office. Cal/OSHA will then call and send a certified letter to the supplier or manufacturer to obtain the needed information. If the supplier or manufacturer still fails to respond within a reasonable time, Cal/OSHA will inspect the supplier or manufacturer and take appropriate enforcement action.

You may contact your local regional office for assistance or make a written request for assistance to the:

Division of Occupational Safety and Health
Deputy Chief of Health and Engineering Services
1515 Clay Street, Suite, Room 1901
Oakland, CA 94612

Some additional information may be included when the request for assistance is being made:

- A copy of the purchaser's written request to the chemical manufacturer, importer, or distributor.
- The name of the product suspected of containing a hazardous chemical.
- The identification number of the product, if available.
- A copy of the product label, if available.
- The name and address of the chemical manufacturer, importer, or distributor from whom the product was obtained.

Exemptions to SDS

HCS exempts "food, drugs, cosmetics, or alcoholic beverages in a retail establishment which are packaged for sale to consumers," and "foods, drugs, or cosmetics intended for personal consumption by employees while in the workplace."

Drugs, as defined in the Federal Food, Drug and Cosmetic Act, in solid, final form for direct administration to the patient (i.e., tablets, pills, capsules) are exempt from coverage of the HCS.

Tablets, capsules, or pills that are designed to be dissolved or crushed by employees prior to administration to a patient are not in "final form" and are covered by the HCS. There may be situations where the tablet, capsule, or pill is dissolved or crushed to facilitate patient administration when that is not typically the way it is dispensed. The "final form" exemption would apply in this situation.

If the active ingredients in the dosage form contain non-hazardous chemicals, then these ingredients are not covered by HCS and do not require SDS.

SDSs for Ointments, Creams, and Other Topical Preparations that Do Not Contain Hazardous Chemicals.

Storing SDS Information in the Computer

Cal/OSHA allows employers to store SDS information on the computer as long as there are no barriers to accessing them. If the employee's work area includes the area where the SDSs can be obtained, then maintaining SDSs on a computer would be in compliance. If the SDSs can be accessed only out of the employee's work area(s), then the employer would be out of compliance, which states that SDSs must be readily accessible.

Other barriers to accessing SDS online include:

- Power outages
- Equipment failure
- System delays
- Deficient user knowledge to operate equipment

Safety Data Sheet (SDS) Contents

The information required on the safety data sheet (SDS) will remain essentially the same as that in the old HCS standard. The previous Hazard Communication Standard (HCS) indicates what information has to be included on an SDS but does not specify a format for presentation or order of information. The revised HCS requires that the information on the SDS is presented using consistent headings in a specified sequence.

The format of the 16-section SDS should include the following sections:

Section 1. Identification
Section 2. Hazard(s) identification
Section 3. Composition/information on ingredients
Section 4. First-Aid measures
Section 5. Fire-fighting measures
Section 6. Accidental release measures
Section 7. Handling and storage
Section 8. Exposure controls/personal protection
Section 9. Physical and chemical properties
Section 10. Stability and reactivity
Section 11. Toxicological information
Section 12. Ecological information
Section 13. Disposal considerations
Section 14. Transport information
Section 15. Regulatory information
Section 16. Other information, including date of preparation or last revision
Sections 12-15 may be included in the SDS, but are not required by OSHA.

Hazard Classification

According to OSHA, employers are not required to classify chemicals unless they choose not to rely on the classification performed by the chemical manufacturer or importer for the chemical (29 CFR 1910.1200(d)(1)).

Under the new HCS standard, the new hazard classification provides specific criteria for classification of health and physical hazards, as well as classification of mixtures. The GHS has identified physical hazards, chemical hazards and environmental hazards, and classified them by defining them and defining different categories within each hazard class with objective criteria. Once a classification for a chemical component has been determined, manufacturers have to classify the mixture to which it belongs. Under the old OSHA standard, there was a pretty simple rule for determining the hazards of a mixture. The mixture was determined to have all the health hazards present if they had it at .1 percent or greater, with no regard to dilution. And that ran into a problem with acute toxicity for example if you took something that was acutely toxic at 100 percent and dilute it down to 5 percent; it might not qualify as acutely toxic anymore. What GHS does is it provides guidance on how to calculate the hazards of a mixture depending on the particular hazard categories of the various components and their proportions in the mixture. And there are different approaches for different kinds of hazards. It's more complicated, but it's generally regarded as a more accurate system than the old OSHA system.

Trade Secrets [T8 CCR §5194(i)]

The chemical manufacturer, importer, or employer may withhold the specific chemical identity, including the chemical name and other specific identification of a hazardous chemical, from the safety data sheet, provided that:

- the claim that the information withheld is a trade secret can be supported;
- information contained in the safety data sheet concerning the properties and effects of the hazardous chemical is disclosed;
- the safety data sheet indicates that the specific chemical identity is being withheld as a trade secret; and
- the specific chemical identity is made available to health professionals, employees, and designated representatives in accordance with the applicable provisions of this paragraph.

In a medical emergency, if a treating physician or nurse determines that a specific chemical identity of a hazardous chemical is necessary for emergency or first-aid treatment, the chemical manufacturer, importer, or employer must immediately disclose the specific chemical identity of a trade secret chemical to that treating physician or nurse, regardless of the existence of a written statement of need or a confidentiality agreement. A written statement of need or confidentiality agreement may be requested by the manufacturer, importer, or employer and should be provided as soon as circumstances permit.

There may be certain non-emergency situations, where the manufacturer might be asked, in writing, to disclose the specific identity of a chemical that is protected under the Trade Secrets provision of the Hazard Communication Standard. They are:

- To assess the hazards of the substances to which employees will be exposed;
- To conduct or assess sampling of the workplace atmosphere to determine employee exposure levels;
- To conduct pre-assignment or periodic medical surveillance of exposed employees;
- To provide medical treatment to exposed employees;
- To select or assess appropriate personal protective equipment for exposed employees;
- To design or assess engineering controls or other protective measures for exposed employees; and,
- To conduct studies to determine the health effects of exposure.

Labels and Signs

The hazard warnings on the label outline the appropriate measures to be taken in the case of an emergency and give the main hazard(s) associated with the use of the chemical. If a label is missing from a container in which the chemical can be properly identified, a new label must be affixed containing the appropriate information. Never mix chemicals that do not have proper labels. Never assume an unlabeled container is harmless. Also, never remove any label unless you immediately replace it with a new label containing the information removed on the previous label. Labels are an important first source of information on the chemicals used in the workplace. Labels are a condensed version of an SDS. The

following information is required to be affixed on all containers of hazardous chemicals.

1. All purchased chemicals, purchased solutions, and in-house prepared solutions must have identity labels showing:
    a. the identity of the hazardous chemical(s) with proper names;
    b. appropriate hazard warnings, such as DANGER OR WARNING; and
    c. the name/address of the chemical manufacturer, importer, or responsible party.
2. Abbreviations are not an acceptable method to identify the contents of a container.
3. Product labels and DOT shipping labels must be retained on all bulk quantities of chemicals.
4. Signs indicating the location of safety showers, eyewash stations, and other safety and first aid equipment are required.
5. Warnings signs are required in areas or on equipment where special or unusual hazards exist.

Limiting Chemical Exposures

Three main methods exist to control exposure: engineering controls, safe work practices, and personal protective equipment (PPE). Certain actions made when procuring, storing, and disposing of chemicals can limit exposures.

Engineering Controls

Engineering controls are the preferred method of reducing exposure. Engineering controls should be used whenever the chemical hazard information on the chemical label or the SDS indicates a need. A common need for engineering controls is indicated when an SDS states “use local exhaust.” Examples of engineering controls include switching to a less-hazardous chemical, isolating the chemical by using isolation rooms or using remote equipment, and using special local ventilation.

Safe Work Practices

Safe work practices offer a second method to reduce exposure after the use of engineering controls. SDS and chemical labels should be reviewed for specific work practice instructions before using chemicals. Additional safe work practices

include not working alone, washing hands after using chemicals, and reducing the amount of chemicals used or stored.

Personal Protective Equipment (PPE)

PPE should be used in addition to, but not as a substitute for, engineering controls and safe work practices to reduce exposure. PPE may consist of respiratory protection, eye protection, face protection, gloves, hearing protection, and protective clothing. SDS and chemical labels contain specific information on the proper PPE needed. It's the responsibility of the supervisor to select appropriate PPE for the chemicals handled in the facility. When PPE is selected, its use must be in accordance with Cal/OSHA Standard T8 CCR §3380 (found in Chapter 4), and in consultation with the manufacturer.

Personnel must wear PPE to help prevent chemical exposures. Adequate PPE needed for the performance of a job function is to be provided by the supervisor at no cost to the employee.

Chemical Procurement, Distribution, Storage, and Disposal

Procurement

- Before a substance is used, an SDS with information on proper handling, storage, and disposal must be obtained and made available for those who will be using the substance. No container is to be accepted without an adequate identifying label. Manufacturers' labels are not to be defaced or removed.
- Whenever possible, supervisors should consider using alternative chemicals for very hazardous chemicals.
- To reduce future wastes, purchase only those quantities necessary.

Distribution

When chemicals are transported by hand or cart, the container should be placed within a second, larger container or bucket.

Storage

- Periodic inventories must be conducted. An example of a chemical inventory sheet is located at the end of this chapter. Updated information is to be entered into the facility's chemical inventory / SDS system. The hazardous waste supervisor must be consulted before disposal of unneeded or excess items. At least annually, a visual inspection for deterioration and container integrity should be performed, and damaged containers replaced, when inventories are updated.
- Chemicals must be stored correctly. Consult the SDS and product labels for recommended storage procedures. Consult manufacturers for additional storage recommendations.

Disposal

Dispose of all hazardous waste generated in accordance with local, state, and federal regulations. Contact the hazardous waste management companies for guidance on the disposal of any chemical waste.

SECTION 3: Chemicals — Hazards and Emergency Response

Exposure Levels

Minimizing exposures to chemicals is important to worker safety. Consulting the SDS can provide valuable information on preventing exposures to chemicals. Effects from adverse chemical exposures can lead to long-term health effects. Exposures to chemicals are described in many ways. Acute or short-term exposures are exposures that occur over a very short period of time, usually less than 15 minutes. Chronic or long-term exposures occur over a long period of time, usually weeks or years.

Cal/OSHA regulates the amount of a chemical an employee can be exposed to. Cal/OSHA's permissible exposure limits (PELs) for a chemical is a legal regulatory limit, time-weighted average, which cannot be exceeded over an eight-hour work period. Short-term exposure limits (STELs) are limits that cannot be exceeded for more than 15 minutes.

The American Congress of Governmental Industrial Hygienists (ACGIH) publishes a list of threshold limit values (TLVs) for chemicals. The TLV for a chemical is the recommended maximum average airborne concentration of a chemical that is thought most people can be exposed to for an eight-hour limit with no ill effects.

Methods of detecting chemicals can include:

- monitoring by the employer;
- continuous monitoring devices; and
- observation of the chemical's appearance, odor, or other characteristic.

Spill Control Policy

When working with chemicals, responding to chemical spills is vital to minimize hazards. Preplanning the spill response saves time and minimizes hazards. Small spills are those spills that by their small volume or low toxicity are deemed to not present a health hazard to trained chemical users. Small chemical spills are to be cleaned up immediately by the chemical user. Some spills can create slippery conditions that can lead to additional hazards. Wear the appropriate PPE when cleaning these spills to help prevent exposures.

Some hazardous substances necessitate special clean-up procedures to minimize hazards to clean-up personnel. Major spills are those spills, which by their large volume or high toxicity present a health hazard under normal conditions. Employees should not attempt to clean up of these spills. Immediately notify appropriate emergency services to arrange for a spill response team.

Spill Emergency Plan

Emergency preplanning to be followed before working with toxic chemicals.

- Determine the potential location of releases.
- Determine the quantities of material that may be released.
- Know the chemical and physical properties of the material (physical state, vapor pressure, air or water reactivity).
- Know the hazardous properties of the material (toxicity, corrosivity, flammability).
- Have the required PPE and spill kits available.

In the event of a *small spill*, the following general procedures are to be followed.

- Attend to any persons who may have been contaminated. If personal exposure has occurred, have the person use the eyewash station or safety shower. Direct the person to appropriate medical facilities.
- Notify persons in the immediate area of the spill.
- Close the door.
- Avoid breathing vapors of the spilled material.
- Leave any local exhaust ventilation on.
- Secure supplies to effect clean up.
- Wear the appropriate PPE during clean up.
- Place the collected waste in an appropriate container for disposal.

In the event of a *major spill*, the following procedures are to be followed.

- Attend to any persons who may have been contaminated. If personal exposure has occurred, have the person use the eyewash station or safety shower. Remove the person from the area and seek medical assistance if needed.
- Alert others in the immediate area of the spill. Evacuate personnel from the area.
- Confine the fumes/vapors from the spill by closing the door to the room where the spill occurred.
- Contact emergency personnel from a safe location.
- Be available for the emergency spill response personnel to provide information concerning the spill and other hazards that may be present in the spill area.

Common Chemicals

This section is designed to provide information of common chemicals used by medical staff in a clinical setting. This section might not include all chemicals used in specialty medical areas but it is designed to cover the majority of chemicals encountered. Those chemicals used that are not listed need to be reviewed by the supervisor so the hazards and means of protection can be established and explained to the employees.

Several of the chemicals in these following paragraphs present potential reproductive hazards to personnel working with them. Radionuclides, including

radioactive iodine and implanted radioactive seeds, are not covered under Hazard Communication Standard. Consult radiation safety supervisor for information on the hazards and safety precautions for these materials.

Information on chemicals/groups must be found in the facility's chemical inventory/SDS system. A brief summary of the chemicals medical staff most commonly come in contact with follows.

Antineoplastic (Chemotherapeutic) Agents

Design a policy to inform nurses and other staff on the precautions and handling procedures necessary to properly work with these agents. The policy should have information regarding the routine use, administration, and cleanup of spills, and disposal of excreta from patients being treated with these agents. The policy must cover all antineoplastic agents used in the facility and must include a cross-reference listing for the drugs. Safety data sheets for the agents must be available.

Disinfecting Agents

These are used by employees to disinfect instruments, contaminated surface, and other items to prevent the spread of organisms and infection. Some cold disinfecting agents contain chemicals, such as glutaraldehyde, that may have adverse health effects associated with them. Use disinfectants containing chemicals such as glutaraldehyde in well-ventilated areas. These areas must be pre-approved by the supervisor. Minimize the potential for skin contact or breathing in vapors. Appropriate eye wear must be worn to prevent eye contact with chemicals when performing duties that has the potential of creating splashes or sprays. Use appropriate gloves and gowns / lab coats to minimize dermal exposures. Spray disinfecting agents onto a cloth whenever possible instead of spraying directly on surfaces to minimize the amount of chemical aerosolized.

Housekeeping Chemicals

These are used by staff for spot cleaning or by housekeeping employees. In general, the majority of chemicals used by the housekeeping team have a low hazard level. Use gloves to prevent dermal exposure. For those tasks where the

risk of eye exposure is possible, safety glasses, goggles, or a face shield is required. The most hazardous chemicals, such as floor strippers, are used infrequently and require special precautions.

Anesthetic Gases

These gases can be found in the operating rooms, labor and delivery units, emergency departments, outpatient clinics, dental surgery rooms, and recovery rooms and may be found much less frequently in other areas. Anesthetic gases used include nitrous oxide, halothane, enflurane, and isoflurane. Anesthetic gases can be released and cause exposures by the following pathways: during hook-up and check-out of the system, gas seeping out of a patient's mask that does not fit properly, leaks in hose fittings and other parts of the delivery system, gas escaping from scavenging systems (designed to capture excess and exhaled gas), and when a post-operative patient exhales gas into the room. The hazards associated with exposure to anesthetic gases are listed below.

- **Nitrous Oxide** — Acute exposure by inhalation to high concentrations of nitrous oxide can cause damage to the central nervous system, depression, drowsiness, lightheadedness, confusion, hysteria, anesthesia, and unconsciousness. Chronic occupational exposure has been linked to neurologic problems, bone marrow depression, and kidney and liver disorders. Spontaneous abortions and fetal malformations linked to nitrous oxide exposure have been reported in dentists and their assistants. Skin and eye exposure with liquid nitrous oxide can cause frostbite.
- **Halogenated Anesthetic Gases** — These gases include halothane, enflurane, and isoflurane. Acute exposure to these gases can cause respiratory depression, muscle relaxation, and loss of consciousness. Waste anesthetic gases are considered chronic low-level health hazards. Suspected health effects include hepatic and renal diseases. Studies of healthcare workers have linked exposure to waste anesthetic gases with cancers, spontaneous abortions, fetal malformations, infertility, and sterility.

Compressed Gases

These gases are considered a physical hazard by the hazard communication standard and should be treated with care. Regardless of the chemical composition of the compressed gas, any cylinder or other container with pressurized contents presents a significant physical hazard if the gas is released uncontrollably. Read the label of the compressed gas cylinder to determine the contents and the possible health hazard it may present to you. Cylinders also present a hazard to ankles, feet, and toes when they are dropped or tipped over. Fasten all cylinders to a sturdy object with straps, chains, or other devices. All cylinders not being used should have a protective cap covering the cylinder valve. Also, some compressed gases can present a health hazard to you.

Mercury

Elemental Mercury or silver mercury is found in many types of medical care equipment, including thermometers, cantor tubes, coulter counters, and sphygmomanometers. Although most mercury-containing items are no longer used these days, some isolated locations may still be using them.

Mercury is an odorless chemical that generates vapors at room temperature. The main route of mercury exposure is the inhalation of mercury vapors. Skin contact and ingestion of elemental mercury should also be avoided. Short-term exposure to high levels of mercury can cause severe respiratory irritation, digestive disturbances, and renal damage. The health hazards associated with chronic exposure to relatively low levels of mercury vapor are significant and include central nervous systems effects, tremors, irritability, emotional instability, gingivitis, anorexia, and weight loss. Mercury is also nephrotoxic and can cause sensitization dermatitis. Take care to avoid exposure to mercury vapors and keep all areas free of mercury contamination.

Employees must be familiar with the proper clean up and disposal of mercury. Employees must be responsible for the cleanup of broken thermometers following the guidelines listed in the document. The amount of mercury in a thermometer is not enough to cause adverse health effects but must be properly cleaned up. Larger spills or releases of mercury, such as a blood-pressure manometer or a cantor tube are cleaned up by emergency responders. Upon recognition of a broken manometer or other large source of mercury, the

employee should relocate patient (if possible) and contact supervisor. Quick response and clean up by properly trained staff limits the exposure to mercury vapors and prevents lingering problems of contamination.

Isopropyl Alcohol

This is commonly used in medical applications as both an antiseptic and a disinfectant. In addition to being flammable, isopropyl alcohol can cause irritation to the eyes, nose, and throat. It can cause defatting of the skin, which leads to irritation, drying and cracking. Contact dermatitis has also been noted. Exposure to high concentrations has a narcotic effect with symptoms of drowsiness, headache, staggering, and unconsciousness.

Formaldehyde and Formalin Solutions

These solutions are used in some facilities to fix tissue samples. Formaldehyde is prepared in aqueous solutions ranging in concentration up to 37%. Formaldehyde is considered a carcinogen by OSHA, NTP, IARC, and ACGIH. A number of cancers have been associated with exposure to formaldehyde; however, the strongest associations found concern nasal and nasopharyngeal cancer. Chronic exposure has also been associated with lung cancer in humans.

Acute exposure to formaldehyde can cause severe irritation of the skin, throat, and nose. High levels can cause tissue damage and severe respiratory tract injury. Formaldehyde is a pulmonary sensitizer. Carefully handle specimen containers containing formaldehyde solutions. Wear proper protective equipment, including gloves and gas-proof goggles. Proper ventilation is required when there is a potential for exposure. In the event of a spill of a specimen container, soak up the spilled liquid with paper towels and place the debris in a sealed container for disposal as hazardous waste.

Prescription Drugs

Prescription drugs and other pharmaceutical agents in a liquid form can present an opportunity for chemical exposure. Prescription drugs in solid form can present a potential for exposure if the materials are cut, crushed, or powdered. The hazards to personnel vary based on the concentration of the active ingredient and the mode of entry. The SDS for these liquid chemical agents and those agents

that may be crushed or powdered must be made available in accordance with the hazard communication standard.

Pentamidine

Pentamidine is administered primarily in aerosol form to patients being treated for *Pneumocystis carinii* pneumonia. Acute irritation has been noted in staff members exposed to the aerosol. Staff members administering pentamidine should make efforts to minimize the release of aerosolized pentamidine and limit the amount of time spent in the room where the drug is administered. The chronic health effects and reproductive effects are unknown at this time, so take care to minimize exposure to the drug.

Ribavirin (Virazole)

This is another drug used in aerosol form in the clinical setting. Ribavirin is used to treat lower respiratory tract infections caused by respiratory syncytial virus (RSV). Ribavirin is aerosolized into a tent or hood containing the patient. Exposure occurs when staff are required to enter the tent and from passive leakage from the tent. Healthcare workers exposed to ribavirin have complained of severe headaches, eye irritation, coughing, and upper respiratory tract irritation. Lung irritation, wheezing, and shortness of breath have been noted in people with asthma. Ribavirin has also been found to be teratogenic and/or embryo lethal in studies on rodents. Currently there is no data on reproductive effects in humans. Pregnant employees or employees planning pregnancy should use the recommended procedures and personal protective equipment to limit exposure.

DEFINITIONS OF HAZARDS [T8 CCR §5194 (c)]

Physical Hazards

Combustible — Ignites at 100°F or above but below 200°F.

Compressed Gas — Gas under high pressure in a cylinder; there is a hazard of violent release if valve is broken off or cylinder is dropped.

Explosive — Ignites suddenly and violently.

Flammable — Ignites at temperature below 100°F.

Organic Peroxide — Explodes if shaken or shocked; some liquids, such as ether, form organic peroxides after long storage times if stored improperly. It has a chemical structure related to hydrogen peroxide.

Oxidizer — Gives off oxygen and will support combustion (Examples: sodium nitrate, sulfuric acid).

Pyrophoric — Catches fire in air without needing a source of ignition at a temperature of 130°F or below.

Unstable (Reactive) — May react in air or with other chemicals, causing explosion or heat.

Water Reactive — Reacts spontaneously in contact with water, giving off toxic or ignitable vapors or causing hazardous pressure increases.

Health Hazards

Carcinogen — Has been found to cause cancer in humans or in at least two experiments with animals.

Corrosive — Causes burns to human tissue on contact (Examples: sulfuric acid, lye, phenol).

Highly Toxic — Contact with a small amount of the chemical (1 teaspoon or less) may cause illness from a single exposure.

Irritant — Causes irritation of skin, eyes, or upper respiratory tract.

Sensitizer — May cause allergic reactions, such as skin rash, especially after repeated contact.

Target Organ Effects — Chemical causes harm to a certain organ or organs of the body.

Toxic — Causes illness, but need single contact with larger amount of the chemical than for "highly toxic" chemicals or repeated contacts with smaller amounts.

CHEMICAL INVENTORY

NAME OF CHEMICAL	MANUFACTURER AND ADDRESS	STORAGE LOCATION	HAS SDS BEEN RECEIVED? YES/NO	PPE REQUIRED FOR USE**

Add any chemicals whenever a new chemical is introduced in the workplace.

NAME OF PERSON COMPLETING INVENTORY: _____
DATE OF INVENTORY: _____/_____/_____

* If the SDS is not available, call the chemical supplier for a copy.
**List the PPE required for using the chemical in this column.

SAMPLE GHS SAFETY DATA SHEET

1. Identification of the Substance or the Mixture and of the supplier	**Product Name: Chemical Stuff** **Synonyms:** Methyltoxy Solution **CAS Number:** 000-00-0 **Product Use**: Organic Synthesis	**Manufacturer/Supplier:** My Company **Address:** My Street, Mytown, TX 00000 **General Information:** 713-000-0000 **Transportation Emergency Number: CHEMTREC: 800-424-9300**
2. Hazard Identification **Symbols**: flame, skull and crossbones, corrosion, health hazard 	Health Acute Toxicity – Category 2 (inhalation), Category 3 (oral/dermal) Eye Corrosion – Category 1 Skin Corrosion – Category 1 Skin Sensitization – Category 1 Mutagenicity – Category 2 Carcinogenicity – Category 1B Reproductive/Developmental – Category 2 Target Organ Toxicity (Repeated) – Category 2 ***Hazard Statements*** **DANGER!** Highly Flammable Liquid and Vapor. Fatal if inhaled. Causes severe skin burns and eye damage. May cause allergic skin reaction. Toxic if swallowed and in	Environmental Aquatic Toxicity – Acute 2 Physical Flammable Liquid – Category 2 ***Precautionary Statements*** Do not eat, drink or use tobacco when using this product. Do not breathe mist/vapors. Keep container tightly closed. Keep away from heat/sparks/open

	contact with skin May cause cancer. Suspected of damaging the unborn child.	flame. - No smoking. Wear respiratory protection, protective gloves and eye/face protection. Use only in a well-ventilated area. Take precautionary measures against static discharge. Use only non-sparking tools.
3. Composition/Information on Ingredients	**Component** Methyltoxy **CAS Number** 000-00-0 **(See Section 8 for Exposure Limits)**	**Weight %** 80
4. First Aid Measures	**Eye**: Eye irritation. Flush immediately with large amounts of water for at least 15 minutes. Eyelids should be held away from the eyeball to ensure thorough rinsing. Get immediate medical attention. **Skin**: Itching or burning of the skin. Immediately flush the skin with plenty of water while removing contaminated clothing and shoes. Get immediate medical attention. Wash contaminated clothing before reuse.	**Inhalation**: Nasal irritation, headache, dizziness, nausea, vomiting, heart palpitations, breathing difficulty, cyanosis, tremors, weakness, red flushing of face, irritability. Remove exposed person from source of exposure to fresh air. If not breathing, clear airway and start cardiopulmonary resuscitation (CPR). Avoid mouth-to-mouth resuscitation. **Ingestion**: Get immediate medical

		attention. Do not induce vomiting unless directed by medical personnel.
5. Fire Fighting Measures	**Suitable Extinguishing Media:** Use dry chemical, foam, or carbon dioxide to extinguish fire. Water may be ineffective but should be used to cool fire-exposed containers, structures and to protect personnel. Use water to dilute spills and to flush them away from sources of ignition. **Fire Fighting Procedures**: Do not flush down sewers or other drainage systems. Exposed firefighters must wear NIOSH-approved positive pressure self-contained breathing apparatus with full-face mask and full protective clothing.	**Unusual Fire and Explosion Hazards:** Dangerous when exposed to heat or flame. Will form flammable or explosive mixtures with air at room temperature. Vapor or gas may spread to distant ignition sources and flash back. Vapors or gas may accumulate in low areas. Runoff to sewer may cause fire or explosion hazard. Containers may explode in heat of fire. Vapors may concentrate in confined areas. Liquid will float and may reignite on the surface of water. **Combustion Products:** Irritating or toxic substances may be emitted upon thermal decomposition. Thermal decomposition products may include oxides of carbon and nitrogen.
6: Accidental Release Measures	Keep unnecessary people away; isolate hazard area and deny entry. Stay upwind; keep out of low areas. (Also see Section 8).	Do not flush to sewer or waterways. Prevent release to the environment if possible. Refer to Section 15 for spill/release reporting

	Vapor protective clothing should be worn for spills and leaks. Shut off ignition sources; no flares, smoking or flames in hazard area. Small spills: Take up with sand or other noncombustible absorbent material and place into containers for later disposal. Large spills: Dike far ahead of liquid spill for later disposal.	information.
7. Handling and Storage	**Handling** Do not get in eyes, on skin or on clothing. Do not breathe vapors or mists. Keep container closed. Use only with adequate ventilation. Use good personal hygiene practices. Wash hands before eating, drinking, smoking. Remove contaminated clothing and clean before re-use. Destroy contaminated belts and shoes and other items that cannot be decontaminated. Keep away from heat and flame. Keep operating temperatures below ignition temperatures at all times. Use non-sparking tools.	**Storage** Store in tightly closed containers in cool, dry, well-ventilated area away from heat, sources of ignition and incompatibles. Ground lines and equipment used during transfer to reduce the possibility of static spark-initiated fire or explosion. Store at ambient or lower temperature. Store out of direct sunlight. Keep containers tightly closed and upright when not in use. Protect against physical damage. Empty containers may contain toxic, flammable and explosive residue or vapors. Do not cut, grind, drill, or weld on or near containers unless precautions are taken against these hazards.
8. Exposure Controls / Personal Protection	**Exposure Limits** **Component, Methyltoxy -TWA**: 3 ppm (skin)	**Respiratory Protection:** If exposure limits are exceeded,

	STEL: C 15 ppm (15 min.) **Engineering Controls**: Local exhaust ventilation may be necessary to control air contaminants to their exposure limits. The use of local ventilation is recommended to control emissions near the source. Provide mechanical ventilation for confined spaces. Use explosion-proof ventilation equipment. **Personal Protective Equipment (PPE)** **Eye Protection**: Wear chemical safety goggles and face shield. Have eye-wash stations available where eye contact can occur. **Skin Protection**: Avoid skin contact. Wear gloves impervious to conditions of use. Additional protection may be necessary to prevent skin contact including use of apron, face shield, boots or full body protection. A safety shower should be located in the work area. Recommended protective materials include: Butyl rubber and for limited contact Teflon.	NIOSH approved respiratory protection should be worn. A NIOSH approved respirator for organic vapors is generally acceptable for concentrations up to 10 times the PEL. For higher concentrations, unknown concentrations and for oxygen deficient atmospheres, use a NIOSH approved air-supplied respirator. Engineering controls are the preferred means for controlling chemical exposures. Respiratory protection may be needed for non-routine or emergency situations. Respiratory protection must be provided in accordance with OSHA 29 CFR 1910.134.
9. Physical and Chemical Properties	**Flashpoint**: 2°C (35°F) **Autoignition Temperature**: 480°C (896°F) **Boiling Point**: 77°C (170.6°F) @ 760 mm Hg **Melting Point**: -82°C **Vapor Pressure**: 100.0 mm Hg @ 23°C **Vapor Density(Air=1)**: 1.7; air = 1 **% Solubility in Water**: 10 @ 20°C **Pour Point**: NA **Molecular Formula**: Mixture **Odor/Appearance**: Clear, colorless liquid with mild, pungent odor.	**Lower Flammability Limit**: >3.00% **Upper Flammability Limit**: <15.00% **Specific Gravity**: 0.82g/ml @ 20°C **% Volatile**: 100 **Evaporation Rate (Water=1)**: 5(Butyl Acetate =1) **Viscosity**: 0.3 cP @ 25°C **Octanol/Water Partition Coefficient**: log K_{ow}: 0.5

		pH: 7, 8% aqueous solution **Molecular Weight: Mixture**
10. Stability and Reactivity	**Stability/Incompatibility:** Incompatible with ammonia, amines, bromine, strong bases and strong acids.	**Hazardous Reactions/Decomposition Products:** Thermal decomposition products may include oxides of carbon and nitrogen.
11. Toxicological Information	**Signs and Symptoms of Overexposure:** Eye and nasal irritation, headache, dizziness, nausea, vomiting, heart palpitations, difficulty breathing, cyanosis, tremors, weakness, itching or burning of the skin. **Acute Effects:** **Eye Contact:** may cause severe conjunctival irritation and corneal damage. **Skin Contact:** may cause reddening, blistering or burns with permanent damage. Harmful if absorbed through the skin. May cause allergic skin reaction. **Inhalation:** may cause severe irritation with possible lung damage (pulmonary edema). **Ingestion:** may cause severe gastrointestinal burns. **Target Organ Effects:** May cause gastrointestinal (oral), respiratory tract, nervous system and blood effects based on experimental animal data. May cause cardiovascular system and liver effects.	**Chronic Effects:** based on experimental animal data, may cause changes to genetic material; adverse effects on the developing fetus or on reproduction at doses that were toxic to the mother. Methyltoxy is classified by IARC as group 2B and by NTP as reasonably anticipated to be a human carcinogen. OSHA regulates Methyltoxy as a potential carcinogen. **Medical Conditions Aggravated by Exposure:** preexisting diseases of the respiratory tract, nervous system, cardiovascular system, liver or gastrointestinal tract. **Acute Toxicity Values** Oral LD_{50} (Rat) = 100 mg/kg Dermal LD_{50} (Rabbit) = 225-300 mg/kg Inhalation LC_{50} (Rat) =

		200 ppm/4 hr., 1100 ppm vapor/1 hr
12. Ecological Information	LC_{50} (Fathead Minnows) = 9 mg/L/96 hr. EC_{50} (Daphnia) = 8.6 mg/L/48 hr. Bioaccumulation is not expected to be significant. This product is readily biodegradable.	
13. Disposal Considerations	As sold, this product, when discarded or disposed of, is a hazardous waste according to Federal regulations (40 CFR 261). It is listed as Hazardous Waste Number Z000, listed due to its toxicity. The transportation, storage, treatment and disposal of this waste material must be conducted in compliance with 40 CFR 262, 263, 264, 268 and 270.	Disposal can occur only in properly permitted facilities. Refer to state and local requirements for any additional requirements, as these may be different from Federal laws and regulations. Chemical additions, processing or otherwise altering this material may make waste management information presented in the SDS incomplete, inaccurate or otherwise inappropriate.
14. Transport Information	**U.S. Department of Transportation (DOT)** **Proper Shipping Name:** Methyltoxy **Hazard Class:** 3, 6.1 **UN/NA Number:** UN0000 **Packing Group:** PG 2 **Labels Required:** Flammable Liquid and Toxic	**International Maritime Organization (IMDG)** **Proper Shipping Name:** Methyltoxy **Hazard Class:** 3 Subsidiary 6.1 **UN/NA Number:** UN0000 **Packing Group:** PG 2 **Labels Required:** Flammable Liquid and Toxic
15. Regulatory Information	**U.S. Federal Regulations** **Comprehensive Environmental Response and Liability Act of 1980**	**International Regulations**

	(CERCLA): The reportable quantity (RQ) for this material is 1000 pounds. If appropriate, immediately report to the National Response Center (800/424-8802) as required by U.S. Federal Law. Also contact appropriate state and local regulatory agencies. **Toxic Substances Control Act (TSCA):** All components of this product are included on the TSCA inventory. **Clean Water Act (CWA):** Methyltoxy is a hazardous substance under the Clean Water Act. Consult Federal, State and local regulations for specific requirements. **Clean Air Act (CAA):** Methyltoxy is a hazardous substance under the Clean Air Act. Consult Federal, State and local regulations for specific requirements. **Superfund Amendments and Reauthorization Act (SARA) Title III Information:** **SARA Section 311/312 (40 CFR 370) Hazard Categories:** Immediate Hazard: X Delayed Hazard: X Fire Hazard: X Pressure Hazard: Reactivity Hazard: **This product contains the following toxic chemical(s) subject to reporting requirements of SARA Section 313 (40 CFR 372)** **Component CAS Number Maximum %** Methyltoxy 000-00-0 80 **State Regulations**	**Canadian Environmental Protection Act:** All of the components of this product are included on the Canadian Domestic Substances list (DSL). **Canadian Workplace Hazardous Materials Information System (WHMIS):** Class B-2 Flammable Liquid Class D-1-B Toxic Class D-2-A Carcinogen Class D-2-B Chronic Toxin Class E Corrosive This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations. **European Inventory of Existing Chemicals (EINECS):** All of the components of this product are included on EINECS. **EU Classification**: F Highly Flammable; T Toxic; N Dangerous to the Environment **EU Risk (R) and Safety (S) Phrases**: R11: Highly flammable. R23/24/25: Toxic by inhalation, in contact

	California: This product contains the following chemicals(s) known to the State of California to cause cancer, birth defects or reproductive harm: **Component** Methyltoxy **CAS** Number 000-00-0 **Maximum%** 80	with skin and if swallowed. R37/38: Irritating to respiratory system and skin. R41: Risk of serious damage to eyes. R43: May cause sensitization by skin contact. R45: May cause cancer. R51/53: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. S53: Avoid exposure - obtain special instructions before use. S16: Keep away from sources of ignition - No Smoking. S45: In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). S9: Keep container in a well-ventilated place. S36/37: Wear suitable protective clothing and gloves. S57: Use appropriate container to avoid environmental contamination.
16. Other Information	**National Fire Protection Association (NFPA) Ratings:** This information is intended solely for the use of individuals trained in the NFPA system. **Health: 3** **Flammability: 3** **Reactivity: 0**	**Revision Indicator**: New SDS **Disclaimer:** The information contained herein is accurate to the best of our knowledge. My Company makes no warranty of any kind,

		express or implied, concerning the safe use of this material in your process or in combination with other substances.

Training Requirements for GHS Labels and SDS

It is important as stated earlier in this chapter that employees become familiar with the different chemicals and the hazards they pose in the workplace. Employees must have sufficient knowledge of the signal words and the pictograms of these chemicals. Reviewing the GHS labels and the Safety Data Sheets of the chemicals at the workplace during the training will provide information on the physical and health hazards, hazard and precautionary statements, first aid measures, PPE needed to protect themselves while handling the chemicals and chemical disposal instructions.

Globally Harmonized System (GHS)

OSHA has provided compliance dates for the revised HCS under GHS. During the phase-in period, employers would be required to be in compliance with either the existing HCS or the revised HCS, or both. OSHA recognizes that hazard communication programs will go through a period of time where labels and SDSs under both standards will be present in the workplace. This will be considered acceptable, and employers are not required to maintain two sets of labels and SDSs for compliance purposes.

The table below summarizes the phase in dates required under the revised HCS:

Effective Completion Date	Requirement(s)	Who
December 1, 2013	Train employees on the new label elements and safety data sheet (SDS) format.	Employers

Effective Completion Date	Requirement(s)	Who
June 1, 2015* December 1, 2015	Compliance with all modified provisions of this final rule, except: The Distributor shall not ship containers labeled by the chemical manufacturer or importer unless it is a GHS label	Chemical manufacturers, importers, distributors and employers
June 1, 2016	Update alternative workplace labeling and hazard communication program as necessary, and provide additional employee training for newly identified physical or health hazards.	Employers
Transition Period to the effective completion dates noted above	May comply with either 29 CFR 1910.1200 (the final standard), or the current standard, or both	Chemical manufacturers, importers, distributors, and employers

OSHA expects that the modifications to the Hazard Communication Standard (HCS) will result in increased safety and health for the affected employees and reduce the numbers of accidents, fatalities, injuries, and illnesses associated with exposures to hazardous chemicals. The GHS revisions to the HCS standard for labeling and safety data sheets would enable employees exposed to workplace chemicals to more quickly obtain and to more easily understand information about the hazards associated with those chemicals. In addition, the revisions to HCS are expected to improve the use of appropriate exposure controls and work practices that can reduce the safety and health risks associated with exposure to hazardous chemicals.

OSHA estimates that the revised HCS will result in the prevention of 43 fatalities and 585 injuries and illnesses (318 non-lost-workday injuries and illnesses, 203 lost-workday injuries and illnesses, and 64 chronic illnesses) annually. The monetized value of this reduction in occupational risks is an estimated $250 million a year on an annualized basis.

OSHA believes that the revised HCS will result in savings of $475.2 million from productivity improvements for health and safety managers and logistics personnel, $32.2 million during periodic updating of SDSs and labels, and $285.3 million from simplified hazard communication training.

OSHA anticipates that, in addition to safety and health benefits, the revised HCS will result in several types of productivity benefits: (1) for chemical manufacturers, because they will need to produce fewer SDSs in future years; (2) for employers, in providing training to new employees as required by the existing OSHA HCS through the improved consistency of the labels and SDSs. (3) for firms engaging in, or considering engaging in, international trade.

Resources

1. 'Hazard Communication,' Code of California Regulations, Title 8, Section 5194, California Department of Industrial Relations.
2. Guide to the California Hazard Communication Regulation, Department of Industrial Relations, Cal/OSHA Consultation Service Research and Education Unit.
3. Hazard Communication Guidelines for OSHA Compliance. OSHA Publication, OSHA-3111.
4. Material Safety Data Sheet, Information Regarding MSDS Form. OSHA Publication, OSHA -174.
5. Chemical Hazard Communication, OSHA Publication. OSHA -3084, 1998.
6. Material Safety Data Sheet (MSDS), Information Regarding the MSDS Form. OSHA 174.
7. Highly Hazardous Chemicals Fact Sheet, OSHA Document.
8. Hospital eTool-Healthcare Wide Hazards-Hazardous Chemicals.

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Chapter 8: Exposure to Tuberculosis

The following health-care settings are required to have a written TB control program:

- Health-care settings where patients with confirmed or suspect TB are treated or to which they are transported.
- Health-care settings within correctional institutions.
- Long-term care settings for the elderly.
- Homeless shelters.
- Drug treatment centers.

Other health-care settings (e.g. emergency medical services, hospices) may require TB control programs based on the assessment of risk factors such as:

- the number of patients with suspected or diagnosed TB disease encountered in the last 5 years;
- the community TB disease profile; and
- the prevalence of other risk factors in the patient population. It is recommended that a risk assessment be performed on a scheduled basis.

Any violations identified will be cited under the following California Code of Regulations:

§332.2 Issuance of Special Order
§3203 Injury and Illness Prevention Program
§5141 Control of Harmful Exposure to Employees
§5143 General Requirements of Mechanical Ventilation Systems
§5144 Respiratory Protection
14300.11 Recording Criteria under Recordkeeping Requirements

Introduction

Nearly one third of the world's population is infected with tuberculosis (TB), and it kills almost three million people per year. However, in the United States, through a broad range of federal and community initiatives, including the Centers for Disease Control and Prevention (CDC) 1994 publication *Guidelines for Preventing the Transmission of Mycobacterium Tuberculosis in Health Care Facilities*, national TB rates have declined steadily over the past decade. The number of reported TB cases and the national TB case rate are now at their lowest levels since TB reporting began in 1953. Neither OSHA nor Cal/OSHA has a tuberculosis standard. In 2003, OSHA withdrew its proposed standards on Occupational Exposure to TB because of the steady decline in the rate of TB since 1993 and substantial compliance by healthcare facilities with CDC guidelines.

TB rise can be attributed to multiple factors, such as:

- homelessness,
- intravenous drug use,
- overcrowding in institutional settings,
- HIV infection,
- drug-resistant strains of TB,
- reduced TB control and resources, and
- immigration from high TB prevalence areas.

Causes of Tuberculosis

The organism that causes TB — *Mycobacterium tuberculosis* — is carried in airborne particles, called "droplet nuclei," that can be generated when a person with pulmonary or laryngeal TB sneezes, coughs, speaks, or sings. For persons with extra pulmonary TB, droplet nuclei can be formed when aerosolizing procedures are done, such as jet water picking of an abscess infected with *M. tuberculosis*. The droplet nuclei are so small (1-5 microns) that normal air currents keep them airborne and can spread them throughout a building.

Additional hazard is now present because of multidrug-resistant (MDR) TB. MDR organisms are resistant to the drugs normally used to treat TB, such as Isoniazid and Rifampin. The course of treatment when treating MDR TB increases from six

months to 18 to 24 months, and the cure rate decreases from nearly 100% to less than 60%. Mortality among patients with MDR-TB can be high.

In response to the rising trend of TB in the United States, the Occupational Safety and Health Administration (OSHA) implemented nationwide enforcement procedures aimed at controlling the transmission of TB in certain work settings, including healthcare settings. These enforcement regulations, based on the Centers for Disease Control's recommendations in *Guidelines for Preventing the Transmission of Mycobacterium tuberculosis in Health Care Facilities,* were intended as an interim measure while OSHA continued its effort at developing a permanent standard.

In general, the CDC guidelines emphasize the importance of a hierarchy of control measures ranked in priority as:

1. Administrative Controls §5141(b)
2. Engineering Controls §5141(a)
3. Personal Respiratory Protection §5141(c)

Healthcare facilities must develop a written TB exposure control plan based on a risk assessment of TB among patients and healthcare workers in each facility. Early identification and management of persons with TB, a purified protein derivative (PPD) skin testing program, and healthcare worker education are essential components of the plan.

According to Cal/OSHA, effective TB exposure control is a multi-step procedure involving the following general public and occupational health principles:

- Assessment of the degree of risk of TB transmission in the work environment.
- Screening for the presence of TB infection and early recognition of TB symptoms utilizing procedures such as PPD skin tests, chest x-rays, and sputum examinations followed by prompt medical evaluation.
- Antibiotic treatment of confirmed TB cases and in some instances, suspect TB cases.
- Where appropriate, preventive therapy for people determined to be TB-infected but without active TB.

- Use of specialized work practices.
- Design and implementation of appropriate engineering controls to remove or isolate TB-contaminated air, or to reduce the concentration of TB droplet nuclei.
- Use of appropriate respiratory protective equipment.

Employee Safety

The CDC's guidelines recommend that all healthcare workers should receive a baseline TB screening upon hire using the two-step tuberculin skin test (TST) or a single blood assay for M tuberculosis (BAMT) to test for infection. Thus, safety coordinators should create a standard TB screening procedure for new hires. Include this documentation in the employee medical record. Additional screenings in low-risk settings are not necessary thereafter, unless there is a known exposure to a patient with M tuberculosis. If the new hire receives a positive TB baseline result, the CDC suggests a chest radiograph to exclude TB disease. Antibiotics may be prescribed to prevent a latent tuberculosis infection (LTBI) from becoming active.

Tuberculin Skin Test (TST)

The TST is used to determine whether a person has a TB infection. The TST is performed by injecting 0.1 mL of tuberculin **purified protein derivative (PPD)** between the layers of the skin on the forearm. TST is an alternative name for PPD. The employee's arm is examined 48 to 72 hours after this injection by the medical provider. The reaction is measured in millimeters of the induration that includes the palpable, raised, hardened area or swelling. Redness is not measured. The diameter of the indurated area is measured and the reaction is interpreted.

CDC recommends a "two-step" testing for any person receiving a PPD for the first time, or receiving a PPD test more than one year after the most recent previous PPD. CDC recommendations for PPD test frequency vary according to the type of employee and the exposure potential associated with the activities of the employee. In general, all employees in increased-risk environments must receive PPD testing at least annually. In the healthcare industry, where exposure potential

is particularly high, the required testing frequency can be more frequent, depending upon the degree of risk of transmission of TB in the specific workplace for the category of work being performed.

Containment of TB Infection

Cal/OSHA recommended measures for containment of TB are as follows:

- Prompt medical evaluation of persons with symptoms suggestive of TB.
- Atmospheric isolation (or reasonably prompt referral to a facility which can provide atmospheric isolation) of patients or clients known or suspected to have infectious TB.

NOTE: Atmospheric isolation means that the patient is kept in a room or other containment which has negative pressure and dilution ventilation or HEPA scrubbing of the air at a rate of at least 12 air changes per hour. Usually, isolation rooms used for this purpose have a toilet and bathing facilities, and an anteroom which aids in maintaining the constancy of negative pressure.

- Use of effective local exhaust ventilation in connection with high-risk procedures. These procedures include:
    - aerosolized pentamidine administration on any patient, or
    - any of the following if performed on a suspect or confirmed infectious TB case:
        - sputum induction;
        - bronchoscopy;
        - tissue handling procedures such as specimen processing and autopsy;
        - operative procedures such as tracheotomy, thoracotomy and aspiration and excision biopsy;
        - respiratory care procedures such as intubation, suctioning, and tracheostomy and endotracheal tube care; and
        - other aerosol treatments, cough-inducing procedures or aerosol-generating procedures.
- Use of respiratory protection to prevent employee exposure to TB bacilli must be used in the following situations:
    - when entering an isolation room;

- when in the presence of an unmasked suspect or confirmed TB case;
- when transporting a suspect or confirmed case in an enclosed vehicle; and
- when in the presence of high-risk procedures.

EXCEPTION: Where the procedure is performed by isolating the patient in an enclosed booth or room, respiratory protection is not required.

Fundamentals of Infection Control

Administrative Controls: reduce risk of exposure via effective infection- control program.
Engineering Controls: prevent spread and reduce concentration of droplet nuclei.
Respiratory Protection Controls: further reduce risk of exposure in special areas and circumstances.

Administrative Controls

- Test and evaluate healthcare workers at risk for TB or for exposure to *M.* Tuberculosis.
- Train healthcare workers about TB infection control.
- Ensure proper cleaning of equipment.
- Use appropriate signage advising cough etiquette and respiratory hygiene.

Accident Prevention Signs and Tags [T8 CCR §3341]

- Warning must be posted outside the respiratory isolation or treatment room or a message referring one to the nursing station for instruction may be posted.
- A signal word or biological hazard symbol may be presented as well as a major message.
- Employers are also required to use biological hazard tags on air transport components that identify TB hazards to employees associated with working on air systems that transport contaminated air.

According to this standard, a warning must be posted outside the respiratory isolation or treatment room. The standard requires that a signal word (i.e., STOP,

HALT, or NO ADMITTANCE) or biological hazard symbol be presented as well as a major message (e.g., "special respiratory isolation," "respiratory isolation," or "AFB isolation"). A description of the necessary precautions (e.g., respirators must be donned before entering) should be included. Respiratory isolation rooms in an emergency department or a message referring one to the nursing station for instruction must also be posted.

Under this subsection, an employer is citable if an employer fails to mask an infectious TB case when the patient is brought outside of an area of atmospheric isolation.

Engineering Controls

Engineering controls are the second line of defense in the TB infection-control program, after administrative controls. Engineering controls include technologies for the removal or inactivation of airborne *M. tuberculosis*. These technologies include local exhaust ventilation, general ventilation, HEPA filtration, and ultraviolet germicidal irradiation (UVGI). These controls help to prevent the spread and reduce the concentration of infectious droplet nuclei in the air.

- Control source of infection by using local exhaust ventilation (e.g., good, tents, or booths).
- Dilute and remove contaminated air by general ventilation.
- Control air flow (clean air to less clean air) to areas adjacent to the source by using high efficient particulate air (HEPA) filtration.

Under this section, an employer would be citable if he or she fails to implement engineering controls in the form of local exhaust ventilation for high-risk procedures on infectious TB cases or atmospheric isolation for infectious TB cases.

Respiratory Protection (RP) Controls

The first two levels of the infection-control hierarchy, administrative and engineering controls minimize the number of areas in which exposure to *M. tuberculosis* might occur. In addition, these administrative and engineering controls also reduce, but do not eliminate, the risk in the few areas in which

exposures can still occur (e.g., all rooms and rooms where cough-inducing or aerosol-generating procedures are performed). Because persons entering these areas might be exposed to airborne *M. tuberculosis*, the third level of the hierarchy is the use of respiratory protective equipment in situations that pose a high risk for exposure.

Respiratory-Protection Program

Cal/OSHA requires health-care settings in which healthcare workers (HCWs) use respiratory protection to develop, implement, and maintain a respiratory-protection program. All HCWs who use respiratory protection should be included in the program.

The program elements must include:

- selection
- medical evaluation
- fit testing
- use
- maintenance and care
- breathing air quality and use
- training
- program evaluation

General Recommendations

In situations that require respiratory protection, the minimum respiratory protection device is a filtering face piece (nonpowered, air-purifying, half-face piece) respirator (e.g., an N95 disposable respirator). This CDC/NIOSH-certified respirator meets the minimum filtration performance for respiratory protection in areas in which patients with suspected or confirmed TB disease might be encountered. For situations in which the risk for exposure to *M. tuberculosis* is especially high because of cough-inducing and aerosol-generating procedures, more protective respirators might be needed.

N95 Respirator

Respiratory Protection Standard

Respiratory protection (HEPA or respirators certified under 42 CFR Part 84 Subpart K) for employees exposed to TB is required under the following circumstances:

- when workers enter rooms housing individuals with suspected or confirmed infectious TB;
- when workers are present during the performance of high-hazard procedures on individuals who have inspected or confirmed infectious TB; and
- when emergency-medical-response personnel or others transport, in a closed vehicle, an individual with suspected or confirmed infectious TB.

Under the new respirator certification and testing guidelines issued by the National Institute of Occupational Safety and Health (NIOSH), several new categories of particulate respirators are now available on the market. These include the Type 100, the Type 99, and the Type 95. According to the NIOSH certification document, all three classes of these respirators are acceptable for use during workplace tuberculosis exposure. The Type 95 is regarded as the minimally acceptable level of respiratory protection. Cal/OSHA will accept the use of the high efficiency particulate air (HEPA) respirator or any of these newly certified respirator classes.

Reuse of disposable respirators is allowed provided the integrity of the mask has not been compromised. On fit checking and fit testing, OSHA and Cal/OSHA standards require that each worker assigned to wear a respirator must receive either a qualitative or quantitative fit test. Once assigned a respirator, each employee must perform a fit check of the mask every time the respirator is put on. The purpose of the fit check is to assure that the respirator is properly situated on the face and is providing a face to respirator seal comparable to when the mask was fit tested.

Steps to Develop an Infection-Control (IC) Program

- Perform TB risk assessments in all settings.
- Base Infection Control program on risk assessments.

- Determine details of IC program by likelihood that persons with TB will be encountered in that setting or transferred to another setting.

TB Risk Classifications

Low risk: Person with TB exposure not likely to be encountered; exposure unlikely.
Medium risk: Healthcare workers might be exposed to persons with TB disease.
Potential ongoing transmission: Evidence of person-to-person transmission of *M. Tuberculosis.*

TB Screening Procedures for Settings or Healthcare Workers (HCWs)

Classified as Low Risk

- All HCWs should receive baseline TB screening upon hire, using two-step TST or a single **Blood Assay for Mycobacterium Tuberculosis** (BAMT) to test for infection with *M. tuberculosis*.
- After baseline testing for infection with *M. tuberculosis*, additional TB screening is not necessary unless an exposure to *M. tuberculosis* occurs.
- HCWs with a baseline positive or newly positive test result for *M. tuberculosis* infection (i.e., TST or BAMT) or documentation of treatment for LTBI or TB disease should receive one chest radiograph result to exclude TB disease (or an interpretable copy within a reasonable time frame, such as six months). Repeat radiographs are not needed unless symptoms or signs of TB disease develop or unless recommended by a clinician (Targeted tuberculin testing, 2000; Food and Drug Administration, 1983).

TB Screening Procedures for Settings or Healthcare Workers (HCWs) Classified as Medium Risk

- All HCWs should receive baseline TB screening upon hire, using two-step TST or a single BAMT to test for infection with *M. tuberculosis*.
- After baseline testing for infection with *M. tuberculosis*, HCWs should receive TB screening annually (i.e., symptom screen for all HCWs and

testing for infection with *M. tuberculosis* for HCWs with baseline negative test results).

- HCWs with a baseline positive or newly positive test result for *M. tuberculosis* infection or documentation of previous treatment for LTBI or TB disease should receive one chest radiograph result to exclude TB disease. Instead of participating in serial testing, HCWs should receive a symptom screen annually. This screen should be accomplished by educating the HCW about symptoms of TB disease and instructing the HCW to report any such symptoms immediately to the occupational health unit. Treatment for LTBI should be considered in accordance with CDC guidelines (Targeted tuberculin testing, 2000).

TB Screening Procedures for Settings (or HCWs) Classified as Potential Ongoing Transmission

- Testing for infection with *M. tuberculosis* might need to be performed every eight to 10 weeks until lapses in infection control have been corrected and no additional evidence of ongoing transmission is apparent.
- The classification of potential ongoing transmission should be used as a temporary classification only. It warrants immediate investigation and corrective steps. After a determination that ongoing transmission has ceased, the setting should be reclassified as medium risk. Maintaining the classification of medium risk for at least one year is recommended.

TB Training and Education

All settings should conduct an annual evaluation of the need for follow-up training and education for HCWs based on the number of untrained and new HCWs, changes in the organization and services of the setting, and availability of new TB infection-control information.

If a potential or known exposure to *M. tuberculosis* occurs in the setting, prevention and control measures should include retraining HCWs in the infection-control procedures established to prevent the recurrence of exposure. If a potential or known exposure results in a newly recognized positive TST or BAMT result, test conversion, or diagnosis of TB disease, education should include information on 1) transmission of *M. tuberculosis*, 2) noninfectiousness

of HCWs with latent tuberculosis infection (LTBI), and 3) potential infectiousness of HCWs with TB disease.

Access to Employee Medical and Exposure Records

- A record concerning employee exposure to TB is an employee exposure record.
- A record of TB skin test results and medical evaluations and treatment are employee medical records. Where known, the workers exposure record should contain a notation of the type of TB to which the employee was exposed (e.g., multidrug-resistant TB).

Recordkeeping

For OSHA Form 300 recordkeeping purposes, both tuberculosis infections (positive TB skin test) and tuberculosis disease are recordable in the high-risk setting. A positive skin test for tuberculosis, even on initial testing (except pre-assignment screening) is recordable on the OSHA 300 log because there is a presumption of work-relatedness in these settings unless there is clear documentation that an outside exposure occurred.

- If the employee's tuberculosis infection, which was entered on the OSHA 300 log, progresses to tuberculosis disease during the five-year maintenance period, the original entry for the infection must be updated to reflect the new information. Because it is difficult to determine if tuberculosis disease resulted from the source indicated by the skin test conversion or from subsequent exposures, only one case should be entered to avoid double counting.
- A positive TB skin test provided within two weeks of employment does not have to be recorded on the OSHA 300 forms. However, the initial test must be performed prior to any potential workplace exposure within the initial two weeks of employment.

Resources

1. Interim Tuberculosis Control Enforcement Guidelines, Division of Occupational Safety and Health Policies and Procedures Manual, Cal/OSHA, P & P C-47, 12/1/1992.
2. Center for Disease Control. "Guidelines for Preventing the Transmission of *Mycobacterium tuberculosis* in Health Care Facilities." 2005.
3. Washington State Department of Labor & Industries, Division of Occupational Safety and Health, Respirators, 296-842 WAC.
4. OSHA's Overview of Enforcement for Occupational Exposure to Tuberculosis: OSHA Training Guidelines for TB.

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Chapter 9: Hazardous Drug Exposure in Healthcare

No standards exist. Can be cited under Special Order.

Healthcare workers who prepare or administer hazardous drugs (e.g., those used for cancer therapy and some antiviral drugs, hormone agents, and bioengineered drugs) or who work in areas where these drugs are used may be exposed to these agents in the workplace. About 5.5 million U.S. healthcare workers are potentially exposed to hazardous drugs, including pharmacy and nursing personnel, physicians, environmental services workers, workers in research laboratories, veterinary care workers, and shipping and receiving personnel.

Antineoplastic cytotoxic medications, anesthetic agents, anti-viral agents, and others have been identified as hazardous.

It seems counterintuitive that the healthcare industry, whose mission is the care of the sick, is itself a high-hazard industry for the workers it employs. In fact, published studies have shown that workplace exposures to hazardous drugs can cause both acute and chronic health effects, such as skin rashes, adverse reproductive outcomes (including infertility, spontaneous abortions, and congenital malformations), and possibly leukemia and other cancers. The health risk depends on how much exposure a worker has to these drugs and how toxic they are. Workers can be protected from exposures to hazardous drugs through engineering and administrative controls and proper protective equipment.

Healthcare workers who handle, prepare, or administer hazardous drugs may face risks to their own health, such as skin rashes, cancer, and reproductive disorders. NIOSH recommends that employers establish a medical surveillance program to protect workers who handle hazardous drugs in the workplace.

These workers include pharmacists and pharmacy technicians, nursing personnel, physicians, operating room personnel, shipping and receiving personnel, waste handlers, maintenance workers, and workers in veterinary practices. Workers may be exposed to hazardous drugs when they create aerosols, generate dust, clean up spills, or touch contaminated surfaces when preparing, administering, or disposing of hazardous drugs (NIOSH 2004).

Many hazardous drugs are used to treat illnesses such as cancer or HIV infection. For the patients, the potential benefits of hazardous drugs outweigh the possible negative side effects. However, exposed healthcare workers risk the same side effects with no positive benefit. Workers exposed to hazardous drugs have developed skin rashes, adverse reproductive effects, and possibly leukemia and other cancers. For example, nurses and pharmacists who were exposed to hazardous drugs at their worksite reported an increase in adverse reproductive events, including spontaneous abortions, stillbirths, and congenital malformations, as compared to unexposed healthcare workers (NIOSH 2004).

Exposure to hazardous drugs may occur through inhalation, skin contact, skin absorption, ingestion, or injection. Inhalation or skin contact and absorption are the most likely ways a worker may be exposed to hazardous drugs. However, ingestion (from hand to mouth) or injection through a needlestick or sharps injury is possible.

Medical Surveillance

A comprehensive approach to minimizing worker exposure should be used as part of a safety and health program that includes engineering controls, good work practices, and personal protective equipment (PPE) supported by a medical surveillance program. Medical surveillance involves collecting and interpreting data to detect changes in the health status of working populations potentially exposed to hazardous substances. The elements of a medical surveillance program are used to establish a baseline of workers' health and then monitoring their future health as it relates to their potential exposure to hazardous agents.

Employers should ensure that healthcare workers who are exposed to hazardous drugs are routinely monitored as part of a medical surveillance program (ASHP 2006; OSHA 1999). This includes workers who directly handle hazardous drugs, such as nurses, pharmacists, and pharmacy technicians. In addition, other workers (e.g., nurses' aides, laundry workers) who may come directly into contact with patient wastes within 48 hours after a patient has received a hazardous drug should be included in a medical surveillance program.

Elements of a Medical Surveillance Program

The elements of a medical surveillance program for hazardous drugs should include (at a minimum):

- reproductive and general health questionnaires completed at the time of hire and periodically thereafter;
- laboratory work, including complete blood count and urinalysis completed at the time of hire and periodically thereafter (additional tests, such as liver function and transaminase tests, may be considered);
- physical examination completed at the time of hire and then as needed for any worker whose health questionnaire or blood work indicates an abnormal finding; and
- follow up for those workers who have shown health changes or have had a significant exposure (substantial skin contact, cleaning a large spill [a broken bag, leaking IV line], etc.).

Periodic health questionnaires and laboratory results should be looked at for trends that may be a sign of health changes because of exposure to hazardous drugs. If health changes are found, there are several actions the employer should take.

Evaluate current protective measures, including:

- Engineering controls (biological safety cabinets/isolators, ventilation, closed-system transfer devices, and closed IV systems).
    - Compare performance of controls with recommended standards.
    - Conduct environmental sampling when analytical methods are available.
    - Policies for the use of PPE and employee compliance with PPE use and policies.
- Availability of appropriate PPE, such as double gloves, non-permeable gowns, and respiratory protection.
    - Develop plan of action that will prevent further employee exposure.
    - Ensure confidential notification of any adverse health effect to an exposed worker and offer alternative duty or temporary reassignment.

- Provide ongoing medical surveillance of all workers at risk to determine whether the new plan is effective.

Steps for Healthcare Workers to Take to Protect Themselves from Hazardous Drugs

- Read all information and safety data sheets (SDSs) your employer provides to you for the hazardous drugs you handle.
- Participate in any training your employer provides on the hazards of the drugs you handle and the equipment and procedures you should use to prevent exposure.
- Be familiar with and able to recognize sources of exposure to hazardous drugs. Sources of exposure include:
  - all procedures involving hazardous drugs, including preparation, administration, and cleaning; and
  - all materials that come into contact with hazardous drugs, including work surfaces, equipment, personal protective equipment, IV bags and tubing, patient waste, and soiled linens.
- Prepare hazardous drugs in an area that is devoted to that purpose alone and is restricted to authorized personnel.
- Prepare hazardous drugs inside a ventilated cabinet designed to protect workers and others from exposure and to protect all drugs that require sterile handling.
- Use two pairs of powder-free, disposable chemotherapy gloves, with the outer one covering the gown cuff whenever there is risk of exposure to hazardous drugs.
- Avoid skin contact by using a disposable gown made of polyethylene-coated polypropylene material (which is nonlinting and nonabsorbent). Make sure the gown has a closed front, long sleeves, and elastic or knit closed cuffs. Do not reuse gowns.
- Wear a face shield when splashes to the eyes, nose, or mouth may occur and when adequate engineering controls (such as the sash or window on a ventilated cabinet) are not available.
- Wash hands with soap and water immediately before using personal protective clothing (such as disposable gloves and gowns) and after removing it.

- Use syringes and IV sets with Luer-Lok™ fittings for preparing and administering hazardous drugs.
- Place drug-contaminated syringes and needles in chemotherapy sharps containers for disposal.
- When supplemental protection is needed, use closed-system drug-transfer devices, glove bags, and needleless systems inside the ventilated cabinet.
- Handle hazardous wastes and contaminated materials separately from other trash.
- Clean and decontaminate work areas before and after each activity involving hazardous drugs and at the end of each shift.
- Clean up small spills of hazardous drugs immediately, using proper safety precautions and PPE.
- Clean up large spills of hazardous drugs with the help of an environmental services specialist.

Steps for Employers of Healthcare Workers to Take to Protect Their Workers from Exposure to Hazardous Drugs

- Make sure you have written policies about the medical surveillance of healthcare workers and all phases of hazardous drug handling, including receipt and storage, preparation, administration, housekeeping, decontamination and cleanup, and disposal of unused drugs, contaminated spills, and patient wastes.
- Seek input from workers who handle hazardous drugs when developing these policies and other programs to prevent exposures.
- Prepare a written inventory of all hazardous drugs used in the workplace, and establish a procedure for regular review and updating of this inventory.
- Train workers to recognize and evaluate hazardous drugs and to control exposure to them.
- Provide workers who handle or work near hazardous drugs with appropriate information and SDSs.
- Provide a work area that is devoted solely to preparing hazardous drugs and is limited to authorized personnel.
- Do not permit workers to prepare hazardous drugs using laminar-flow workstations that move air from the drug toward the worker.

- Provide and maintain ventilated cabinets designed to protect workers and others from exposure to hazardous drugs and to protect all drugs that require sterile handling. Examples of ventilated cabinets include biological safety cabinets (BSCs) and containment isolators designed to prevent hazardous drugs from escaping into the work environment.
- Filter the exhaust from ventilated cabinets with high-efficiency particulate air filters (HEPA filters). Make sure these cabinets are exhausted to the outdoors wherever feasible—well away from windows, doors, and other air-intake locations. Consider providing supplemental equipment to protect workers further; for example, glove bags, needleless systems, and closed-system drug-transfer devices.
- Establish and oversee appropriate work practices for handling hazardous drugs, patient wastes, and contaminated materials.
- Provide workers with proper PPE on the basis of a risk assessment and train workers how to use it—as required by the Occupational Safety and Health Administration (OSHA) PPE standard [29 CFR* 1910.132]. PPE may include chemotherapy gloves, nonlinting and nonabsorbent disposable gowns and sleeve covers, and eye and face protection.
- Ensure the proper use of PPE by workers.
- Use NIOSH-certified respirators [42 CFR 84]. Note: Surgical masks do not provide adequate respiratory protection.
- Provide syringes and IV sets with Luer-Lok™ fittings for preparing and administering hazardous drugs. Also provide containers for their disposal.
- Consider using closed-system drug-transfer devices and needleless systems to protect nursing personnel during drug administration.
- Periodically evaluate hazardous drugs, equipment, training effectiveness, policies, and procedures in your workplace to reduce exposures as much as possible.
- Comply with all relevant U.S. Environmental Protection Agency/Resource Conservation and Recovery Act (EPA/RCRA) regulations related to the handling, storage, and transportation of hazardous waste.

Resources

1. Workplace Safety and Health, Preventing Occupational Exposures to Antineoplastic and Other Hazardous Drugs in Health Care Settings, Center for Disease Control, September, 2004.

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Chapter 10: Ionizing Radiation [Title 17 California Code of Regulations]

Cal/OSHA does not regulate safety issues related to Ionizing radiation caused by x-rays although federal OSHA has specific regulations. The Radiologic Health Branch (RHB) within the Food, Drug, and Radiation Safety Division of the Department of Public Health regulates them under Title 17, Chapter 5, and Subchapter 4. This chapter has been included for guidance. Violations of these guidelines maybe referred to the appropriate enforcement agency by Cal/OSHA.

Introduction

Radioactive atoms decay spontaneously to emit radiation. Ionizing radiation can injure any tissue in the human body. The body can repair the damage if it is not too severe or widespread. Radioactive materials are chemical and radiation hazards. The degree of the radiation hazard varies with different materials and depends on the strength of the ionizing radiation, the half-life, and the amount. Radiation can cause injury after inhalation, ingestion, or direct (external) exposure.

X-RAY Machine

Although ionizing radiation has been used in workplaces since 1896, its use has grown significantly in recent years. For example, the use of x-ray equipment to inspect luggage, packages, and other items has become very widespread. Currently, ionizing radiation is also used to neutralize harmful biological agents, including anthrax, as well as microorganisms in certain food.

Ionizing radiation is used extensively throughout a wide range of industries. In medicine, x-ray equipment and electron microscopes are some of the OSHA and Cal/OSHA -regulated sources of worker exposure to ionizing radiation. The use of ionizing radiation continues to grow. Non-Nuclear Regulatory Commission (NRC) regulated medical uses can be divided into two areas: diagnostic/imaging techniques and radiotherapy. Imaging techniques include radiography, fluoroscopy, angiography, and computed tomography. These imaging techniques are used to perform medical procedures, including cardiac catheterizations; to locate fractures, growths and tumors; to determine the

extent of an injury or disease; and to determine the necessity for other medical procedures, such as dental work.

Radiotherapy involves the use of ionizing radiation for treatment of diseases such as cancer. Non-NRC regulated radiotherapy includes the use of x-rays and accelerators.

Potential Hazard

Employees are exposed to radiation from portable and fixed x-ray machines as they are used for diagnostic procedures. Potential health effects of radiation exposure are somatic (body) and/or genetic (offspring) in nature:

- Acute: Erythema and dermatitis. Large, whole-body exposures cause nausea, vomiting, diarrhea, weakness, and death.
- Chronic: Skin cancer and bone marrow suppression. Genetic effects may lead to congenital defects in the employee's offspring.

Monitoring

Personal Dosimeters — Normally, they do not prevent exposures (no alarm), just record it. They can provide a record of **accumulated exposure** for an individual worker over extended periods of time (hours, days, or weeks), and are small enough for measuring localized exposures (e.g., ring badges). Common types include film badges, thermoluminescence detectors (TLD), and pocket dosimeters.

Direct Reading Survey Meters and Counters — Useful in **identifying source** of exposures recorded by personal dosimeters and in **evaluating potential sources,** such as surface or sample contamination, source leakage, inadequate decontamination procedures, and background radiation. Some can be used to evaluate industrial hygiene (IH) samples (e.g., air, bulks, wipes).

Continuous Monitors — Continuous direct reading ionization detectors (same detectors as above) can provide read-outs and/or alarms to monitor hazardous locations and alert workers to leakage, thereby **preventing exposures**.

Radiation exposure controls include:

- x-ray rooms that are equipped with a barrier wall with a lead-plated glass window so technician can step behind barrier wall to take the x-ray and avoid radiation exposure.
- Lead-plated glass to use as a barrier to protect against radiation exposure when procedures must be done close to the patient.
- Lead strips to provide some protection from radiation exposure for employee running fluoroscopy procedures.
- Lead aprons and lead gloves to offer some protection for employees and patients; these should be worn in the direct x-ray field. Opaque goggles are to be worn in the direct x-ray field.
- Some procedures like those that use remote fluoroscopy can be run from controls in an adjacent room, free from radiation exposure.
- A specific person should have the responsibility for assuring proper maintenance of the portable x-ray machines.
- There should be a separate storage area for radioactive sources. This area should be adequately shielded. Kits containing radioactive isotopes or specimens and excreta of humans and animals who have received radio nucleotides may pose a hazard. Exposure may also result from handling of radioactive spills.
- Document and retain inventories of radioactive materials. Only authorized personnel should have access to storage areas.
- Every employer must supply appropriate personnel monitoring equipment, such as film badges, pocket chambers, pocket dosimeters, or film rings, and must require the use of such equipment.
- Employers must maintain records of the radiation exposure of all employees for whom personnel monitoring is required and advise each employee of his individual exposure at least yearly.
- At the request of a former employee, an employer must furnish to the employee a report of the employee's exposure to radiation records. Such report must be furnished within 30 days from the time the request is made.

The report must also include the results of any calculations and analysis of radioactive material deposited in the body of the employee. The report must be in writing and contain the following statement: "You should preserve this report for future reference."

- Each radiation area must be conspicuously posted with a sign or signs bearing the radiation caution symbol, with the wording "Caution Radiation Area".

Radiation area: Each radiation area must be conspicuously posted with a sign or signs bearing the radiation caution symbol and the word:

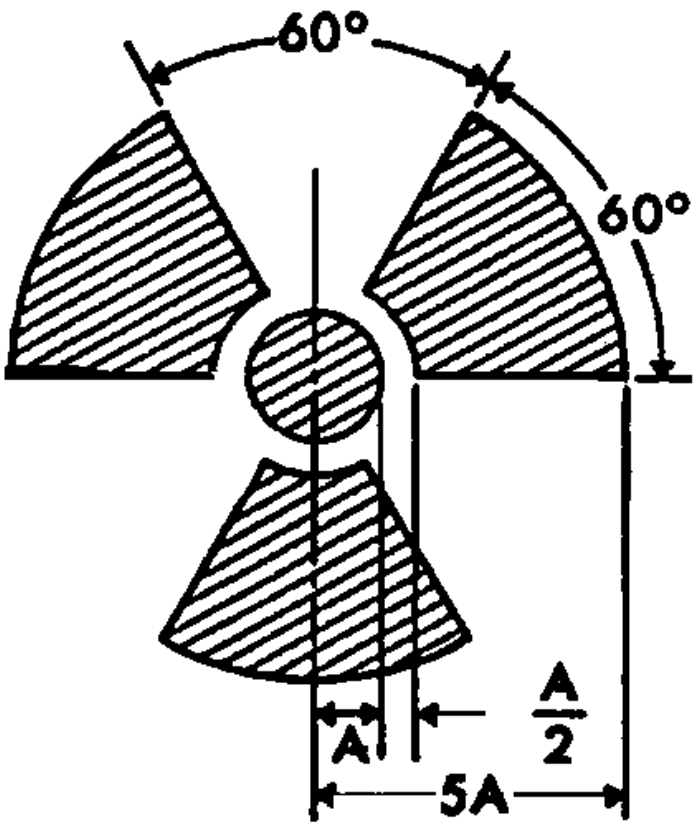
Rem means a measure of the dose of any ionizing radiation to body tissue in terms of its estimated biological effect relative to a dose of 1 roentgen (r) of X-rays (1 millirem (mrem)=0.001 rem). The relation of the rem to other dose units depends upon the biological effect under consideration and upon the conditions for irradiation. Each of the following is considered to be equivalent to a dose of 1 rem;

- a dose of 1 roentgen due to x- or gamma radiation;
- a dose of 1 rad due to x-, gamma, or beta radiation;
- a dose of 0.1 rad due to neutrons or high energy protons;
- a dose of 0.05 rad due to particles heavier than protons and with sufficient energy to reach the lens of the eye.

Rad is a measure of the dose of any ionizing radiation to body tissues in terms of the energy absorbed per unit of mass of the tissue. One rad is the dose corresponding to the absorption of 100 ergs per gram of tissue (1 millirad (mrad)=0.001 rad).

RADIATION SYMBOL

1. Cross-hatched area is to be magenta or purple.
2. Background is to be yellow.



Radiation area means any area, accessible to personnel, in which there exists radiation at such levels that a major portion of the body could receive in any 1 hour a dose in excess of 5 millirem, or in any 5 consecutive days a dose in excess of 100 millirem.

High-radiation area means any area accessible to personnel in which there exists radiation at such levels that a major portion of the body could receive in any one hour a dose in excess of 100 millirem.

Permissible exposure of individuals to ionizing radiation in restricted areas is listed below:

	Rems per calendar quarter
Whole body: Head and trunk; active blood-forming organs; lens of eyes; or gonads	1 1/4
Hands and forearms; feet and ankles	18 3/4
Skin of whole body	7 ½

An employer may permit an individual in a restricted area to receive doses to the whole body greater than those permitted above as long as the dose to the whole body does not exceed 3 Rems during any calendar quarter.

Every employer must supply appropriate personnel monitoring equipment, such as film badges, pocket chambers, pocket dosimeters, or film rings, and should require the use of such equipment for the following employees:

- Each employee who enters a restricted area under such circumstances that he receives, or is likely to receive, a dose in any calendar quarter in excess of 25 percent of the applicable value.
- Each employee under 18 years of age who enters a restricted area under such circumstances that he receives, or is likely to receive, a dose in any calendar quarter in excess of 5 percent of the applicable value.
- Each employee who enters a high radiation area.

Precautionary Procedures and Personal Monitoring

Every employer should make surveys of their radioactive work areas. Survey means an evaluation of the radiation hazards incident to the production, use, release, disposal, or presence of radioactive materials or other sources of radiation under a specific set of conditions. When appropriate, such evaluation includes a physical survey of the location of materials and equipment and measurements of levels of radiation or concentrations of radioactive material present.

Recordkeeping

Every employer must maintain records of the radiation exposure of all employees for whom personnel monitoring is required and advise each employee of his or her individual exposure on at least an annual basis.

At the request of a former employee, an employer must furnish to the employee a report of the employee's exposure to radiation, as shown in records maintained by the employer. Such report should be furnished within 30 days from the time the request is made and should cover each calendar quarter of the individual's employment involving exposure to radiation, or such lesser period as may be requested by the employee. The report must also include the results of any calculations and analysis of radioactive material deposited in the body of the employee. The report should be in writing and contain the following statement: "You should preserve this report for future reference."

Checklist for Exposure to Radiation

Question	Yes	No or NA	More consideration needed
Are exposures to ionizing radiation kept under the limits?	☐	☐	☐
Does the employer supply appropriate personnel monitoring equipment, such as film badges, pocket chambers, pocket dosimeters, or film rings, and require the use of such equipment?	☐	☐	☐
Does the employer maintain records of the radiation exposure of all employees for whom personnel monitoring is conducted and advise each employee of his or her individual exposure at least yearly?	☐	☐	☐
Does the employer furnish at the request of a former employee a report of the employee's exposure to radiation records?	☐	☐	☐

Question	Yes	No or NA	More consideration needed
Is each radiation area conspicuously posted with a sign or signs bearing the radiation caution symbol, with the wording “Caution, Radiation Area”?	☐	☐	☐

Resources

1. OSHA Ionizing Radiation Standard, Regulatory Text, 29 CFR 1910.1096.
2. Hospital eTool-Healthcare Wide Hazards: Radiology.

Chapter 11: Workplace Violence [T8 CCR §3342]

Workplace violence causes a significant number of deaths and injuries in California and throughout the country. Workplace violence can include physical violence, harassment, intimidation, or other threatening disruptive behavior at the work site. Recent data indicate that medical facility workers are at high risk for experiencing violence in the workplace. In the American Nurses Association (ANA) 2011 Health & Safety Survey, about 1 in 10 nurses reported having been physically assaulted in the past year, half had been threatened or verbally abused and a third ranked on-the-job assault as one of their three top safety concerns. According to the U.S. Bureau of Labor Statistics, RNs in 2009 reported more than 2,000 assaults and violent acts that required four days away from work on average.

Another reality that leads to workplace violence is the issue of intimate partner violence. National Institute of Occupational, Safety and Health (NIOSH) research indicates that intimate partner violence resulted in 142 homicides among women at work in the U.S. from 2003 to 2008, a figure which represents 22 percent of the 648 workplace homicides among women during the period.

Several studies indicate that violence often takes place during times of high activity and interaction with patients, such as at meal times and during visiting hours and patient transportation. Assaults may occur when service is denied, when a patient is involuntarily admitted, or when a healthcare worker attempts to set limits on eating, drinking, or tobacco or alcohol use.

In 2016, California has introduced a tough workplace violence prevention standard.

California has enacted the toughest workplace violence rules anywhere in the country. Effective Jan 2017, all healthcare facilities including medical offices must be compliant with the new standard T8 CCR §3342. Under the standard, specific oral and written procedures are required to convey to the employees the existence of any workplace violence threats. Engineering and work practice controls must be implemented to eliminate the violent threats. Corrective actions to eliminate workplace violence hazards must be taken within seven days of learning of the hazard. Finally a violent incident log must be maintained to document workplace violence

incidents. Larger facilities such as a hospital are mandated to report to Cal/OSHA any incident involving a firearm or a dangerous weapon and threats within 24 hours and all other workplace violent incidents within 24 hours.

Although an injury and illness prevention plan (IIPP) standard for workplace violence exists in California, a separate standard that gives more teeth to Cal/OSHA was justifiably introduced due to the rising number of workplace violence incidents. Cal/OSHA seems to have fine-tuned the injury and illness prevention program for workplace security to bring the new workplace violence standard. It is widely believed that California standard would become a model for the rest of the country.

What is Workplace Violence?

Workplace violence ranges from offensive or threatening language to homicide. National Institute of Occupational Safety and Health (NIOSH) defines workplace violence as violent acts (including physical assaults and threats of assaults) directed toward persons at work or on duty.

Examples of Workplace Violence

Threats: Expressions of intent to cause harm, including verbal threats, threatening body language, and written threats.

Physical assaults: Attacks ranging from slapping and beating to rape, homicide, and the use of weapons such as firearms, bombs, or knives.

Muggings: Aggravated assaults, usually conducted by surprise and with intent to rob.

Who Is at Risk?

Although anyone working in a medical facility may become a victim of violence, nurses and aides who have the most direct contact with patients are at higher risk. Other medical facility personnel at increased risk of violence include front office staff, emergency response personnel, medical facility safety officers, and all healthcare providers.

Types of Workplace Violence

- Violence by strangers [Type 1]
- Violence by customers or clients [Type II]
- Violence by co-workers [Type III]
- Violence by personal relations [Type IV].

In Type I, the agent has no legitimate business relationship to the workplace and usually enters the affected workplace to commit a robbery or other criminal act.

In Type II, the agent is either the recipient, or the object, of a service provided by the affected workplace or the victim, e.g., the assailant is a current or former client, patient, customer, passenger, criminal suspect, inmate or prisoner. Most healthcare and dental employers can expect workplace violence from this category.

In Type III, the agent has some employment-related involvement with the affected workplace. Usually this involves an assault by a current or former employee, supervisor or manager; by a current/former spouse or lover; a relative or friend; or some other person who has a dispute with an employee of the affected workplace.

Locations Where Violence Occurs at Healthcare Facilities

Violence may occur anywhere in the medical facility, but it is most frequent in the following areas:

- psychiatric wards,
- emergency rooms,
- waiting rooms, and
- geriatric units.

What Are the Effects of Violence?

The effects of violence can range in intensity and include the following:

- minor physical injuries;
- serious physical injuries;
- temporary and permanent physical disability;
- psychological trauma; and
- death.

Violence may also have negative organizational outcomes, such as low worker morale, increased job stress, increased worker turnover, reduced trust of management and coworkers, and a hostile working environment.

What are the Risk Factors for Workplace Violence?

The risk factors for violence vary from medical facility to another, depending on location, size, and type of care. Common risk factors for medical facility violence include the following:

- working directly with volatile people, especially, if they are under the influence of drugs or alcohol or have a history of violence or certain psychotic diagnoses;
- working when understaffed-especially during meal times and visiting hours;
- transporting patients;
- long waits for service;
- overcrowded, uncomfortable waiting rooms;
- working alone;
- poor environmental design;
- inadequate security;
- lack of staff training and policies for preventing and managing crises with potentially volatile patients;
- drug and alcohol abuse;
- access to firearms;
- unrestricted movement of the public; and
- poorly lit corridors, rooms, parking lots, and other areas.

Prevention Strategies for Employers

To prevent violence in medical facilities, employers should develop a safety and health program that includes management commitment; employee participation; hazard identification; safety and health training; and hazard prevention, control, and reporting. Employers should evaluate this program periodically. Although risk factors for violence are specific for each medical facility and its work scenarios, employers can follow general prevention strategies.

Environmental Designs

- Develop emergency signaling, alarms, and monitoring systems.
- Install security devices in large medical centers such as metal detectors to prevent armed persons from entering the medical facility.
- Install other security devices such as cameras and good lighting in hallways.
- Provide security escorts to the parking lots at night.
- Design waiting areas to accommodate and assist visitors and patients who may have a delay in service.
- At hospital facilities, design the triage area and other public areas to minimize the risk of assault.
    - Provide staff restrooms and emergency exits.
    - Install enclosed nurses' stations.
    - Install deep service counters or bullet-resistant and shatterproof glass enclosures in reception areas.
    - Arrange furniture and other objects to minimize their use as weapons.
    - Administrative Controls
- Design staffing patterns to prevent personnel from working alone and to minimize patient waiting time.
- Restrict the movement of the public in medical facilities by card-controlled access.
- Develop a system for alerting security personnel when violence is threatened.

Behavior Modifications

Provide all workers with training in recognizing and managing assaults, resolving conflicts, and maintaining hazard awareness.

Dealing with the Consequences of Violence

Violence may occur in the workplace in spite of preventive measures. Employers should be prepared to deal with the consequences of this violence by providing an environment that promotes open communication and by developing written procedures for reporting and responding to violence. Employers should offer and encourage counseling whenever a worker is threatened or assaulted.

Safety Tips for Medical Facility Workers

Watch for signals that may be associated with impending violence, including:

- verbally expressed anger and frustration;
- body language, such as threatening gestures;
- signs of drug or alcohol use; and
- presence of a weapon.

Maintain Behavior that Helps Diffuse Anger

- Present a calm, caring attitude.
- Don't match the threats.
- Don't give orders.
- Acknowledge the person's feelings (e.g., "I know you are frustrated.").
- Avoid any behavior that may be interpreted as aggressive (e.g., moving rapidly, getting too close, touching, or speaking loudly).

Be Alert

- Evaluate each situation for potential violence when you enter a room or begin to relate to a patient or visitor.
- Be vigilant throughout the encounter.
- Don't isolate yourself with a potentially violent person.
- Always keep an open path for exiting—don't let the potentially violent person stand between you and the door.

Take These Steps if You Can't Diffuse the Situation Quickly

- Remove yourself from the situation.
- Call security for help.
- Report any violent incidents to your management.

Comprehensive Workplace Violence Program

Under the new standard, any workplace violent incident occurring due to employer's failure to provide a safe workplace can be cited. Employers must have a written workplace violence program that can be part of their establishment's IIP Program or as a standalone workplace violence prevention plan. The risk factors vary from medical facility to another and from unit to unit within the facility. Medical facilities should form multidisciplinary committees that include direct-care staff as well as union representatives (if available) to identify risk factors in specific work scenarios and to develop strategies for reducing them.

All medical facility workers should be alert and cautious when interacting with patients and visitors. They should actively participate in safety training programs and be familiar with their employers' policies, procedures, and materials on violence prevention.

California's workplace violence prevention program must include the following:

- **Safety Compliance** – A system for ensuring that employees comply with safe and healthy work practices, including ensuring that all employees, including supervisors and managers, comply with work practices designed to make the workplace more secure and do not engage in threats or

physical actions which create a security hazard to other employees, supervisors or managers in the workplace [3203(a)(2)].

- **Communication**–A system for communicating with employees about workplace security hazards, including a means that employees can use to inform the employer of security hazards at the worksite without fear of reprisal [3203(a)(3)].
- **Identifying Security Hazards**–Procedures for identifying workplace security hazards including scheduled periodic inspections to identify unsafe conditions and work practices whenever the employer is made aware of a new or a previously unrecognized hazard [3203(a)(4)(C)].
- **Investigation of Accidents**–Procedures for investigating occupational injury or illness arising from a workplace assault or threat of assault [3203(a)(5)]
- **Methods to Correct Unsafe Conditions**–Procedures for correcting unsafe conditions, work practices and work procedures, including workplace security hazards, and with attention to procedures for protecting employees from physical retaliation for reporting threats[3203(a)(6)].
- **Training and Instruction for Employees**–Training and instruction about how to recognize workplace security hazards, measures to prevent workplace assaults and what to do when an assault occurs, including emergency action and post-emergency procedures [3203(a)(7)].

Cal/OSHA has adopted OSHA guidelines for accountabilities and responsibilities from various stakeholders at each facility to ensure that employers provide a safe and healthful workplace to their employees. OSHA guidelines include a comprehensive workplace violence prevention program for all facilities, irrespective of their size.

The guidelines include:

Management Commitment and Employee Involvement

Management Commitment

Management commitment provides the motivating force to deal effectively with workplace violence.

- Employee involvement and feedback enable workers to develop and express their commitment to safety and health organizational concern for employee emotional and physical safety and health.
- Equal commitment to worker safety and health and patient/client safety.
- System of accountability for involved managers and employees.
- Create and disseminate a clear policy of zero tolerance for workplace violence.
- Ensure no reprisals are taken against employees who report incidents.
- Encourage employees to promptly report incidents and suggest ways to reduce or eliminate risks.
- Outline a comprehensive plan for maintaining security in the workplace.
- Assign responsibility and authority for program to individuals with appropriate training and skills.
- Affirm management commitment to worker supportive environment.
- Set up company briefings as part of the initial effort to address safety issues.

Employee Involvement

- Understand and comply with the workplace violence prevention program and other safety and security measures.
- Participate in employee complaints or suggestion procedures covering safety and security concerns.
- Prompt and accurate reporting of violent incidents.

Hazard Analysis

- Step-by-step look at the workplace to find existing or potential hazards for workplace violence.
- A threat assessment team, patient assault team, or similar task force may assess the vulnerability to workplace violence and determine appropriate actions.
- Analyzing and tracking records, monitoring trends, and analyzing incidents.
- Screening surveys.
- Analyzing workplace security.

Hazard Prevention and Control

1. Engineering Controls
    a. Alarm systems and other security devices.
    b. Metal detectors.
    c. Closed-circuit video recording for high-risk areas.
    d. Safe rooms for use during emergencies.
    e. Deep service counters or bullet-resistant glass in reception area, triage, and admitting; enclosed nurses' station.
2. Workplace and Administrative Controls
    a. State clearly to patients, clients, and employees that violence will not be tolerated or permitted.
    b. Establish liaison with local police and state prosecutors.
    c. Require employees to report all assaults and threats.
    d. Set up trained response teams to respond to emergencies.
3. Post-Incident Response
    a. Provide comprehensive treatment for victimized employees and employees who may be traumatized by witnessing a workplace violence incident;
    b. Trauma-crisis counseling;
    c. Critical incident stress debriefing; and
    d. Employee assistance programs to assist victims.

Training and Education

Training program should involve all employees, including supervisors and managers. Management should establish a workplace violence prevention policy. The workplace violence standard mandates the employer to provide initial training when the workplace violence plan is established or when new employees are hired and it must include the following:

- Ensure that all staff are aware of potential security hazards and ways of protecting themselves.
- Employees should understand concept of universal precautions for violence, i.e., that violence should be expected but can be avoided or mitigated through preparation.
- Employees should be instructed to limit physical interventions in workplace altercations unless designated emergency response team or security personnel is available.
- Management and employees should:
    - recognize risk factors that cause or contribute to assaults,
    - recognize escalating behavior or warning signs,
    - know how to prevent volatile situations,
    - establish a standard response action plan for violent situations, and
    - know the location and operation of safety devices.
- How to report violent incidents to law enforcement;

Employees performing patient activities must be given refresher training to review the topics covered in the initial training and also include:

- Q and A session with the person in charge of the workplace violent prevention program;
- General and personal safety measures;
- Aggression and violence predicting factors;
- The assault cycle;
- Characteristics of aggressive and violent patients and victims;
- Verbal and physical maneuvers to defuse and prevent violent behavior;
- Strategies to prevent physical harm
- Restraining techniques;
- Appropriate use of medications as chemical restraints;

- An opportunity to practice the maneuvers and techniques included in the training with other employees they will work with, including a meeting to debrief the practice session. Problems found should be corrected.

Recordkeeping and Evaluation of Program

The new workplace violence standard mandates **recordkeeping** related to workplace violence program. Recordkeeping and evaluation of the violence prevention program are necessary to determine overall effectiveness and identify deficiencies or changes that should be made. The program should include:

- OSHA Log of Injury and Illness (OSHA 300);
- medical reports of work injuries assaults;
- record of incidents of abuse, verbal attacks, or aggressive behavior must be maintained for a period of five years;
- information on patients with a history of violence;
- minutes of safety meetings, records of hazard analyses, and corrective actions; and
- records of all training programs must be maintained for a period of one year and include training dates, contents or a summary of the training sessions, names and qualifications of persons conducting the training, and names and job titles of all persons attending the training sessions.
- All records must be made available upon request to employees, chief of Cal/OSHA for examination and copying.

Evaluation

- Establish uniform violence reporting system and regular review of reports.
- Review reports of minutes from staff meetings on safety issues.
- Analyze trends and rates in illness/injury or fatalities caused by violence.
- Measure improvement based on lowering frequency and severity of workplace violence.

Workplace Violent Incident Log

The employer must record information in a violent incident log about every incident, post-incident response, and workplace violence injury investigation. Information that must be included in the log are:

- The date, time, specific location, and department of the incident;
- A detailed description of the incident and classification of the violence such as Type I, II or III.
- A classification of circumstances at the time of the incident, such as whether the employee was completing usual job duties, working in poorly lit areas, rushed, working during a low staffing level, in a high crime area, isolated or alone, unable to get help or assistance, working in a community setting, working in an unfamiliar or new location, or other circumstances.

A description of the incident that includes:

- A classification of where the incident occurred, including whether it was in a patient or client room, emergency room or urgent care, hallway, waiting room, restroom or bathroom, parking lot or other area outside the building, personal residence, break room, cafeteria, or other area.
- The type of incident, including whether it involved:
    - Physical attack, including biting, choking, grabbing, hair pulling, kicking, punching, slapping, pushing, pulling, scratching, or spitting;
    - Attack with a weapon or object, including a gun, knife, or other object;
    - Threat of physical force or threat of the use of a weapon or other object;
    - Sexual assault or threat, including rape/attempted rape, physical display, or unwanted verbal/physical sexual contact;
    - Animal attack;
    - Other.
- Consequences of the incident, including:
    - Whether medical treatment was provided to the employee;
    - Who, if anyone, provided necessary assistance to conclude the incident;
    - Whether security was contacted and whether law enforcement was contacted;

- Amount of time taken off work, if any;

Actions taken to protect employees from a continuing threat, if any.
Information about the person completing the Log including their name, title, phone number, email address, and the date completed.

A comprehensive workplace violence prevention program incorporating all the measures mentioned in this chapter is available in the Documentation Kit.

Resources

1. Guidelines for Security and Safety of Health Care And Community Service Workers, Cal/OSHA Publications, March 10, 1998.
2. Guidelines for Preventing Workplace Violence for Healthcare and Social Workers. OSHA Publication, OSHA-3148, 2004.
3. Hospital eTool — Healthcare Wide Hazards: Workplace Violence.
4. OSHA Fact Sheet: Workplace Violence.

Chapter 12: Electrical Safety Standard [T8 CCR Sections 2299 through 2599]

Electricity has long been recognized as a serious workplace hazard. As per the Bureau of Labor Statistics, 163 workers died from injuries from contact with electric current in 2010. 76 workers died from overhead power lines in the same year. Employee exposure to electrical hazards includes electric shock, electrocutions, fires, and explosions. Damaged electrical cords can lead to possible shocks or electrocutions. A flexible electrical cord may be damaged by door or window edges, by staples and fastenings, by equipment rolling over it, or simply by aging.

Possible electrocution or electric shock or contact with electrical hazards is from:

- faulty electrical equipment/machinery or wiring,
- damaged receptacles and connectors, and
- unsafe work practices.

Electrical injuries consist of four main types:

- electrocution (fatal),
- electric shock,
- burns, and
- falls caused as a result of contact with electrical energy.

You will receive an electrical shock if a part of your body completes an electrical circuit by touching a live wire and an electrical ground, or touching a live wire and another wire at a different voltage.

Always test a circuit to make sure it is de-energized before working on it.

Introduction

How Is an Electric Shock Received?

An electrical shock is received when electrical current passes through the body. Current will pass through the body in a variety of situations. Whenever two wires are at different voltages, current will pass between them if they are connected.

Your body can connect the wires if you touch both of them at the same time. Current will pass through your body.

In most household wiring, the black wires and the red wires are at 120 volts. The white wires are at 0 volts because they are connected to ground. The connection to ground is often through a conducting ground rod driven into the earth. The connection can also be made through a buried metal water pipe. If you come in contact with an energized black wire—and you are also in contact with the neutral white wire—current will pass through your body. You will receive an electric shock. If you are in contact with a live wire or any live component of an energized electrical device—and also in contact with any grounded object—you will receive a shock. You will receive a shock if you touch a live wire and are grounded at the same time. When a circuit, electrical component, or equipment is energized, a potential shock hazard is present.

You can even receive a shock when you are not in contact with an electrical ground. Contact with both live wires of a 240-volt cable will deliver a shock. This type of shock can occur because one live wire may be at +120 volts while the other is at -120 volts during an alternating current cycle—a difference of 240 volts. You can also receive a shock from electrical components that are not grounded properly. Even contact with another person who is receiving an electrical shock may cause you to be shocked.

This chapter is divided into three sections:

Section I: Recognizing Electrical Hazards
Section II: Evaluating Hazards
Section III: Controlling Hazards: Safe Work Environment

Section I: Recognizing Electrical Hazards

Exposed Wires

Employees face many electrical hazards at the workplace. hazards are:

- inadequate wiring,
- exposed electrical parts,
- overhead power lines,
- defective insulation,
- improper grounding,
- overloaded circuits,
- damaged power tools and equipment,
- improper PPE,
- some on-site chemicals,
- defective ladders and scaffolding,
- ladders that conduct electricity, and
- wet conditions.

Overloaded Outlets

Section II: Evaluating Electrical Hazards

After hazard recognition, the next step is to evaluate risk from the hazard. Exposed wires should always be recognized as a hazard. If the exposed wires are 15 feet off the ground, the risk is low. You must constantly evaluate your risk. Combinations of hazards increase risk. Improper grounding and a damaged tool greatly increase risk. Wet conditions combined with other hazards also increase risk. There are clues that electrical hazards exist. For example, if a GFCI (Ground Fault Circuit Interrupter) keeps tripping while using a power tool, there is a problem. Do not keep resetting the GFCI and continue to work. You must evaluate the clue and decide what action should be taken to control the hazard.

There are a number of other conditions that indicate a hazard.

- Tripped circuit breakers and blown fuses show that too much current is flowing in a circuit. This condition could be due to several factors, such as malfunctioning equipment or a short between conductors. You need to determine the cause in order to control the hazard.

- An electrical tool, appliance, wire, or connection that feels warm may indicate too much current in the circuit or equipment. You need to evaluate the situation and determine your risk.
- An extension cord that feels warm may indicate too much current for the wire size of the cord. You must decide when action needs to be taken. A cable, fuse box, or junction box that feels warm may indicate too much current in the circuits.
- A burning odor may indicate overheated insulation.
- Worn, frayed, or damaged insulation around any wire or other conductor is an electrical hazard because the conductors could be exposed. Contact with an exposed wire could cause a shock.
- Damaged insulation could cause a short, leading to arcing or a fire. Inspect all insulation for scrapes and breaks. You need to evaluate the seriousness of any damage you find and decide how to deal with the hazard.
- A Ground Fault Circuit Interrupter (GFCI) that trips indicates there is current leakage from the circuit. First, you must decide the probable cause of the leakage by recognizing any contributing hazards. Then, you must decide what action needs to be taken.

Note: Employers should use ground fault circuit interrupters (GFCIs) on all 120-volt, single-phase, and 15- and 20-ampere receptacles.

Section III: Controlling Electrical Hazards: Safe Work Environment

A safe work environment is created by controlling contact with electrical voltages and the currents they can cause. Electrical currents need to be controlled so they do not pass through the body. In addition to preventing shocks, a safe work environment reduces the chance of fires, burns, and falls. Special precautions must be taken to guard against contact with electrical voltages and control electrical currents in order to create a safe work environment.

Make the environment safer by doing the following:

- treat all conductors—even "de-energized" ones—as if they are energized until they are locked out and tagged [8CCR 2320.3];
- lock out and tag out circuits and machines;
- prevent overloaded wiring by using the right size and type of wire;
- prevent exposure to live electrical parts by isolating them;
- prevent exposure to live wires and parts by using insulation;
- prevent shocking currents from electrical systems and tools by grounding them;
- prevent shocking currents by using GFCIs;
- electrical equipments used in wet locations must be weather proof; and
- prevent too much current in circuits by using over current protection devices.

Lock-out/tag-out is an essential safety procedure that protects workers from injury while working on or near electrical circuits and equipment. Lock-out involves applying a physical lock to the power source(s) of circuits and equipment after they have been shut off and de-energized. The source is then tagged out with an easy-to-read tag that alerts other workers in the area that a lock has been applied.

Hazards could be controlled by safe work practices. A safe work environment is not enough to control all electrical hazards. You must also work safely. Safe work practices help you control risk of injury or death from workplace hazards. If you are working on electrical circuits or with electrical tools and equipment, you need to use safe work practices.

Before you begin a task, ask yourself:

- What could go wrong?
- Do I have the knowledge, tools, and experience to do this work safely?

All workers should be very familiar with the safety procedures for their jobs. They must know how to use specific controls to help keep them safe. They must also use good judgment and common sense.

Control electrical hazards through safe work practices.

- Plan your work and plan for safety.
- Avoid wet working conditions and other dangers.
- Use proper wiring and connectors.
- Use and maintain tools properly.
- Wear correct PPE.

Use of Electrical Equipment that is not Marked

Electric equipment may not be used unless the following markings have been placed on the equipment:

- The manufacturer's name, trademark, or other descriptive marking by which the organization responsible for the product may be identified;
- Make sure markings are durable and appropriate to the environment; and
- Voltage, current and wattage, or other ratings as necessary.

Use of Flexible Wiring

Flexible wiring is defined as cables with insulated and stranded wire that bend easily. **DO NOT** use flexible wiring in situations where frequent inspection would be difficult, where damage would be likely, or where long-term electrical supply is needed. Flexible cords cannot be used as a substitute for the fixed wiring of a structure. Flexible cords must not be:

- run through holes in walls, ceilings, or floors;
- run through doorways, windows, or similar openings (unless physically protected);
- attached to building surfaces (except with a tension take-up device within six feet of the supply end);
- hidden in walls, ceilings, or floors; or
- hidden in conduit or other raceways.

Use the Right Extension Cord

The size of wire in an extension cord must be compatible with the amount of current the cord will be expected to carry. The amount of current depends on the equipment plugged into the extension cord. Current ratings (how much current a device needs to operate) are often printed on the nameplate. If a power rating is given, it is necessary to divide the power rating in watts by the voltage to find

the current rating. For example, a 1,000-watt electric gadget plugged into a 120-volt circuit will need almost 10 amps of current.

The length of the extension cord also needs to be considered when selecting the wire size. Voltage drops over the length of a cord. If a cord is too long, the voltage drop can be enough to damage equipment. Many electric machines only operate safely in a narrow range of voltages and will not work properly at voltages different from the voltage listed on the nameplate. Even though light bulbs operate (somewhat dimmer) at lowered voltages, do not assume electric motors will work correctly at less-than-required voltages. Also, when machines start or operate under load, they require more current. The larger the size of the wire, the longer a cord can be without causing a voltage drop that could damage tools and equipment.

The grounding path for extension cords must be kept intact to keep you safe. A typical extension cord grounding system has four components:

- a third wire in the cord, called a ground wire;
- a three-prong plug with a grounding prong on one end of the cord;
- a three-wire, grounding-type receptacle at the other end of the cord; and
- a properly grounded outlet.

Precautions must be taken to prevent injuries from contact with live electrical parts.

- Immediately report exposed live parts to a supervisor.
- As an employee, you should never attempt to correct the condition yourself without supervision.
- Provide guards or barriers if live parts cannot be enclosed completely.
- Use covers, screens, or partitions for guarding that require tools to remove them.
- Replace covers that have been removed from panels, motors, or fuse boxes.
- Even when live parts are elevated to the required height (eight feet), care should be taken when using objects (like metal rods or pipes) that can contact these parts.

- Close unused conduit openings in boxes so that foreign objects (pencils, metal chips, conductive debris, etc.) cannot get inside and damage the circuit.

Other Safeguards include:

- Make sure electrical equipment that is not marked is not used;
- Identify disconnecting means or switches;
- Make sure all electrical equipment is used for its approved or listed purpose;
- Make sure electrical equipment used or located in wet or damp locations is designed for such use;
- Inspect all electrical equipment your employees use to make sure the equipment is safe;
- Maintain electrical fittings, boxes, cabinets and outlets in good condition;
- Provide enough working space around electrical equipment;
- Guard electrical equipment to prevent your employees from electrical hazards; and
- Make sure electrical equipment is effectively grounded.

Resources

1. Cal/OSHA Guide to Electrical Safety, Cal/OSHA Consultation Service Research and Education, Division of Occupational Safety and Health, Revised October 2012.
2. General Safety and Health Standards OSHA Electrical Safety Standard, Regulatory Text, 29 CFR 1910 Subpart S.
3. Controlling Electrical Hazards. OSHA Publication, OSHA-3075, 2002 (revised).
4. Hospital eTool-Healthcare Wide Hazards: Electrical Hazards.

Chapter 13: Fire Safety Standard [8CCR §3221]

According to the Bureau of Labor Statistics' *Census of Fatal Occupational Injuries Charts, 1992-2006,* fires and explosions accounted for 4% of workplace fatalities in 2006. In the educational and healthcare facilities, fire fatalities amounted to 0.9 % of all workplace fatalities. Fire safety is a primary concern for healthcare facilities because of the unique challenges surrounding moving patients, many of whom may not be ambulatory, in the event of a fire. Healthcare facilities' responsibility to provide a safe work environment free of fire hazards cannot be understated.

Cal/OSHA, according to 8CCR §3221, mandates a fire prevention plan in writing for employers with eleven employees or more. All other employers can communicate the plan orally to their employees. At a minimum, a fire prevention plan must include:

- a list of all major fire hazards, proper handling and storage procedures for hazardous materials, potential ignition sources and their control, and the type of fire protection equipment necessary to control each major hazard;
- procedures to control accumulations of flammable and combustible waste materials;
- procedures for regular maintenance of safeguards installed on heat-producing equipment to prevent the accidental ignition of combustible materials;
- the name or job title of employees responsible for maintaining equipment to prevent or control sources of ignition or fire; and
- the name or job title of employees responsible for the control of fuel source hazards.

An employer must inform employees upon initial assignment to a job of the fire hazards to which they are exposed. An employer must also review with each employee those parts of the fire prevention plan necessary for self-protection.
Employee Training

An employer must train employees upon initial assignment to a job of the fire hazards to which they are exposed. An employer must also review with each employee those parts of the fire prevention plan necessary for self-protection.

Fire Extinguishers: General Requirements

An employer must:

- provide portable fire extinguishers and mount, locate, and identify them so that they are readily accessible to employees without subjecting the employees to possible injury;
- use only approved portable fire extinguishers;
- not use portable fire extinguishers that use carbon tetrachloride or chlorobromomethane extinguishing agents;
- assure that portable fire extinguishers are maintained, fully charged, operating properly, and kept in designated places at all times, except during use; and
- remove from service all soldered or riveted shell self-generating soda acid or self-generating foam or gas cartridge water type portable fire extinguishers that are operated by inverting the extinguisher to rupture the cartridge or to initiate an uncontrollable pressure-generating chemical reaction to expel the agent.

Fire Extinguisher

The following exemptions apply:

- Where the employer has established and implemented a written fire safety plan or policy that requires the immediate and total evacuation of employees from the workplace upon the sounding of a fire alarm signal and which includes an emergency action plan and a fire prevention plan.
- Where the employer has an emergency action plan, which designates certain employees to be the only employees authorized to use the available portable fire extinguishers, and which requires all other employees in the fire area to immediately evacuate the affected work area upon the sounding of the fire alarm, the employer is exempt from the distribution requirements.

Common Fire-Extinguishing Agents [T8 CCR §6150]

- Water
- Carbon Dioxide
- Dry Chemical (Baking Soda)

- Multi-purpose Dry Chemical (ammonium phosphate)
- Halon 1301
- Halon 1211

These agents can be found in both portable and fixed fire extinguishing agents.

Classification of Fire Extinguishers

Class A: Class A extinguishers are used on fires involving ordinary combustibles, such as wood, cloth, and paper.

Class B: Class B extinguishers are used on fires involving liquids, greases, and gases.

Class C: Class C extinguishers are used on fires involving energized electrical equipment.

Class D: Class D extinguishers are used on fires involving metals, such as magnesium, titanium, zirconium, sodium, and potassium.

Ratings for Fire Extinguishers

Class A Ratings: An extinguisher for Class A fires could have any one of the following ratings: 1-A, 2-A, 3-A, 4-A, 6-A, 10-A, 20-A, 30-A, and 40-A. A 4-A extinguisher, for example, should extinguish about twice as much fire as a 2-A extinguisher.

Class B Ratings: An extinguisher for Class B fires could have any one of the following ratings: 1-B, 2-B, 5-B, 10-B, 20-B, 30-B, 40-B, and up to 640-B.

Class C Ratings: Extinguishers rated for Class C fires are tested only for electrical conductivity. However, no extinguisher gets a Class C rating without a Class A and/or Class B rating.

Class D Ratings: Class D extinguishers are tested on metal fires. The agent used depends on the metal for which the extinguisher was designed. Check the extinguisher faceplate for the unit's effectiveness on specific metals.

Fire Extinguishers and Small Hose Lines

According to the law, a fire extinguisher, rated not less than 2A, must be provided for each 3,000 square feet of the protected building area, or major fraction thereof. Travel distance from any point of the protected area to the nearest fire extinguisher must not exceed 100 feet.

One 55-gallon open drum of water with two fire pails may be substituted for a fire extinguisher having a 2A rating.

A half-inch diameter garden-type hose line, not to exceed 100 feet in length and equipped with a nozzle, may be substituted for a 2A-rated fire extinguisher, providing it is capable of discharging a minimum of five gallons per minute with a minimum hose stream range of thirty feet horizontally. The garden-type hose lines must be mounted on conventional racks or reels. The number and location of hose racks or reels must be such that at least one hose stream can be applied to all points in the area.

One or more fire extinguishers, rated not less than 2A, should be provided on each floor. In multistory buildings, at least one fire extinguisher must be located adjacent to stairway.

Extinguishers and water drums, subject to freezing, should be protected from freezing.

A fire extinguisher, rated not less than 10B, must be provided within fifty feet of wherever more than five gallons of flammable or combustible liquids or five pounds of flammable gas are being used on the jobsite.

Carbon tetrachloride and other toxic vaporizing liquid fire extinguishers are prohibited.

Portable fire extinguishers must be inspected periodically and maintained in accordance with *Maintenance and Use of Portable Fire Extinguishers*, NFPA No. 10A-1970. Fire extinguishers, which have been listed or approved by a nationally recognized testing laboratory, must be used to meet the requirements of this subpart.

Selection and Distribution of Portable Fire Extinguishers [T8 CCR§6151]

Portable fire extinguishers must be provided for employee use and selected and distributed based on the classes of anticipated workplace fires and on the size and degree of hazard that would affect their use.

- The employer should distribute portable fire extinguishers for use by employees on Class A fires so that the travel distance for employees to any extinguisher is 75 feet (22.9 m) or less.
- The employer should distribute portable fire extinguishers for use by employees on Class B fires so that the travel distance from the Class B hazard area to any extinguisher is 50 feet (15.2 m) or less.
- The employer should distribute portable fire extinguishers used for Class C hazards on the basis of the appropriate pattern for the existing Class A or Class B hazards.
- The employer must distribute portable fire extinguishers or other containers of Class D extinguishing agent for use by employees so that the travel distance from the combustible metal working area to any extinguishing agent is 75 feet (22.9 m) or less. Portable fire extinguishers for Class D hazards are required in those combustible metal-working areas where combustible metal powders, flakes, shavings, or similarly sized products are generated at least once every two weeks.

Where the employer has an emergency action plan that designates certain employees to be the only employees authorized to use the available portable fire extinguishers, and which requires all other employees in the fire area to immediately evacuate the affected work area upon the sounding of the fire alarm, the employer is exempt from the distribution requirements.

Inspection, Maintenance, and Testing [T8 CCR §6151(e)]

- The employer is responsible for the inspection, maintenance, and testing of all portable fire extinguishers in the workplace.
- Portable extinguishers or hose must be visually inspected monthly.
- The employer must assure that portable fire extinguishers are subjected to an annual maintenance check. Stored pressure extinguishers do not require an internal examination. The employer must record the annual maintenance date and retain this record for one year after the last entry or the life of the shell, whichever is less. The record must be available to the assistant secretary upon request.
- The employer must assure that stored pressure dry chemical extinguishers that require a twelve-year hydrostatic test are emptied and subjected to applicable maintenance procedures every six years. Dry chemical extinguishers having non-refillable disposable containers are exempt from this requirement. When recharging or hydrostatic testing is performed, the six-year requirement begins from that date.
- The employer must assure that alternate equivalent protection is provided when portable fire extinguishers are removed from service for maintenance and recharging.

Cal/OSHA fined offices of Physicians (industry classification-6211) $130 in 2017-2018 inspections for Portable Extinguisher violations, T8 CCR 6151(e).

Hydrostatic Testing

The employer must assure that hydrostatic testing is performed by trained persons with suitable testing equipment and facilities.

The employer must assure that portable extinguishers are hydrostatically tested at regular intervals listed by the manufacturer, except under any of the following conditions: When the unit has been repaired by soldering, welding, brazing, or use of patching compounds.

Training and Education

- Where the employer has provided portable fire extinguishers for employee use in the workplace, the employer must also provide an educational program to familiarize employees with the general principles of fire extinguisher use and the hazards involved with incipient stage firefighting.
- The employer must provide the training upon initial employment and at least annually thereafter.
- The employer must provide employees who have been designated to use fire-fighting equipment as part of an emergency action plan with training in the use of the appropriate equipment.

Fixed Fire Extinguishing Systems

- Standpipes and hose systems
- Sprinkler systems

The employer must ensure that fixed systems are inspected annually by a person knowledgeable in the design and function of the system to assure that the system is maintained in good operating condition.

The employer must post hazard warning or caution signs at the entrance to, and inside of, areas protected by fixed extinguishing systems that use agents in concentrations known to be hazardous to employee safety and health.

Standpipes [T8 CCR§6165]

Water supply: The minimum water supply for standpipe and hose to provide 100 gallons per minute for a period of at least thirty minutes.

The employer must ensure that the hose on all standpipe systems installed after January 1, 1981, is hydrostatically tested with couplings in place, at a pressure of not less than 200 psi (1380 kPa), before it is placed in service. This pressure must be maintained for at least fifteen seconds and not more than one minute, during which time the hose should not leak or any jacket thread break during the test.

Sprinkler System [T8 CCR§6170]

Water supplies: The employer must provide that every automatic sprinkler system is provided with at least one automatic water supply capable of providing design water flow for at least thirty minutes. An auxiliary water supply or equivalent protection must be provided when the automatic water supply is out of service, except for systems of twenty or fewer sprinklers.

Maintenance: The employer must properly maintain an automatic sprinkler system. The employer must assure that a main drain flow test is performed on each system annually. The inspector's test valve should be opened at least every two years to assure that the sprinkler system operates properly.

Sprinkler alarms: On all sprinkler systems having more than twenty sprinklers, the employer must assure that a local water flow alarm is provided that sounds an audible signal on the premises upon water flow through the system equal to the flow from a single sprinkler.

Fire Alarm Devices [T8 CCR§6184]

Key Provisions

- The employee alarm system must provide warning for necessary emergency action as called for in the emergency action plan, or for reaction time for safe escape of employees from the workplace or the immediate work area, or both.
- The employee alarm should be capable of being perceived above ambient noise or light levels by all employees in the affected portions of the workplace. Tactile devices may be used to alert those employees who are hearing impaired.
- The employee alarm should be distinctive and recognizable as a signal to evacuate the work area or to perform actions designated under the emergency action plan.
- The employer must establish procedures for sounding emergency alarms in the workplace. For those employers with ten or fewer employees in a particular workplace, direct voice communication is an acceptable

procedure for sounding the alarm, provided all employees can hear the alarm. Such workplaces need not have a back-up system

- The employer must ensure that all employee alarm systems are maintained in operating condition except when undergoing repairs or maintenance.

Resources

1. Code of California Regulations, Title 8, Section 3221, Cal/OSHA Regulatory Text, Department of Industrial Relations.
2. Fire Safety, OSHA Publication, OSHA Fact Sheet, 2002.
3. Fire Safety Standard, OSHA Regulatory Text, 29 CFR 1910 Subpart L-Fire Protection.
4. Hospital eTool-Healthcare Wide Hazards: Fire Hazards.

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Chapter 14: Exit Routes / Means of Egress [T8 CCR §3215]

"Means of egress" is defined as the way to exit a building or structure, especially during an emergency. Cal/OSHA has set forth fundamental requirements to follow.

An exit route is a continuous and unobstructed path of exit travel from any point within a workplace to a place of safety. An exit route consists of three parts:

Exit access: portion of an exit route that leads to an exit.

Exit: portion of an exit route that is generally separated from other areas to provide a protected way of travel to the exit discharge.

Exit discharge: part of the exit route that leads directly outside or to a street, walkway, refuge area, public way, or open space with access to the outside.

Basic Requirements

An exit route must be permanent. Each exit route must be a permanent part of the workplace.

- An exit must be separated by fire-resistant materials. Construction materials used to separate an exit from other parts of the workplace must have a one-hour fire resistance rating if the exit connects three or fewer stories and a two-hour fire resistance rating if the exit connects four or more stories.
- Openings into an exit must be limited. An exit is permitted to have only those openings necessary to allow access to the exit from occupied areas of the workplace, or to the exit discharge. An opening into an exit must be protected by a self-closing fire door that remains closed or automatically closes in an emergency upon the sounding of a fire alarm or employee alarm system. Each fire door, including its frame and hardware, must be listed or approved by a nationally recognized testing laboratory.

Number of Exits [T8 CCR§§3228]

- The number of exits must be adequate.
- At least two exits must be available in a workplace to permit prompt evacuation of employees and other building occupants during an emergency. The exits must be located as far away as practical from each other so that if one exit is blocked by fire or smoke, employees can evacuate using the second exit.
- More than two exits must be available in a workplace if the number of employees, the size of the building, its occupancy, or the arrangement of the workplace is such that all employees would not be able to evacuate safely during an emergency.
- A single exit is permitted where the number of employees, the size of the building, its occupancy, or the arrangement of the workplace is such that all employees would be able to evacuate safely during an emergency.

Exit Discharge [T8 CCR§§3227]

- Each exit discharge must lead directly outside or to a street, walkway, refuge area, public way, or open space with access to the outside.
- The street, walkway, refuge area, public way, or open space to which an exit discharge leads must be large enough to accommodate the building occupants likely to use the exit route.
- Adequate barrier and warnings must be placed when any doorway, ramp, walkway, stairway or ladder landing exits directly into the path of vehicular traffic to prevent employees stepping directly into dangerous traffic.
- Exit stairs that continue beyond the level on which the exit discharge is located must be interrupted at that level by doors, partitions, or other effective means that clearly indicate the direction of travel leading to the exit discharge.

Locking Arrangements

- An exit door must be unlocked from the inside.
- Employees must be able to open an exit route door from the inside at all times without keys, tools, or special knowledge. A device such as a panic bar that locks only from the outside is permitted on exit discharge doors.

- Exit route doors must be free of any device or alarm that could restrict emergency use of the exit route if the device or alarm fails.
- An exit route door may be locked from the inside only in mental, penal, or correctional facilities and then only if supervisory personnel are continuously on duty and the employer has a plan to remove occupants from the facility during an emergency.

Door Swing [T8 CCR§§3235]

- A side-hinged exit door must be used and must be used to connect any room to an exit route.
- An exit door must be capable of opening at least 90 degrees and must be mounted so that the clear width of the exit way is no less than 32 inches.
- The door that connects any room to an exit route must swing out in the direction of exit travel if the room is designed to be occupied by more than 50 people or if the room is a high-hazard area (i.e., contains contents that are likely to burn with extreme rapidity or explode).

Exit Route Capacity

- The capacity of an exit route must be adequate.
- Exit routes must support the maximum permitted occupant load for each floor served.
- The capacity of an exit route may not decrease in the direction of exit route travel to the exit discharge.

Height and Width Requirements [T8 CCR§3224 and §3229]

- An exit must meet minimum height and width requirements.
- The ceiling of an exit must be at least seven feet high.
- An exit access must be at least 28 inches (71.1 cm) wide at all points. Where there is only one exit access leading to an exit or exit discharge, the width of the exit and exit discharge must be at least equal to the width of the exit access.
- The width of an exit route must be sufficient to accommodate the maximum permitted occupant load of each floor served by the exit route.
- Objects that project into the exit route must not reduce the width of the exit route to less than the minimum width requirements for exit routes.

Outdoor Exit Routes

- An outdoor exit route is permitted.
- The outdoor exit route must have guardrails to protect unenclosed sides if a fall hazard exists.
- The outdoor exit route must be covered if snow or ice is likely to accumulate along the route, unless the employer can demonstrate that any snow or ice accumulation will be removed before it presents a slipping hazard.
- The outdoor exit route must be reasonably straight and have smooth, solid, substantially level walkways.
- The outdoor exit route must not have a dead-end that is longer than 20 feet (6.2 m).

Maintenance and Access to Exits [T8 CCR§§3225]

- Exit routes must be kept free of explosive or highly flammable furnishings or other decorations.
- Exit routes must be arranged so that employees will not have to travel toward a high-hazard area, unless the path of travel is effectively shielded from the high-hazard area by suitable partitions or other physical barriers.
- Exit routes must be free and unobstructed. No materials or equipment may be placed, either permanently or temporarily, within the exit route. The exit access must not go through a room that can be locked, such as a kitchen, storeroom, restroom, closet or space used for similar purposes, to reach an exit or exit discharge, nor may it lead into a dead-end corridor. Stairs or a ramp must be provided where the exit route is not substantially level.
- Safeguards designed to protect employees during an emergency (such as sprinkler systems, alarm systems, fire doors, exit lighting) must be in proper working order at all times.

Lighting and Marking

- Each exit route must be adequately lighted so that an employee with normal vision can see along the exit route.
- Each exit must be clearly visible and marked by a sign reading “Exit”.

- Each exit route door must be free of decorations or signs that obscure the visibility of the exit route door.
- If the direction of travel to the exit or exit discharge is not immediately apparent, signs must be posted along the exit access indicating the direction of travel to the nearest exit and exit discharge. Additionally, the line-of-sight to an exit sign must clearly be visible at all times.

- Each doorway or passage along an exit access that could be mistaken for an exit (such as a closet) must be marked "Not an Exit" or similar designation, or be identified by a sign indicating its actual use.
- Each exit sign must be illuminated to a surface value of at least five foot-candles (50 lux) by a reliable light source and be distinctive in color. Self-luminous or electroluminescent signs that have a minimum luminance surface value of at least .02 foot lamberts during its useful life are permitted.
- Each exit sign must have the word "Exit" in plainly legible letters not less than five inches high, with the principal strokes of the letters in the word "Exit" not less than one-half of an inch wide.

Fire Retardant Properties of Paints or Solutions [T8 CCR§3217]

Decorative Materials- All drapes, hangings, curtains, drops, and all other similar material located in corridors, stairways, lobbies, ramps, passageways and balconies used as required exits must be made from a non-flammable material. This includes Christmas trees as well. Fire retardant paints or solutions must be renewed as often as necessary to maintain their fire retardant properties. Exit lights, fire alarm sending stations, wet standpipe hose cabinets, and fire extinguisher locations must not be concealed by any decorative material.

Exit Route Maintenance during Construction, Repairs, or Alterations

- During new construction, employees must not occupy a workplace until the exit routes are completed and ready for employee use for the portion of the workplace they occupy.
- During repairs or alterations, employees must not occupy a workplace unless the exit routes required are available and existing fire protections

are maintained, or until alternate fire protection is furnished that provides an equivalent level of safety.

- Employees must not be exposed to hazards of flammable or explosive substances or equipment used during construction, repairs, or alterations, that are beyond the normal permissible conditions in the workplace, or that would impede exiting the workplace.

Arrangement and Distance to Exits [T8 CCR§3222]

In a two exit scenario, the exits must be placed at a distance apart equal to not less than one-half the length of the maximum overall diagonal dimension of the building or area to be served measured in a straight line between exits. The maximum distance of travel from any point to an exterior exit door, horizontal exit, exit passageway or an enclosed stairway in a building not equipped with an automatic sprinkler system throughout must not exceed 150 feet or 200 feet in a building equipped with an automatic sprinkler system throughout.

Resources

1. 'Means of Egress', Code of California Regulations, Title 8, Section 3215, Cal/OSHA Regulatory Text, Department of Industrial Relations.
2. OSHA Regulations, OSHA's Regulatory text on Means of Egress, 29 CFR 1910.36.
3. OSHA Evacuation Plans and Procedures, eTool, OSHA's Exit Routes Demonstration #2.

Chapter 15: Emergency Action Plan [T8 CCR §3220]

An emergency action plan (EAP) is a written document that details the plans your facility has in place for certain types of emergencies such as medical emergencies; natural disasters; radiation, and chemical spills, releases, and exposures. Well-developed emergency plans and proper employee training (such that employees understand their roles and responsibilities within the plan) will result in fewer and less severe employee injuries and less structural damage to the facility during emergencies. A poorly prepared plan will likely lead to a disorganized evacuation or emergency response, resulting in confusion, injury, and property damage.

Cal/OSHA fined offices of Physicians (industry classification-6211) $8,400 in 2015-2016 inspections for violations under Emergency Action Plan. There were no known citations in 2016-2017 inspection year.

Putting together a comprehensive emergency action plan that deals with those issues specific to your worksite is not difficult. It involves taking what was learned from your workplace evaluation and describing how employees will respond to different types of emergencies, taking into account your specific worksite layout, structural features, and emergency systems. Most organizations find it beneficial to include a diverse group of representatives (management and employees) in this planning process and to meet frequently to review progress and allocate development tasks. The commitment and support of all employees is critical to the plan's success in the event of an emergency; ask for their help in establishing and implementing your emergency action plan.

At a minimum, the plan must include but is not limited to the following elements.

- Means of reporting fires and other emergencies.
- Evacuation procedures and emergency escape route assignments.
- Procedures to be followed by employees who remain to operate critical operations before they evacuate.
- Procedures to account for all employees after an emergency evacuation have been completed.
- Rescue and medical duties for those employees who are to perform them.

- Names or job titles of persons who can be contacted for further information or explanation of duties under the plan.

Note: A written plan is mandatory for employers with eleven employees or more, for all other employers oral communication about their plan is mandated [T8 CCR§3220(e)(3)].

Means of Reporting Fires and Emergency Reporting Procedures

Preferred procedures for reporting emergencies, such as dialing 911 or an internal emergency number, or pulling a manual fire alarm, are examples of emergency reporting procedures, but there are many other possibilities that you could implement, such as using b**ells, whistles, and horns to alert employees about an emergency.**

Employees must know how to report emergencies. Some use internal telephone numbers, intercom, or public address systems to notify other employees. It is important for employees to also notify the proper authorities such as fire, medical, or rescue services, if your facility relies on this type of assistance during an emergency

Employee alarm system: An employer must have and maintain an employee alarm system according to T8 CCR§3220(c). The employee alarm system must use a distinctive signal for each purpose. You do not need an alarm system if employees can promptly see or smell a fire or other hazard in time to provide adequate warning to other employees.

Evacuation Procedures and Emergency Route Assignments

A disorganized evacuation can result in confusion, injury, and property damage. When developing your emergency action plan, it is important to determine the following:

- **Conditions under which an evacuation would be necessary:** A wide variety of emergencies, both manmade and natural, may require a workplace to be evacuated. These emergencies include fires, explosions, floods, earthquakes, hurricanes, tornadoes, toxic material releases, radiological and biological accidents, civil disturbances, and workplace violence.

- **Conditions under which it may be better to shelter-in-place:** "Shelter-in-place" means selecting an interior room or rooms within your facility, or ones with few or no windows, and taking refuge there. In many cases, local authorities will issue advice to shelter-in-place via TV or radio. Chemical, biological, or radiological contaminants may be released into the environment in such quantity and/or proximity to a place of business that it is safer to remain indoors rather than to evacuate employees. Such releases may be either accidental or intentional. Examples of situations that might result in a decision by an employer to institute "shelter-in-place" include an explosion in an ammonia refrigeration facility across the street, or a derailed and leaking tank car of chlorine on the rail line behind your place of business.
- **A clear chain of command and designation of the person in your business authorized to order an evacuation or shutdown**: It is common practice to select a responsible individual to lead and coordinate your emergency plan and evacuation. It is critical that employees know who the coordinator is and understand that this person has the authority to make decisions during emergencies. The coordinator should be responsible for assessing the situation to determine whether an emergency exists requiring activation of the emergency procedures, overseeing emergency procedures, notifying and coordinating with outside emergency services, and directing shutdown of facility operations if necessary.
- **Specific evacuation procedures, including routes and exits:** Most employers create maps from floor diagrams with arrows that designate the exit route assignments. These maps should include locations of exits, assembly points, and equipment (such as fire extinguishers, first aid kits, spill kits) that may be needed in an emergency. Exit routes should be:
    - clearly marked and well lit;
    - wide enough to accommodate the number of evacuating personnel;
    - Unobstructed and clear of debris at all times; and
    - Unlikely to expose evacuating personnel to additional hazards.

When preparing drawings that show evacuation routes and exits, post them prominently for all employees to see.

Specific Evacuation Procedures for High-Rise Buildings

For Employers

Don't lock fire exits or block doorways, halls, or stairways.

- Test regularly all back-up systems and safety systems, such as emergency lighting and communication systems, and repair them as needed.
- Develop a workplace evacuation plan, post it prominently on each floor, and review it periodically to ensure its effectiveness.
- Identify and train floor wardens, including back-up personnel, who will be responsible for sounding alarms and helping to evacuate employees.
- Conduct emergency evacuation drills periodically.
- Establish designated meeting locations outside the building for workers to gather following an evacuation. The locations should be safe distance from the building and in an area where people can assemble safely without interfering with emergency response teams.
- Identify personnel with special needs or disabilities who may need help evacuating and assign one or more people, including back-up personnel, to help them.
- Ensure that during off-hour periods, systems are in place to notify, evacuate, and account for off-hour building occupants.
- Post emergency numbers near telephones.
- In an emergency, employer must sound appropriate alarms and instruct employees to leave the building.
- In an emergency, employer must notify, police, firefighters, or other appropriate emergency personnel.
- In an emergency, employer must, take a head count of employees at designated meeting locations, and notify emergency personnel of any missing workers.

For Employees

Before an emergency:

- Be familiar with the worksite's emergency evacuation plan.
- Know the pathway to at least two alternative exits from every room/area at the workplace.
- Recognize the sound/signaling method of the fire/evacuation alarms.
- Know who to contact in an emergency and how to contact them.
- Know how many desks or cubicles are between your workstation and two of the nearest exits so you can escape in the dark if necessary.
- Know where the fire/evacuation alarms are located and how to use them.
- Report damaged or malfunction safety systems and back-up systems.

During an emergency:

- Leave the area quickly but in an orderly manner, following the worksite's emergency evacuation plan. Go directly to the nearest fire-free and smoke-free stairwell, recognizing that in some circumstances the only available exit route may contain limited amounts of smoke or fire.
- Listen carefully for instructions over the building's public address system.
- Crawl low, under the smoke, to breathe cleaner air if there is a fire. Test doors for heat before opening them by placing the back of your hand against the door so you do not burn your palm and fingers. Do not open a hot door, but find another exit route. Keep "fire doors" closed to slow the spread of smoke and fire.
- Avoid using elevators when evacuating a burning building.
- Report to the designated meeting place.
- Don't re-enter the building until directed by authorities.

Upon being trapped:

- Stay calm and take steps to protect yourself.
- Go to a room with an outside window, and telephone for help if possible.
- Stay where rescuers can see you and wave a light-colored cloth to attract attention.
- Open windows, if possible, but be ready to shut them if smoke rushes in.
- Stuff clothing, towels, or newspapers around the cracks in doors to prevent smoke from entering your room.

Procedures for Assisting Visitors and Employees to Evacuate, Particularly Those with Disabilities or Who Do Not Speak English

Many employers designate individuals as evacuation wardens to help move employees from danger to safe areas during an emergency. Generally, one warden for every 20 employees should be adequate, and the appropriate number of wardens should be available at all times during working hours.

Wardens may be responsible for checking offices, bathrooms, and other spaces before being the last person to exit an area. They might also be tasked with ensuring that fire doors are closed when exiting. All employees designated to assist in emergency evacuation procedures should be trained in the complete workplace layout and various alternative escape routes if the primary evacuation route becomes blocked. Employees designated to assist in emergencies should be made aware of employees with special needs (who may require extra assistance during an evacuation), how to use the buddy system, and any hazardous areas to avoid during an emergency evacuation.

Visitors also should be accounted for following an evacuation and may need additional assistance when exiting. Some employers have all visitors and contractors sign in when entering the workplace and use this list when accounting for all persons in the assembly area. The hosts and/or area wardens, if established, are often tasked with helping these individuals safely evacuate.

Actions to Be Taken by Designated Employees Before Evacuating

The supervisor-designated employees remain behind briefly to operate fire extinguishers or shut down gas and/or electrical systems and other special equipment that could be damaged if left operating or that could create additional hazards to emergency responders (such as releasing hazardous materials).

Each employer must review their operation and determine whether total and immediate evacuation is possible for various types of emergencies. The preferred approach, and the one most often taken by small enterprises, is immediate evacuation of all employees when the evacuation alarm is sounded.

If any employees will stay behind, the plan must describe in detail the procedures to be followed by these employees. All employees remaining behind must be capable of recognizing when to abandon the operation or task and evacuate themselves before their egress path is blocked. In small establishments, it is common to include in your plan locations where utilities (such as electrical and gas) can be shut down for all or part of the facility either by employees or by emergency response personnel.

Accounting for Employees after Evacuation

To ensure the fastest, most accurate accountability of all employees, consider including these steps in an emergency action plan:

- Designate assembly areas, both inside and outside your workplace, where employees should gather after evacuating. Assembly locations within the building are often referred to as "areas of refuge." Make sure your assembly area has sufficient space to accommodate all of your employees. Exterior assembly areas, used when the building must be partially or completely evacuated, are typically located in parking lots or other open areas away from busy streets. Try and designate assembly areas so that you will be upwind of your building from the most common or prevailing wind direction.
- Take a headcount after the evacuation. Identify the names and last known locations of anyone not accounted for and pass them to the official in charge. Accounting for all employees following an evacuation is critical. Confusion in the assembly areas can lead to delays in rescuing anyone trapped in the building, or unnecessary and dangerous search-and-rescue operations. When designating an assembly area, consider (and try to minimize) the possibility of employees interfering with rescue operations.
- Establish a method for accounting for non-employees, such as suppliers and customers.
- Establish procedures for further evacuation in case the incident expands. This may consist of sending employees home by normal means or providing them with transportation to an offsite location.

Rescue and Medical Duties for Those Employees Who Are to Perform Evacuations

List all the duties, responsibilities, and names of employees assigned with rescue and medical tasks. Most healthcare facilities rely on local public resources, such as the local fire department or hospital, to provide these services. Therefore, this aspect must be mentioned in the EAP.

Using Public Resources

Unless you are a large employer handling hazardous materials and processes or have employees regularly working in hazardous situations, you will probably choose to rely on local public resources to provide these specialized services. If you choose to use external departments or agencies, such as the local fire and police departments, medical clinics or hospitals, and ambulance services, make sure they are prepared to respond as outlined in your plan. For example:

- Have members of the local fire department conduct a walk-through of your workplace so they are familiar with the layout and any potential hazards.
- Establish a relationship with a local ambulance service so transportation is readily available for emergencies.
- Make arrangements with other facilities to handle emergency cases and to provide medical and first-aid services to employees.
- If a hospital is not close to your workplace, ensure that onsite person(s) have adequate first-aid training to handle all kinds of emergencies. The American Red Cross, some insurance providers, local safety councils, fire departments, or other sources may be able to provide this training. Treatment of a serious injury should begin within three to four minutes of the accident.

Names or Job Titles of Persons who can Be Contacted for Further Information or Explanation of Duties under the Plan.

A comprehensive list of designated supervisors and employees, who are expected to take part in an emergency, must be prepared. An employer must designate and train employees to assist in a safe and orderly evacuation of other employees.

Review of Emergency Action Plan

An employer must review the emergency action plan with each employee covered by the plan under the following circumstances:

- when the plan is developed or the employee is assigned initially to a job;
- when the employee's responsibilities under the plan change; and
- when the plan is changed.

Resources

1. 'Emergency Action Plan', Code of California Regulations, Title 8, Section 3220, Regulatory Text, Cal/OSHA, Department of Industrial Relations.
2. OSHA Regulations, OSHA's Regulatory Text on Emergency Action Plan, 29 CFR 1910.38.
3. Evacuation Plans and Procedures, OSHA eTool, Develop and Implement an Emergency Action Plan (EAP).

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Chapter 16: Repetitive Motion Injuries and Workplace Ergonomics [T8 CCR §5110]

Ergonomics is the science of fitting the job to the worker. When there is a mismatch between the physical requirements of the job and the physical capacity of the worker, work-related musculoskeletal disorders (MSDs) can result. Ergonomics is the practice of designing equipment and work tasks to conform to the capability of the worker; it provides a means for adjusting the work environment and work practices to prevent injuries before they occur. Healthcare facilities, especially nursing homes, have been identified as an environment where ergonomic stressors exist.

Not all MSDs are work related. The determination of whether any particular MSD is work-related may require the use of different approaches tailored to specific workplace conditions and exposures. Establishing the work-relatedness of a specific case may include:

- taking a careful history of the patient and illness,
- conducting a thorough medical examination, and
- characterizing factors on and off the job that may have caused or contributed to the MSD.

Repetitive Motion Injuries (RMI) [T8 CCR§5110]

California Division **of Occupational Safety and Health** adopted an ergonomics standard on November 14, 1996. The standard provides that when at least two employees performing identical tasks have been diagnosed by a physician with repetitive motion injuries (RMIs) within 12 consecutive months, the employer must establish a program which should:

- evaluate each job, process, or operation of identical activity for exposures that have caused RMIs at the affected worksite;
- control or minimize to the extent feasible the exposures that have caused repetitive motion injuries, considering engineering controls and administrative controls; and
- provide training to affected employees.

Cal/OSHA is conducting inspections as well as outreach activities and has developed publications and training materials concerning ergonomics, which are available through the Cal/OSHA website at Publications.

Identifying Conditions That Contribute to Musculoskeletal Disorders

Both work-related and non-work related conditions can either individually, or by interacting with each other, give rise to musculoskeletal disorders (MSDs). There are several approaches that may be used to determine whether conditions in the workplace might be contributing to employees developing MSDs. These approaches can be used individually or in combination.

Review and analyze injury and illness records to determine whether there is a pattern of ergonomic-related injuries in certain jobs or work tasks.

Step 1: Review Injury and Illness Records

An easy and straightforward approach to assessing potential ergonomic-related problems is to conduct a review of various injury and illness records. The records can be different for every company but may include:

- OSHA 200 forms for years prior to 2002,
- OSHA 300 Log forms for years after 2002,
- workers' compensation claims,
- group health insurance records,
- first aid logs,
- absentee and turnover Records, and
- records of employee complaints or grievances.

Step 2: Identify Potential MSD Cases

Using all these information sources, try to identify entries that may indicate the presence of Musculoskeletal Disorders (MSDs). MSD is a term of art in scientific literature that refers collectively to a group of injuries and illnesses that affect the musculoskeletal system. While there is no single diagnosis for MSDs, the conditions identified below are commonly included in the range of conditions that potentially constitute MSDs.

- tendinitis

- tenosynovitis
- epicondylitis
- carpal tunnel syndrome
- bursitis
- deQuervain's disease
- ganglion cyst
- thoracic outlet syndrome
- less precise entries such as sprains, strains, tears, or even just pain

Step 3: Categorize

Once all of the records have been examined, categorize MSD cases by job, department, division, work task, shift, and so on, to determine whether patterns or trends exist. For example, look for instances where:

- one unit (e.g., job, department, or division) has a higher number of MSDs than other units in the facility,
- one unit has more severe MSDs than other units in the facility,
- one unit's rate of MSDs has increased each year for several years,
- one unit's rate of MSDs is higher than other facilities doing the same job,
- MSDs increase during a particular shift or time of the year, and
- MSDs increase when performing a particular work task.

Analysis of Job or Work Tasks

Not all MSDs are related to work activities. Other factors, such as personal characteristics and societal factors, have also been associated with ergonomic-related injuries and illnesses. When analyzing jobs or work tasks that may be associated with MSDS, conditions to consider may include, but are not limited to, the following.

Awkward postures, which might include prolonged work with hands above the head or with the elbows above the shoulders; prolonged work with the neck bent; squatting, kneeling, or lifting; handling objects with back bent or twisted; repeated or sustained bending or twisting of wrists, knees, hips, or shoulders; forceful and repeated gripping or pinching.

Forceful lifting, pushing, or pulling, which might include handling heavy objects, moving bulky or slippery objects, assuming awkward postures while moving objects.

Prolonged repetitive motion includes keying; using tools or knives; packaging, handling, or manipulating objects.

Contact stress, which might include repeated contact with hard or sharp objects, like desk or table edges.

Vibration, which might include overuse of power hand tools.

Analyzing tools may help in analyzing jobs. While there is no one size fits all approach, there are numerous non-OSHA, voluntary analysis tools that may be used to learn more about potential ergonomic risks associated with jobs. Seek employee input about the existence of ergonomic problems related to particular jobs or work tasks. This may be accomplished, among other ways,

- by speaking with employees,
- by conducting symptom surveys, and
- through use of employee questionnaires.

Be aware of common contributing conditions within your job classifications. If other facilities have ergonomic-related problems, then it is possible these potential problems are also your concern. Obtain information from other facilities

- to see what problems others have experienced in their operations, and
- to gain a better understanding of potential problems that may exist in your workplace.

Good Safety and Health Program in Ergonomics

A good safety and health program in ergonomics must include:

- management leadership/employee participation,
- workplace analysis,
- accident and record analysis,
- hazard prevention and control,
- medical management, and

- training.

Management Leadership/Employee Participation:

Management Leadership should demonstrate a commitment to reduce or eliminate patients/residents handling hazards through establishing a written program that addresses issues, such as:

- continued training of employees in injury prevention,
- Methods of transfer and lifting to be used by all staff,
- compliance with transfer and lift procedures, and
- procedures for reporting early signs and symptoms of back pain and other musculoskeletal injuries.

Employee Participation should include:

- complaint/suggestion program that includes employee reports of unsafe working conditions, and
- prompt reporting of signs and symptoms as well as injuries.

Workplace Analysis

A workplace analysis is used to identify existing and potential workplace hazards and find ways to correct these hazards. Assessment of work tasks involves an examination of duration, frequency, and magnitude of exposure to ergonomic stressors, such as force, repetition, awkward postures, vibration, and contact stress to determine if employees are at risk of pain or injury. Observation, workplace walkthroughs, talking with employees, and periodic screening surveys are used to help identify hazards such as stressful tasks.

Accident and Record Analysis

Records of injuries and illnesses should be analyzed to identify patterns of injury that occur over time, enabling the hazards to be addressed and prevented. This includes reviewing OSHA 300 logs, OSHA 301 forms, and workers' compensation reports.

Hazard Prevention and Control

Hazard prevention and control should include the implementation of administrative and engineering controls.

- Administrative controls: Provide for adequate staffing, assessment of patients/residents needs, and restricted admittance policies.
- Engineering controls: Help to isolate or remove the hazards from the workplace, for example, providing proper selection, training, and use of assist devices or equipment.

Medical Management

A medical management program, supervised by a person trained in the prevention of musculoskeletal disorders, should be in place to manage the care of those injured. The program should include:

- accurate injury and illness recording,
- early identification and treatment of injured employees,
- "light duty" or "no lifting" work restrictions during recovery periods, and
- systematic monitoring of injured employees to identify when they are ready to return to regular duty.

Training

A training program, designed and implemented by qualified persons, should be in place to provide continual education and training about ergonomic hazards and controls to managers, supervisors, and all healthcare providers, including "new employee" orientation. Training should be updated and presented to employees as changes occur at the workplace, and be at a level of understanding appropriate for those individuals being trained, and should also include:

- the opportunity to ask questions of the trainer,
- an overview of the potential risks, causes, and symptoms of back injury and other injuries. Be able to identify existing ergonomic stressors and methods of control, such as the use of engineering, administrative, and work practice controls, particularly safe resident handling techniques.
- recognizing the signs and symptoms of MSDs and the procedures for reporting potential problems,
- encouragement of staff physical fitness,

- lifting guidelines for healthcare workers (nurse assistants, licensed practical nurses, registered nurses), which should include:
    - never transfer patients/residents when off balance;
    - lift loads close to the body;
    - never lift alone, particularly fallen patients/residents, use team lifts or use mechanical assistance;
    - limit the number of allowed lifts per worker per day;
    - avoid heavy lifting, especially with spine rotated; and
    - training in when and how to use mechanical assistance.

Common Ergonomic Hazards

At the Admission and Records Office

Potential hazards at the admission and records office include exposure of staff to:

- work-related musculoskeletal disorders (MSDs) from file management (e.g., excessive reaching above shoulder height while filing),
- workplace violence during admissions, and
- infectious diseases during admissions.

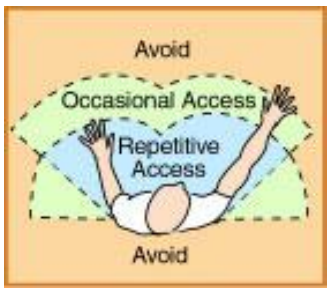
Possible Solutions

- Redesign or lower filing cabinets so they can be reached while maintaining the elbows in close to the body.
- Use powered filing cabinets that move to any height.
- Use ladders or stools to access high files rather than reaching overhead.

Computer Workstation

Potential hazards at computer workstations exist for employees who use a computer (e.g., admittance area, data entry clerk, secretary) intensively for four hours or more per day, as they can develop musculoskeletal disorders (MSD) of the hand/arm, shoulder, neck, and back.

Possible Solutions



- Arrange materials and supplies in front of the body so they can be easily reached with the elbows in close to the torso.
- Provide adjustable, supportive, padded chairs that support the forearms, legs, and low back. Armrests should allow the elbows to hang normally at the side of the body.
- Arrange monitor so that the most commonly viewed area is slightly below, (about 20 degrees), horizontal eye level and can be seen without looking up, or leaning forward.
- Provide engineering controls to limit awkward positions (e.g., provide headsets for employees to use when answering phones).
- Use a keyboard that includes an adjustable mouse support that can be easily reached from a keying position. Employees should keep wrists straight while typing and use wrist pads to rest on when not typing.

Use of Carbonless Paper

Employee exposure to carbonless paper is a potential hazard. Carbonless paper is used every day for checks, credit-card receipts, and medical forms. Tiny micro granules of dyes and resins are released when sheets are pressed together. The released chemicals can be absorbed through the skin or released into the air and inhaled, resulting in mild to moderate symptoms of skin irritation and irritation of the mucosal membranes of the eyes and upper respiratory tract. Symptoms include headaches, sinus infections, bronchitis, and eye and skin irritations. Some rare cases of allergic contact dermatitis have also been reported. Symptoms include shortness of breath and hives.

Possible Solutions

NIOSH suggests, in most cases, good industrial hygiene and work practices should be adequate to reduce or eliminate symptoms, including:

- adequate ventilation, humidity, and temperature controls;
- proper housekeeping;
- minimal hand-to-mouth and hand-to-eye contact; and

- periodic cleansing of hands.

Patient Handling Controls

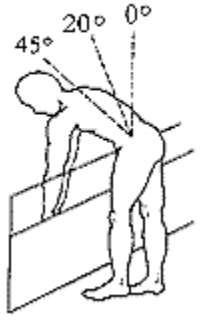
Employee exposure to injury from ergonomic stressors during handling, transferring, and repositioning of patients/residents is a potential hazard. Hospital healthcare workers (especially nursing assistants, who do a majority of the lifting in many facilities) may develop musculoskeletal injuries, such as muscle and ligament strain and tears, joint and tendon inflammation, pinched nerves, herniated discs, and others from handling patients/residents.

Possible Solutions

Good work practice includes continually identifying the most hazardous tasks and implementing engineering and work practice controls to help reduce or prevent injuries in those tasks. Remember, OSHA recommends minimizing manual lifting of patients in all cases and eliminating lifting when possible.

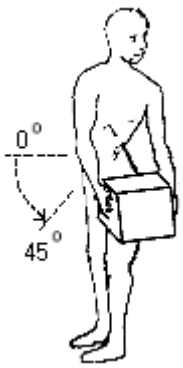
Awkward Postures

Increased potential for employee injury exists when awkward postures are used when handling or lifting patients/residents. Awkward postures include:



- twisting while lifting;
- bending over to lift;
- lateral or side bending;
- back hyperextension or flexion; and
- reaching forward or twisting to support patients/residents from behind to assist them in walking.

Forces on the spine increase when lifting, lowering, or handling objects with the back bent or twisted. This occurs because the muscles must handle your body weight in addition to the weight of the patients/residents being lifted. Employees should be aware that:



- more muscular force is required when awkward postures are used because muscles cannot perform efficiently;
- fixed awkward postures (i.e., holding the arm out straight for several minutes) contribute to muscle and tendon fatigue, and joint soreness;

To be considered a risk factor, awkward postures need to last more than one hour continuously or for several hours in the work shift;

In the pictures above, back flexion figures indicate awkward postures occur with twisted, hyper-extended, or flexed back positions. They are unsafe back postures for lifting patients/residents.

Possible Solutions

Good work practice recommends avoiding awkward postures while lifting or moving patients/residents.

- Educate and train employees about safer lifting techniques.
- Use assist devices or other equipment whenever possible.
- Utilize team lifting based on assessment.

Transferring Equipment

Strains and sprains can occur if an employee is transferring equipment like IV poles, wheelchairs, oxygen canisters, respiratory equipment, dialysis equipment, x-ray machines, or multiple items at the same time. The following tips will help to reduce the hazards of transferring equipment.

- Place equipment on a rolling device if possible to allow for easier transport, or have wheels attached to the equipment.

- Push rather than pull equipment when possible. Keep arms close to your body and push with your whole body not just your arms.
- Assure that passageways are unobstructed.
- Attach handles to equipment to help with the transfer process.
- Get help moving heavy or bulky equipment or equipment that you can't see over.
- Don't transport multiple items alone, for example if moving a patient/resident in a wheelchair as well as an IV pole and/or other equipment, get help, don't overexert yourself.

Reaching Into Deep Sinks or Containers

If washing dishes, laundry, or working in maintenance areas and using a deep sink, limit excessive reaching and back flexion by:

- placing an object such as a plastic basin in the bottom of the sink to raise the surface up while washing items in the sink, or
- removing objects to be washed into a smaller container on the counter for scrubbing or soaking and then replace back in the sink for final rinse.

Lifting Trash, Laundry, or Other Large Kinds of Bags

Limit reaching or lifting hazards when lifting trash, laundry, or other kinds of bags by:

- using handling bags for laundry, garbage, and housekeeping when possible that have side openings to allow for easy disposal without reaching into and pulling bags up and out. The bags should be able to slide off the cart without lifting.
- limiting the size and weight of these bags and provide handles to further decrease lifting hazards.

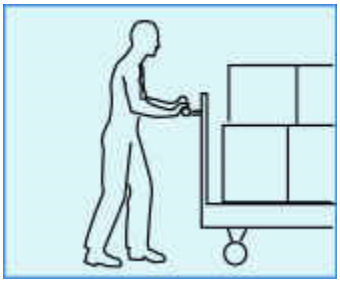
- using garbage cans that have a frame vs. a solid can to prevent plastic bags from sticking to the inside of the can or use products that stick to the inside of the garbage can that prevent the bag from sticking.
- Limit the size of the container to limit the weight of the load employee must lift and dump.
- Place receptacles in unobstructed and easy-to-reach places.

Handling Bags

- Install chutes and dumpsters at or below grade level.
- Use spring-loaded platforms to help lift items, such as laundry, keeping work at a comfortable, uniform level.

Moving Heavy Carts

Limit reaching and pushing hazards from moving heavy dietary, laundry, housekeeping, or other carts by:



- keeping carts, hampers, gurneys, or other carts well maintained to minimize the amount of force exerted while using these items.
- using carts with large, low-rolling resistance wheels. These can usually roll easily over mixed flooring as well as gaps between elevators and hallways.
- keeping handles of devices to be pushed at waist to chest height.
    - Use handles to move carts rather than the side of the cart to prevent the accidental smashing of hands and fingers.
- keeping floors clean and well maintained.
- pushing rather than pulling whenever possible.
- removing from use all malfunctioning carts.
- getting help with heavy or bulky loads.

Housekeeping Tasks

To decrease ergonomic stressors when employees are performing cleaning tasks, employees should:

- alternate leading hand;
- avoid tight and static grip and use padded non-slip handles;
- clean objects at waist level if possible, rather than bending over them (e.g., push wheelchairs up a ramped platform to perform cleaning work, or raise beds to waist level before cleaning);
- use knee pads when kneeling;
- use tools with extended handles, or use step stools or ladders to avoid or limit overhead reaching;
- use flat head dusters when sweeping or dusting and push with the leading edge, sweeping all areas into one pile and picking up with a vacuum;
- use chemical cleaners and soaks to minimize force needed for scrubbing;
- frequently change mopping styles when mopping (e.g., push/pull, and rocking side to side) to alternate stress on muscles;
- be sure buckets, vacuums, and other cleaning tools have wheels or are on wheeled containers with functional brakes;
- alternate tasks or rotate employees through stressful tasks;
- avoid awkward postures while cleaning (e.g. twisting and bending);
- use carts to transport supplies rather than carrying;
- use buffers and vacuums that have lightweight construction and adjustable handle heights; and
- use spray bottles and equipment that have trigger bars rather than single finger triggers.

Resources

1. Repetitive Motion Injuries, Code of California Regulations, Title 8, Section 5110, Regulatory Text, California Division of Occupational Safety and Health, Department of Industrial Relations.
2. Elements of Ergonomics Programs: A Primer on Workplace Evaluations of Musculoskeletal Disorders, NIOSH Publication.
3. Safety and Health Topics: Ergonomics, OSHA Publication.
4. Hospital eTool-Healthcare Wide Hazards: Ergonomics.

Chapter 17: Other Miscellaneous Cal/OSHA General Safety Standards

First Aid

According to T8 CCR§3400, employers must make sure first-aid trained personnel are available to provide quick and effective first aid and appropriate first-aid supplies are readily available. A medical facility is a self-contained unit for medical care; hence first aid kit is not required. Dental and Veterinary facilities must comply with this section.
The first aid supplies must be appropriate to:

- Your occupational setting.
- The response time of your emergency medical services.

Note: First-aid kits from your local retailer or safety supplier should be adequate for most nonindustrial employers.

Make sure that first-aid supplies are:

- Easily accessible to all your employees.
- Stored in containers that protect them from damage, deterioration, or contamination. Containers must be clearly marked, not locked, and may be sealed.
- Able to be moved to the location of an injured or acutely ill worker.
- Stretchers and blankets, or other adequate warm covering may be required unless ambulance service is available within 30 minutes under normal conditions.
- Make sure emergency washing facilities are functional and readily accessible.

Provide emergency eyewash:

- When there is potential for an employee's eyes to be exposed to corrosives, strong irritants, or toxic chemicals.
- That irrigates and flushes both eyes simultaneously while the user holds their eyes open.
- With an on-off valve that activates in one second or less and remains on without user assistance until intentionally turned off.
- That delivers at least 0.4 gallons (1.5 liters) of water per minute for fifteen minutes or more.

Make sure emergency washing facilities:

- Are located so that it takes no more than ten seconds to reach.
- Are kept free of obstacles blocking their use.
- Function correctly.
- Provide the quality and quantity of water that is satisfactory for emergency washing purposes.

Consumption of Food and Beverages [T8 CCR§3368]

According to this section, food and beverages must not be stored or consumed in a toilet room or in an area where they may be contaminated by any bloodborne pathogen or other toxic material. Receptacles used for food wastes must be emptied once every day and must be maintained in a clean and sanitary condition. Covers must be provided for these receptacles unless sanitary conditions can be maintained without them.

Housekeeping

General Requirements [T8 CCR§3362(a),(b) and (c)]

- Keep all areas of your workplace, passageways, storage rooms, and service rooms in a clean, orderly and sanitary condition to the extent the nature of the work allows.
- Sweep and clean your workplace in a way that minimizes dust in the air as much as possible.
- When practical, clean after hours so that your employees are not exposed to dust in the air on the job.
- Keep your workplace free of obstacles that interfere with cleaning.
- Keep your workplace clear of obstructions such as nails, splinters, loose boards and unnecessary holes and openings to make cleaning easier and more effective.

Control Pests in your Workplace [T8 CCR§3362(f)]

By handling dead or live pests including their waste products, attached parasites and other contaminated materials, employees may be exposed to certain health

risks. These risks include, but are not limited to: Hanta virus, rabies, lyme disease and psittacosis.

- Make sure each building in your workplace is constructed, equipped and maintained so it restricts pests from entering or living in it. Pests include animals such as:
    - Rodents (rats, mice, and squirrels).
    - Birds (starlings, pigeons, and swallows).
    - Insects (bees, wasps, and mosquitoes).
- Take steps to effectively control pests in your workplace, if they are detected.
    - Carry out a continuing and effective control program in the areas of your workplace where pests have been detected.

Make sure floors are maintained in a safe condition.

This rule requires employers to keep floors free of debris. It extends to:

- Buildings
- Platforms
- Walkways and driveways
- Storage yards
- Docks

The floor must have a nonslip coating on all polished floors.

Storage Areas

- Store materials so they do not create a hazard.
- Keep workplace storage areas free from accumulation of materials that could create hazards from tripping, fire, or explosion.
- Secure stored items such as bundles, containers, and bags to prevent them from falling, sliding, or collapsing by doing one or more of the following:
    - Stacking
    - Racking
    - Blocking
    - Interlocking

    - Otherwise securing them
- Make sure stored items are limited in height so that they are stable and secure to prevent sliding or collapse.

Drainage

- Keep your workroom floors dry, when practical.
- Do the following to help keep your employees dry if wet processes are used in your work area:
    - Maintain drainage away from the work area;
    - Provide false floors, platforms, or other dry places where employees can stand, where practical;
    - Provide appropriate waterproof footgear.

Prohibition of Smoking in the Workplace [T8 CCR§5148]

According to this section, employers must ensure that no person is allowed to smoke in an enclosed space at the place of employment. It is allowed when clear and prominent signs are displayed at the entrance of the building such as these:

- 'No Smoking'
- 'Smoking is Prohibited Except in Designated Areas'

Provision of Safe Drinking (Potable) Water [T8 CCR§3363]

Potable water is water that you can safely drink that meets specific safety standards prescribed by the United States Environmental Protection Agency's National Interim Primary Drinking Water Regulations, published in 40 CFR Part 141, and 40 CFR 147.2400.

Mandatory requirements for employers to do are:

- Employers must provide safe drinking (potable) water for employees for washing themselves, personal service rooms, cooking, washing premises where food is prepared or processed and washing food, eating utensils, or clothing.
- Make sure when providing movable or potable drinking water dispensers that they are capable of being closed, kept in sanitary condition and equipped with a tap.
- Prohibit employees from using shared drinking cups or utensils and using open containers such as barrels, pails, and tanks that require employees to dip or pour drinking water, even if the containers have covers.

Personal service rooms are defined as rooms that are used for activities not directly connected with a business' production or service function such as first aid, medical services, dressing, showering, bathrooms, washing and eating.

Clearly Mark Water Outlets

Mark water outlets that are not fit for drinking (non-potable) such as those used for industrial processes or firefighting, so they will not be used for:

- Drinking
- Washing themselves, except in emergencies
- Cooking
- Washing food, eating utensils, or clothing

Prohibit the use of non-potable water containing substances that could create unsafe conditions such as lead or chlorine and fecal coliform bacteria.

Bathrooms and Washing Facilities [T8 CCR§3364]

You must:

1. Provide bathrooms with the appropriate number of toilets for your employees at every workplace.
    a. Have an appropriate number of toilets for each gender, based on the number of male and female employees at your workplace.
    b. For example, if you have 37 men and 17 women, you need to have 3 toilets for the men and 2 toilets for the women.

c. Make sure each toilet is in a separate compartment with a door and walls or partitions for privacy.

2. Provide toilet paper and a toilet paper roll holder for each toilet.
3. Make sure bathrooms are maintained in a clean and sanitary condition.
4. Make sure the sewage disposal method does not endanger the health of employees.

Separate bathrooms for men and women are not required if the bathroom:

- If there are fewer than five employees.
- Will only be occupied by one person at a time.
- Can be locked from the inside.
- Contains at least one toilet.

Required Number of Employee Toilets at Every Workplace	
Maximum Number of Employees Present at Any One Time During a Shift	**Minimum Number of Toilets Required****
1 to 15	1
16 to 35	2
36 to 55	3
56 to 80	4
81 to 110	5
111 to 150	6
Over 150	One additional toilet for each additional 40 employees

Provide Convenient and Clean Washing Facilities

You must:

- Provide convenient and clean washing facilities for employees including:
    - Sinks or basins for personal washing.
    - Hot and cold water, or lukewarm (tepid), running water in each sink and basin.
    - Hand soap or similar cleaning agents.
    - One of the following:
        - Individual paper or cloth hand towels
        - Individual sections of clean continuous cloth toweling

- Warm air blowers for drying hands, located near the sinks and basins.

Eating Areas and Food Service

Make sure eating areas are safe and healthy

- Make sure employees are not allowed to eat and drink in:
  - Bathrooms.
  - Areas exposed to toxic substances.
- Make sure food is not stored in bathrooms or areas exposed to toxic substances.

Garbage and Waste Disposal

- Make sure garbage containers are:
  - Kept in a clean and sanitary condition.
  - Made from smooth, corrosion resistant materials.
  - Easily cleaned or are disposable.
  - Equipped with a solid tight-fitting cover unless you can keep them in a sanitary condition without a cover.
- Provide enough garbage containers to make sure they:
  - Are conveniently located to encourage their use.
  - Won't be overfilled.

Remove garbage and waste in a way that does not create a health hazard

Remove all sweepings, solid and liquid wastes, refuse, and garbage as often as needed to keep the workplace in a sanitary condition. Please sign up for medical waste pick up and disposal with a transporter to ensure that medical wastes are removed periodically. Also, please ensure that all hazardous chemical wastes are disposed off timely.

Provide a separate lunchroom if employees are exposed to toxic substances

Maximum Number of Employees Using Lunchroom at One Time	
Number of Persons	Number of Persons
25 and less	25 and less
26–74	26–74
75–149	75–149
150 and over	150 and over

Resources

1. 'Sanitation', Code of California Regulations, Title 8, Sections 3360–3374, Regulatory text, California Occupational Safety and Health, Department of Industrial Relations.

Conclusion

This manual encompasses chapters from relevant Cal/OSHA regulations that a medical office must comply. We have incorporated several federal regulations as well. All State OSHA Programs must establish job safety and health standards that are "at least as effective as" comparable federal standards. Cal/OSHA, amongst all state programs, has extensive regulations for all industries.

You will find training materials in this manual to help you train your staff. New-hire training is mandatory for employees – even though they had prior OSHA training – to become familiar with the safety tasks and procedures that exist at your facility. According to Cal/OSHA regulations, every facility must have written safety plans. You have been provided documentation kit in a binder and/or in a word format in the welcome CD. Please complete the safety plans in the kit. An annual review of the facility's safety plans such as the exposure control plan and hazard communication plan is not only important but also mandatory.

Cal/OSHA is not a fiendish agency. It is relatively easy to comply with their regulations, if a good faith effort is put in. Every procedure must be "safety" friendly. Your office must be kept free of clutter, presentable, and always ready for inspection. Hazard communication labels, tags and signs (T8 CCR §3340) are your first line of defense to avoid OSHA citations. It presents a picture that you are serious about complying with Cal/OSHA standards. Mandatory safety equipment and PPE must be part of Cal/OSHA regalia. The documentation with mandated safety plans must be complete. Medical and training records of each employee must be updated and ready for inspection. Under these circumstances, there's no way Cal/OSHA can cite you for lack of compliance.

We, at Gamma Compliance Solutions have taken diligent efforts to prepare a manual that is simple, accurate, comprehensive, and current. If we have omitted some regulations, please inform us; we will be happy to include them. If you find any inaccuracies in this manual, we request you to notify us so that we can correct them.

Thank you for allowing us to be part of your Cal/OSHA compliance.

The Gamma Compliance Solutions Team

Appendix A: Compliance Checklist

Here is a full list of what you must have in order to be Cal/OSHA compliant:

1. Injury and Illness Prevention Program in writing.
2. Job Assessment for PPE in writing.
3. Written exposure control plan (ECP).
4. Hepatitis immunization records, including declination forms signed by employees (*declination found in the Welcome Kit > Documentation Kit > Exposure Forms)*.
5. Written hazard communication plan.
6. List of the inventory of hazardous chemicals.
7. SDS and labels for all chemicals available at the facility.
8. Copy of the sharps injury log (if applicable).
9. Copy of the safety evaluation form for selection of safety syringes (*found in the Welcome Kit > Documentation Kit > Equipment Selection Forms)*.
10. Job Safety and Health Law- Cal/OSHA Safety Poster.
11. Log of Work-related Injury and Illnesses (OSHA Log 300) (if applicable).
12. Injury and Illnesses Incident Report (OSHA Log 301) (if applicable).
13. Summary of Work-related Injuries and Illnesses (OSHA Form 300A) (if applicable).
14. Copy of Bloodborne Pathogen Standard Booklet (*found in the Welcome Kit > Supporting Materials*).
15. Copy of Hazard Communication Standard Booklet (*found in the Welcome Kit > Supporting Materials*).
16. Annual training record for employees including documentation of PPE training.
17. Medical records for all employees.
18. Copy of emergency action plan (for facilities with eleven or more employees).
19. Written fire prevention plan (for employers with eleven or more employees).
20. Schedule for housekeeping and decontamination.
21. Written contract for waste disposal, the vendor's registration, and insurance documentation.
22. Portable fire extinguishers inspection and maintenance records.

23. Heating Ventilation and Air Conditioning (HVAC) inspection and maintenance records.

Items required by law to be in compliance.

1. Personal protective equipment (PPE) for all employees, including masks, gloves, gowns, face shields, and respirators such as N95, P100, or PAPRS.
2. Waste disposal containers, including sharps containers for disposal of all sharps.
3. Exit signs.
4. Evacuation plan prominently posted for all employees to see.
5. Hand and eye wash stations.
6. Smoke detectors.
7. Fire extinguishers.
8. Employee alarm system.

Appendix B: Aerosol Transmissible Diseases/Pathogens

This appendix contains a list of diseases and pathogens which are to be considered aerosol transmissible pathogens or diseases for the purpose of Section 5199. Employers are required to provide the protections required by Section 5199 according to whether the disease or pathogen requires airborne infection isolation or droplet precautions as indicated by the two lists below.

Diseases/Pathogens Requiring Airborne Infection Isolation

- Aerosolizable spore-containing powder or other substance that is capable of causing serious human disease, e.g. Anthrax/*Bacillus anthracis*
- Avian influenza/Avian influenza A viruses (strains capable of causing serious disease in humans)
- Varicella disease (chickenpox, shingles)/Varicella zoster and Herpes zoster viruses, disseminated disease in any patient. Localized disease in immunocompromised patient until disseminated infection ruled out
- Measles (rubeola)/Measles virus
- Monkeypox/Monkeypox virus
- Novel or unknown pathogens
- Severe acute respiratory syndrome (SARS)
- Smallpox (variola)/Varioloa virus
- Tuberculosis (TB)/*Mycobacterium tuberculosis* -- Extrapulmonary, draining lesion; Pulmonary or laryngeal disease, confirmed; Pulmonary or laryngeal disease, suspected
- Any other disease for which public health guidelines recommend airborne infection isolation

Diseases/Pathogens Requiring Droplet Precautions

- Diphtheria pharyngeal
- Epiglottitis, due to Haemophilus influenzae type b
- Haemophilus influenzae Serotype b (Hib) disease/Haemophilus influenzae serotype b -- Infants and children
- Influenza, human (typical seasonal variations)/influenza viruses
- Meningitis

    - Haemophilus influenzae, type b known or suspected
    - Neisseria meningitidis (meningococcal) known or suspected
- Meningococcal disease sepsis, pneumonia (see also meningitis)
- Mumps (infectious parotitis)/Mumps virus
- Mycoplasmal pneumonia
- Parvovirus B19 infection (erythema infectiosum)
- Pertussis (whooping cough)
- Pharyngitis in infants and young children/Adenovirus, Orthomyxoviridae, Epstein-Barr virus, Herpes simplex virus,
- Pneumonia
- Adenovirus
- Haemophilus influenzae Serotype b, infants and children
- Meningococcal
- Mycoplasma, primary atypical
- Streptococcus Group A
- Pneumonic plague/Yersinia pestis
- Rubella virus infection (German measles)/Rubella virus
- Severe acute respiratory syndrome (SARS)
- Streptococcal disease (group A streptococcus)
- Skin, wound or burn, Major
- Pharyngitis in infants and young children
- Pneumonia
- Scarlet fever in infants and young children
- Serious invasive disease

Appendix C: NAICS Code: 6211 Offices of Physicians

Listed below are the standards which were cited by **California OSHA** for the specified NAICS Code during the period October 2024 through September 2025. Penalties shown reflect current rather than initial amounts.

Standard	Citations	Inspections	Penalty	Description
Total	6	3	$13,680	All Standards cited for Offices of Physicians
64010009	2	1	$1,500	--- No Description Found ---
3395(C)	1	1	$6,750	--- No Description Found ---
3395(H)	1	1	$5,060	--- No Description Found ---
3395(I)	1	1	$185	--- No Description Found ---
5199(D)(	1	1	$185	--- No Description Found ---

Source: Frequently cited OSHA Standards, www.osha.gov, 2025

Listed below are the standards which were cited by **California OSHA** for the specified NAICS Code during the period October 2023 through September 2024. Penalties shown reflect current rather than initial amounts.

Standard	Citations	Inspections	Penalty	Description
Total	16	5	$25,005	All Standards cited for Offices of Physicians
3203(A)	3	3	$1,135	--- No Description Found ---
23200002	2	1	$7,310	--- No Description Found ---
342(A)	2	2	$8,000	--- No Description Found ---
5193(C)(	2	1	$935	--- No Description Found ---
23200006	1	1	$6,750	--- No Description Found ---
3203(A)(	1	1	$0	--- No Description Found ---
3342(C)	1	1	$185	--- No Description Found ---
3342(D)	1	1	$185	--- No Description Found ---
3342(F)	1	1	$185	--- No Description Found ---
3342(H)	1	1	$185	--- No Description Found ---
43000040	1	1	$135	--- No Description Found ---

Source: Frequently cited OSHA Standards, www.osha.gov, 2024

Listed below are the standards which were cited by **California OSHA** for the specified NAICS Code during the period October 2022 through September 2023. Penalties shown reflect current rather than initial amounts.

Standard	Citations	Inspections	Penalty	Description
Total	9	3	$14,215	All Standards cited for Offices of Physicians
3203(A)	2	2	$695	--- No Description Found ---
3342(E)	2	2	$750	--- No Description Found ---
3342(F)	2	2	$4,085	--- No Description Found ---
3342(C)(	1	1	$8,435	--- No Description Found ---
3342(D)	1	1	$0	--- No Description Found ---
43000004	1	1	$250	--- No Description Found ---

Source: Frequently cited OSHA Standards, www.osha.gov, 2023

Listed below are the standards which were cited by **California OSHA** for the specified NAICS Code during the period October 2021 through September 2022. Penalties shown reflect current rather than initial amounts.

Standard	Citations	Inspections	Penalty	Description
Total	15	5	$64,045	All Standards cited for Offices of Physicians
5199(C)(	4	1	$2,240	--- No Description Found ---
3203(A)	2	2	$1,495	--- No Description Found ---
342(A)	2	2	$10,000	--- No Description Found ---
5199(G)(	2	2	$400	--- No Description Found ---
3302(A)	1	1	$22,500	--- No Description Found ---
43000004	1	1	$375	--- No Description Found ---
5144(G)(	1	1	$5,060	--- No Description Found ---
5199(D)(	1	1	$21,600	--- No Description Found ---
780(A)	1	1	$375	--- No Description Found ---

Source: Frequently cited OSHA Standards, www.osha.gov, 2022

Listed below are the standards which were cited by **California OSHA** for the specified NAICS Code during the period October 2020 through September 2021. Penalties shown reflect current rather than initial amounts.

Standard	Citations	Inspections	Penalty	Description
Total	23	10	$127,105	All Standards cited for Offices of Physicians
5199(C)(	6	2	$69,000	--- No Description Found ---
342(A)	3	3	$15,000	--- No Description Found ---
3203(A)	2	2	$5,820	--- No Description Found ---
3203(A)(	2	2	$570	--- No Description Found ---
3205(C)(	1	1	$300	--- No Description Found ---
3382(A)	1	1	$1,000	--- No Description Found ---
43000029	1	1	$375	--- No Description Found ---
5199(D)	1	1	$530	--- No Description Found ---
5199(E)(	1	1	$11,475	--- No Description Found ---
5199(G)	1	1	$9,000	--- No Description Found ---
5199(G)(	1	1	$935	--- No Description Found ---
5199(H)(	1	1	$11,475	--- No Description Found ---
5199(I)(	1	1	$1,125	--- No Description Found ---
5199(J)(	1	1	$500	--- No Description Found ---

Source: Frequently cited OSHA Standards, www.osha.gov, 2021

Listed below are the standards which were cited by **California OSHA** for the specified NAICS Code during the period October 2019 through September 2020. Penalties shown reflect current rather than initial amounts.

Standard	Citations	Inspections	Penalty	Description
Total	3	3	$8,035	*All Standards cited for Offices of Physicians*
3273(A)	1	1	$935	*--- No Description Found ---*
5193(D)(	1	1	$350	*--- No Description Found ---*
5199(G)(	1	1	$6,750	*--- No Description Found ---*

Source: Frequently cited OSHA Standards, www.osha.gov, 2020

Listed below are the standards which were cited by **California OSHA** for the specified NAICS Code during the period October 2018 through September 2019. Penalties shown reflect current rather than initial amounts.

Standard	Citations	Inspections	Penalty	Description
Total	10	4	$57,465	*All Standards cited for Offices of Physicians*
3314(G)(	2	1	$1,200	*--- No Description Found ---*
3203(A)	1	1	$560	*--- No Description Found ---*
3203(A)(	1	1	$600	*--- No Description Found ---*
3314(C)	1	1	$18,000	*--- No Description Found ---*
3314(L)(	1	1	$18,000	*--- No Description Found ---*
3342(C)	1	1	$18,000	*--- No Description Found ---*
3395(H)(	1	1	$450	*--- No Description Found ---*
3395(I)	1	1	$450	*--- No Description Found ---*
5193(C)(	1	1	$205	*--- No Description Found ---*

Source: Frequently cited OSHA Standards, www.osha.gov, 2019

Listed below are the standards which were cited by **California OSHA** for the specified NAICS Code during the period October 2017 through September 2018. Penalties shown reflect current rather than initial amounts.

Standard	Citations	Inspections	Penalty	Description
Total	17	6	$24,720	All Standards cited for Offices of Physicians
3203(A)	5	5	$1,375	No Description Found
5193(C)(	3	3	$7,310	No Description Found
3328(B)	1	1	$300	No Description Found
3380(F)(	1	1	$375	No Description Found
43000040	1	1	$375	No Description Found
5162(A)	1	1	$6,750	No Description Found
5193(D)(	1	1	$560	No Description Found
5193(G)(	1	1	$6,750	No Description Found
5193(H)(	1	1	$375	No Description Found
5194(E)(	1	1	$420	No Description Found
6151(E)	1	1	$130	No Description Found

Source: Frequently cited OSHA Standards, www.osha.gov, 2018

Appendix D: Sample Inspection Statistics and Citations

Given below is the copy of an OSHA inspection report. The names and details of the facilities have been kept private to protect the identities of the employers.

Inspection: 1664985.015				
Nr:	1664985.015	Report ID:	0950643	
Name:	XXXXX	Open Date:	04/19/2023	
Address:	XXXXX	Union Status:	NonUnion	
SIC:		XXXXX		
NAICS:		621112/ Offices of Physicians, Mental Health Specialists		
Inspection Type:	Accident			
Scope:	Partial	Advanced Notice:	N	
Ownership:	Private			
Safety/Health:		Close Conference:	08/08/2023	
Emphasis		Close Case:	08/28/2023	
Case Status: CLOSED				

Violation Summary						
	Serious	Willful	Repeat	Other	Unclass	Total
Initial Violations				2		2
Current Violations				2		2
Initial Penalty	$0	$0	$0	$810	$0	$810
Current Penalty	$0	$0	$0	$810	$0	$810
FTA Penalty	$0	$0	$0	$0	$0	$0

ID	Type	Standard	Issuance	Abate	Curr$	Init$	Fta$	LastEvent
01001	Other	43000004 A	08/10/2023		$250	$250	$0	Z - Issued
01002	Other	3203(A)	08/10/2023		$560	$560	$0	Z - Issued