# Guidelines for an Occupational Safety and Health Program

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Twenty years ago, if occupational health nurses had been asked what safety related tasks they performed, they might have responded: "I don't have any safety responsibilities," "I teach CPR and first aid courses," or "I'm only here to administer the workers' compensation program."

For many occupational health nurses today, the situation is very different. More and more, occupational health nurses are taking an active role in the entire area of occupational safety and health. Today, the dichotomy between safety and health is less.

Passage of the Occupational Safety and Health (OSH) Act of 1970 has reduced this division by implying that occupational safety and health programs should be managed as a single function. This has given many occupational health nurses the opportunity to expand their roles by working more closely with the safety professionals in their workplace or by assuming the responsibility for safety themselves.

Recently, the Occupational Safety and Health Administration (OSHA) published "Occupational Safety and Health Administration Guidelines on Workplace Safety and Health Program Management" in the *Federal Register* (U.S. Dept. of Labor, 1989). These were issued as voluntary guidelines. Given the evidence from these exemplary programs and other sources—that systematic management policies, procedures, and practices can have a major impact on the incidence of many illnesses and injuries—OSHA believes that such guidelines are both reasonable and advisable.

The elements of safety and health programs outlined by OSHA represent "a distillation of the means, methods, and processes already in use at worksites where safety and health conditions are exceptionally good" (U.S. Dept. of Labor, 1988). These basic elements were derived from exemplary worksite safety and health programs. If occupational health nurses are to be contributing members of the occupational safety and health team, they must understand the minimum basic elements of safety programs and why these elements are important in providing safe and healthful workplaces.

Since these elements cover the most basic aspects of a safety program, they will be used in this article as a discussion guide for the occupational health nurse. These elements can be utilized in the development of a safety and health program for the workplace or by the occupational health nurse who wishes to work more effectively with the safety staff.

Prior to discussing the OSHA guidelines, the occupational health nurse must realize that the goal of management is efficient production. One philosophy of effective safety and health consistent with this management goal is: "We do not want production and a safety program, production and safety, or production with safety—but rather, we want safe production" (Petersen, 1978). Therefore, a safety and health program must be a planned, organized effort to control injuries, illnesses, and capital losses yielding efficient production. This approach is not unlike the methods used in planning for nursing care.

## OSHA GUIDELINES FOR GENERAL SAFETY AND HEALTH PROGRAMS

OSHA addresses this concept of safe production in the following section. (The OSHA guidelines will be noted in italics; related comments will follow in regular type.)

*General. (1) Employers are advised and encouraged to institute and maintain in their establishments a program which provides systematic policies, procedures, and practices that are adequate to recognize and protect their employees from occupational safety and health hazards.*

*(2) An effective program includes provisions for the systematic identification, evaluation, and prevention or control of general workplace hazards, specific job hazards, and potential hazards arising from foreseeable conditions.*

*(3) Although compliance with the law, including specific OSHA standards, is an important objective, an effective program looks beyond specific requirements of law to address all hazards. It will seek to prevent injuries and illnesses, whether or not compliance is at issue.*

*(4) The extent to which the program is described in writing is less important than how effective it is in practice. As the size of a worksite or the complexity of a hazardous operation increases, however, the need for written guidance increases to ensure clear communication of policies and priorities, and consistent and fair application of rules.*

What is this program? Does it sound mysterious, complex, or overwhelming? Nurses need not be intimidated because they have probably planned similar programs for many years. Nurses have learned to

plan client care as an organized, systematic program.

They identify a need, define a nursing care goal, and develop the objectives needed to accomplish that goal. They must also select appropriate methods of meeting those objectives and be able to justify the method of care they have chosen. The final step of the client care program requires the occupational health nurse to evaluate the effectiveness of nursing care and modify the care plan in response to the client's changing needs.

Developing a safety and health program follows the same logical steps. Many occupational health nurses may have been responsible for the development of an occupational health program for their employer. Again, the same logical steps were followed. These steps only need to be applied to injury prevention and loss control activities for the safety program. The elements of effective safety programs, according to OSHA, follow logical steps similar to those used in developing a client care plan or an employee health program.

## FOUR MAJOR ELEMENTS OF SAFETY AND HEALTH PROGRAMS

The individual components of a safety and health program will vary with the size of a facility, the type of work done in the facility, and the philosophy of the safety manager. No hard and fast rules dictate which components must be incorporated into a program. However, OSHA has suggested that safety and health programs contain, at a minimum, the following four components: management commitment and employee involvement, worksite analysis, hazard prevention and control, and safety and health training.

### Management Commitment and Employee Involvement

This is probably the most important element of any program that management wants to initiate or continue. This element should relate a message to all levels of the company that safety and health must be managed in the same manner that product cost, quality, and quantity are managed. Additionally, this commitment should clearly indicate that the company is willing to dedicate the time and resources to achieve its safety and health goals and objectives.

Through this commitment, management will motivate its entire organization to commit to implementation of the program. Employees are encouraged to participate in development and application of the company's overall program. Both the company and the workers then have the same understanding of the meaning, importance, and value of safety and health.

*(i) State clearly a worksite policy on safe and healthful work and working conditions, so that all personnel with responsibility at the site and personnel at other locations with responsibility for the site understand the priority of safety and health protection in relation to other organizational values.*

OSHA has suggested that a program provide for policies, procedures, and practices. The employer's safety policy is the "taproot" of the safety program. That is, the safety and health program starts from a safety policy issued by upper management which then nurtures the remainder of the program. The policy outlines management's commitment to the workplace safety and health program.

*(ii) Establish and communicate a clear goal for the safety and health program and objectives for meeting that goal, so that all members of the organization understand the results desired and the measures planned for achieving them; and*

*(iii) Provide visible top management involvement in implementing the program, so that all will understand that management's commitment is serious.*

Without clear goals and objectives, a program has no direction. These goals and objectives must be communicated to *all* employees so that everyone understands the direction the organization wants to take. Upper management must ensure the credibility of their commitment by actual demonstrations of their involvement in safety and health concerns. They should lead by example and:

- Participate in safety meetings and safety committees,
- Participate in accident investigations,
- Conduct safety inspections, and
- Observe the workplace for safe and unsafe conditions and practices.

*(iv) Provide for and encourage employee involvement in the structure and operation of the program and in decisions which affect their safety and health, so that they will commit their insight and energy to achieving the safety and health program's goal and objectives.*

Employee participation does not mean transferring the burden of responsibility for safety to the employee. The responsibility for safety and health protection has clearly been placed upon the employer by the OSH Act. This portion of the guidelines addresses the important role that employees have in knowing their jobs and associated hazards.

The result of employee involvement is improved morale and an overall strengthening of the employer's safety and health program. Employees may be involved in: inspecting for hazards and recommending corrections or controls for hazards; analyzing jobs to locate potential hazards and developing safe work procedures; developing or revising safe work rules; training new employees in safe work procedures and rules; providing programs and presentations for safety meetings; and assisting in accident investigation.

*(v) Assign and communicate responsibility for all aspects of the program, so that managers, supervisors, and employees in all parts of the organization know what performance is expected of them.*

Two-way communication between

management and employees—both about organizational goals and objectives and about expectations of individuals—is critical. If everyone does not understand what is expected of them and why, they are unlikely to perform as desired.

*(vi) Provide adequate authority and resources to responsible parties, so that assigned responsibilities can be met.*

Authority is defined as the right to correct, command, and determine courses of action (U.S. Dept. of Labor, 1988b). Individuals given the responsibilities for meeting the goals of the occupational safety and health program must also be given the authority and the resources (capital, personnel, budget) to fulfill those responsibilities. Otherwise, it is unlikely that they will be successful in meeting management's safety and health goals.

*(vii) Hold managers, supervisors, and employees accountable for meeting their responsibilities, so that essential tasks will be performed.*

After assigning responsibility and providing the necessary authority and resources to accomplish safety and health program goals and objectives, it is essential to hold accountable those who are responsible for achieving them. Systems of accountability (i.e., performance evaluations or program evaluations) should include recognition for competent performance and correction of inadequate performance. When a refusal to follow safe and healthful practices is at issue, consistently applied disciplinary procedures for enforcing those practices are essential.

*(viii) Review program operations at least annually to evaluate their success in meeting the goal and objectives, so that deficiencies can be identified and the program and/or the objectives can be revised when they do not meet the goal of effective safety and health protection.*

This is a critical element of an occupational safety and health program, or, for that matter, any program. If routine program evaluations are not conducted, it is impossible to know whether the established goal can be met. The program, as originally established, may not be adequate to protect against the worksite hazards. A safety and health audit can determine the strengths and weaknesses of the program in meeting the established goal.

**If routine program evaluations are not conducted, it is impossible to know whether the established goal can be met.**

Occupational health nurses are often far better prepared than many other professionals at the facility to systematically develop such a program. Most nurses approach all aspects of client care in an organized way. Occupational health nurses' education and training have enhanced their ability to communicate with all levels of management.

Communication with upper management regarding their role in the safety and health program, necessary resources, and program evaluations must be accomplished with finesse and competence. Communication with labor must be approached with respect and concern. Occupational health nurses' experiences in dealing with both physicians and clients make them well prepared to communicate with all levels of the work force.

Once a policy acceptable to upper management has been developed, the safety staff must create programs and procedures for meeting the policy goals. Naturally, these programs and procedures must address the hazardous exposures within the workplace. Therefore, the safety staff needs to conduct a worksite analysis to determine the exposures and potential exposures.

### Worksite Analysis

Worksite analysis involves active examination of the workplace to identify not only existing hazards, but also conditions and operations in which changes might create hazards. Identifying those hazards that are recognized in a particular industry is a critical foundation for safety and health protection.

An effective program will not stop at this point, however. It will continually review working conditions and operations (to identify hazards not previously recognized in the industry), and conditions and operations that may change to create a hazard.

It is OSHA's view that the identification of hazards and potential hazards, site inspections or safety inspections, a hazard identification system, accident investigations, and analysis of injury and illness trends are essential elements which should be incorporated into the worksite analysis portion of safety and health programs.

This second component of OSHA's guidelines recommends five elements for conducting a worksite analysis:

*(i) So that all hazards are identified:*
- *(A) Conduct comprehensive baseline worksite surveys for safety and health and periodic comprehensive update surveys;*
- *(B) Analyze planned and new facilities, processes, materials, and equipment; and*
- *(C) Perform routine job hazard analyses.*

Periodic comprehensive surveys of the worksite provide an opportunity to step back from the routine checks for previously recognized hazards and look for other hazards. The comprehensive survey will need to be

conducted by someone with expertise in identifying unsafe conditions, since this type of survey will have a very broad scope. Additionally, it will be difficult to develop a checklist type of tool for conducting this survey. The competent person will look beyond the items previously identified in a checklist for conditions that have changed since the last inspection, possibly resulting in existing or foreseeable hazards.

The frequency with which comprehensive surveys are needed depends on the complexity, the inherent hazards, and changeability of the worksite. Many successful worksites conduct this review on an annual or biannual basis, whereas others, such as construction sites, may require more frequent reviews.

Two hazard analysis tools frequently are used for incorporating safety and health control measures into the production planning process. The job hazard analysis (JHA) is useful for planning control measures into stable work situations, as in manufacturing. Phase hazard analysis is more applicable for planning control measures into changing work processes, as commonly found in construction.

The JHA is a simple process involving four steps:

- Select the job to be analyzed.
- Separate the job into steps.
- Identify the hazards associated with each step.
- Select appropriate measures to control the hazard.

The Figure illustrates the type of form used in conducting the JHA. This form can be modified if desired, but all of the columns—job steps, hazards, and safe procedures—should be included on every form (Eninger, 1982).

JHAs first should be completed on jobs which have proven to be especially hazardous. These include those that have a history of many accidents (regardless of injury severity), a history of serious injury accidents, or a potential for serious injury.

JHAs can be performed by an individual, but the use of a small committee seems to yield the best results (U.S. Dept. of Labor, 1988). This is an excellent way to involve employees in the safety program. This simple tool is one of the most effective ways of identifying and controlling job hazards.

The phase hazard analysis is more complicated, since the individual preparing the analysis must be familiar with the many activities to be performed in a phase of a large project. The large project must be divided into generic phases of work. For example, a typical construction project may have phases such as site preparation, foundation excavation, foundation erection, structure erection, interior follow up, and landscaping. With the constantly changing work processes come changing hazard exposures. The employer must plan the control measures in advance so that the controls are implemented as the work process evolves.

New processes, materials, and equipment should be analyzed before use as well as when they are first introduced into the workplace. This provides an opportunity to prevent the introduction of new hazards. The results of accident investigations can also be used to stimulate job hazard analyses.

To protect the worker on a daily basis, OSHA has made the following recommendation:

*(ii) Provide for regular site safety and health inspections, so that new or previously missed hazards and failures in hazard controls are identified.*

Although continuous or incidental safety inspections should be conducted on a "keep your eyes open" basis by supervisors, competent persons, and workers alike, something more deliberate is necessary. As factors gradually change in an environment, they are not easily noticed. Eventually, an unsafe condition is accepted. For example, the insulating quality of a handtool gradually erodes. If not found during an inspection or reported by an employee, the defect could result in an electrocution.

The planned inspection uses a checklist specifically developed for the area to be inspected. JHAs can assist in defining the inspection area, pinpointing the items to inspect, deciding what parts to inspect, and determining the suspect conditions for inspection. If not detailed on a written form, it is very easy to miss gradually deteriorating conditions, inferior work practices, and changes in work procedures.

Job observation is another useful tool for supervisors and competent persons. It can be utilized to:

- Check the effectiveness of training.
- Detect implementation and violation of safety rules and standards.
- Detect safe as well as unsafe practices and use or non-use of personal protective equipment.
- Help employees understand their own work practices.
- Provide positive reinforcement for safe work practices.
- Identify employees needing retraining.
- Improve job procedures and safe work behaviors.

Despite the safety manager's efforts to keep the workplace hazard-free, accidents still may occur occasionally. OSHA stresses the necessity of further analysis of hazards in the workplace through their discussion of accident investigation.

*(iii) So that employee insight and experience in safety and health protection may be utilized and employee concerns may be addressed, provide a reliable system for employees, without fear of reprisal, to notify management personnel about conditions that appear hazardous and to receive timely and appropriate responses; and encourage employees to use the system.*

Because the worker has the best knowledge of the daily hazards associated with the job, the benefits of such a program are obvious. Most important, accidents may be prevented if problems are noted and corrected quickly. Employee interest in safety is heightened when their opinions and participation are requested.

More information can be obtained

**Operation ZERO**

# JOB SAFETY ANALYSIS WORKSHEET

Job _____

Occ. _____ Assigned To _____

Dept. _____ Date Due _____

Method Used ☐ Observation ☐ Group Discussion ☐ Other

**Participant employees:**

| 1. SEQUENCE OF BASIC JOB STEPS | 2. POTENTIAL ACCIDENTS/HAZARDS | 3. RECOMMENDED SAFE JOB PROCEDURES |
|---|---|---|
| • Break job down into basic steps<br>• Record in normal sequence of occurrence.<br>• Describe what, not how of each step.<br>• Check with experienced job doer.<br><br>EXAMPLE: Replace light bulb<br><br>1. Bring & set up ladder<br>2. Ascend ladder<br>3. Remove light globe<br>4. Replace light<br>5. Replace light globe<br>6. Descend ladder<br>7. Remove/store ladder | • Question each job step for potential accidents.<br>• Get ideas from (1) observing job being done, (2) discussing with employees, and/or recalling past accidents • Record and number each potential accident by combining the correct abbreviation (see below) with the agent of contact.<br>EX. SB - Roof fall<br><br>1. SB - Struck By<br>2. CB - Contacted By<br>3. SA - Struck Against<br>4. CW - Contact With<br>5. TI - Trapped In<br>6. CO - Caught On<br>7. (CB) Caught Between<br>8. F - Fall<br>9. S - Strain<br>10. E - Exposure To<br><br>Finish each step before going on. | • For each potential accident, decide exactly what employee should do or not do to avoid the accident. Be specific.<br>• Number each such recommended procedure to coincide with number assigned to potential accident in Column 2.<br>• Get ideas from (1) observing job, (2) discussing with job doers and/or recalling past accidents.<br>• Use simple do - don't statements. Be brief & specific.<br><br>EXAMPLES: Lock out main power switch<br>Keep feet inside shuttle car<br>Don't go beyond temporary supports<br>Don't pull cable around sharp corners<br><br>• Write as if talking to employee. Never record useless generalities, like be careful, be alert, use caution, etc.<br>• If applicable, cite published general safety rule code. |
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Figure: Job safety analysis worksheet. (Used with permission of Normax Publications, Inc.).

when an employee notifies company management about potential or real safety and health problems than by conventional accident investigation methods. Successful implementation of such a program demonstrates management's respect for the employee and sincere interest in employee safety (Petersen, 1976).

This program should incorporate procedures for prompt and appropriate correction of the hazards noted by employees. It must also be noted, however, that valid factors may delay the correction of hazards. They can include the complexity of the abatement technology, the degree of risk, and the availability of resources such as equipment, materials, and staff qualified to complete the correction.

An effective program will correct hazards in the shortest feasible time permitted by the nature of technology and availability of resources. It will also provide for interim protection when immediate correction is not possible. Without a credible and timely response, the notification program will be ineffective.

*(iv) Provide for investigation of accidents and "near miss" incidents, so that their causes and means for their prevention are identified.*

Accident investigations are intended to prevent the occurrence of similar accidents in the future. They should *not* be done to establish fault. If they are conducted with a fault-finding attitude, the information received will be biased and generally not useful in preventing similar accidents. The kinds of accidents that should be reported and investigated include accidents that cause worker injury, illness, property damage, or "near misses."

OSHA recommends conducting accident investigations to identify their causes. If only the "direct cause" of the accident is identified, many preventive strategies will be missed. Therefore, it is important to understand that many factors, causes, and sub-causes contribute to accidents.

The theory of multiple causation is that these factors combine together in random fashion, causing accidents (Petersen, 1978). Therefore, accident investigations should identify as many factors as possible that influenced the accident. Certainly, more than one act or one condition should be identified.

Accident investigation should not stop with the identification of the multiple causes of the incident. To make positive gains from the event, changes should be made in the interaction of people, machines, materials, methods, and physical and social environment. These changes result from recommendations based on the causal factors identified during the investigation. Again, the goal of these changes is the prevention of future accidents.

*(v) Analyze injury and illness trends over time, so that patterns with common causes can be identified and prevented.*

Surveillance is an excellent tool to help the program manager determine the components to be included in the program and which injury and illness problems will receive attention first. If a system is not in place for monitoring the incidence of injury and illness, the occupational health nurse will have difficulty determining major problem areas.

Surveillance is defined as the continued and close observation of the distribution and trends of disease or injury incidence (Simons, 1982). It is necessary to clearly delineate the extent of the injury and illness problems. The surveillance system should consist of a method of collecting information that can document the extent of these problems.

This information should be analyzed periodically and consolidated into meaningful arrangements such as tables, graphs, and charts to help pinpoint specific problem areas. Analysis involves comparing current data with some "normal" value, identifying differences between the two, and assessing the significance of these differences.

The "normal" data might be the employer's average facility experience over the past 5 years, or it might be the average experience of the entire industry (Accident Facts, 1987; U.S. Dept. of Labor, Bureau of Labor Statistics, 1988). Finally, the results of the analysis should be disseminated to management, as justification for programs and funding, and to employees as an educational tool.

Recordkeeping is an essential part of the surveillance system. *Recordkeeping Guidelines for Occupational Injuries and Illnesses* (U.S. Dept. of Labor, Bureau of Labor Statistics, 1986) discusses the regulations for maintenance of records of injuries and illnesses. These regulations are currently under review and revisions are expected in 1990. A copy of the new regulations should be requested and carefully reviewed as soon as they are available.

These regulations and any company policy specific to these regulations should be part of the written safety program. Copies of the recordkeeping form used in the workplace, as well as instructions for completing the forms, should be included. The recordkeeping policy should state when injuries will be reported, by whom and to whom, and the appropriate forms to be used.

The workplace should also maintain records related to employee training, equipment damage and status, and program evaluation. Again, recordkeeping is familiar to all nurses. Documentation of client progress is a critical element of any nurse's role. Working in concert with the company management, the nurse can be valuable in preparing the recordkeeping policies and procedures.

It is easy to see that the occupational health nurse can be very valuable in analyzing the worksite. Nurses are trained to observe. In a clinical setting, the nurse observes a client for changes in health status. While this type of observation will continue in the occupational setting, the worksite itself becomes the "client." The occupational health nurse can easily learn to observe changes in the work setting.

The knowledge of anatomy and

physiology makes job observation a logical start to an inspection program. When observing a worker performing a job, the occupational health nurse should ask such questions as: "Is the employee standing in a comfortable position, or is that person reaching and leaning in such a way that a back injury might occur?" or "Is the employee performing detailed work that might be stressful physically or psychologically?"

Looking at the worksite may not be an intuitive task. With well prepared inspection checklists, the occupational health nurse can begin the process of identifying the small and almost imperceptible changes that diagnose what is wrong with the "client."

The occupational health nurse can also play a major role in accident investigation. The communication skills gained in client interviewing are valuable when interviewing the accident victim. A non-threatening demeanor can elicit useful information. Occupational health nurses must be especially careful to maintain their perceived image as professionals who are more concerned with the cause of disease and injury rather than with fault finding.

Worksite analysis is the program component that identifies hazardous exposures in the workplace. This analysis involves the worker, all levels of supervision, and the safety staff. Once the exposures have been identified, the prudent approach is to prevent or control these exposures. The third component of the OSHA guidelines recommends program activities for the prevention and control of worksite hazards.

### Hazard Prevention and Control

Hazard prevention and control are triggered by the determination that a hazard or potential hazard exists. Where possible, hazards should be eliminated. Where potential hazards cannot be completely prevented, they should be controlled to prevent actual exposure. When exposure does occur, it should be corrected in a timely manner. The OSHA guidelines outline four components for

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hazard prevention and control:

*(i) So that all current and potential hazards, however detected, are corrected or controlled in a timely manner, establish procedures for that purpose, using the following measures:*

- *(A) Engineering techniques where feasible and appropriate;*
- *(B) Procedures for safe work which are understood and followed by all affected parties, as a result of training, positive reinforcement, correction of unsafe performance, and, if necessary, enforcement through a clearly communicated disciplinary system;*
- *(C) Provision of personal protective equipment; and*
- *(D) Administrative controls, such as reducing the duration of exposure.*

Several components typically seen in effective occupational safety and health programs are included in this section on hazard prevention and control.

Traditional safety practice prescribes a hierarchy of three broad categories of prevention and control measures. Controls from the engineering category should be considered first. The emphasis here is to "engineer" the hazard out of the process. If the hazard cannot be eliminated, then a guard or a barrier to separate the hazard from the employee should be developed. Control measures from the engineering category are considered to be the most effective because the worker is protected automatically.

If engineering controls are not possible, administrative controls should be implemented. The most common example of an administrative control is to limit exposure to the hazard by removing the employee from the environment totally or for parts of the shift.

Finally, if exposure to the hazard is still considered to be excessive, the employee should be fitted with the appropriate personal protective equipment. This third measure is considered to be the least effective of the three because employees must actively participate in their own protection.

Personal protective equipment (PPE) protects an employee from a known hazard, but it can be truly protective only if employees understand the need for the equipment, know how to use it, and understand its benefits and limitations. One critical aspect of any program is that it employ only high-quality, reliable, precisely maintained equipment with use and applications carefully documented.

The occupational health nurse should have a good understanding of the worker, the job process, and the PPE required for that job. Coupled with the nurse's basic education in human anatomy and physiology, preliminary assessments of a worker's ability to safely wear prescribed PPE can be made.

For example, it is known that respirators put additional stress on the human cardiovascular system. Therefore, the occupational health nurse should recommend that employees with a known cardiac condition or restrictive lung disease not wear respirators unless they are carefully evaluated and approval to do so is given by a qualified occupational health care provider.

As another example, some protective clothing prevents cooling by evaporation (perspiration); the occupational health nurse can assess

the employee's health status and make a preliminary determination about the ability to work in this "hot" environment.

Two distinct discipline measures are used in managing safety and health programs. The occupational health nurse, who functions as a safety manager, should be familiar with these measures and encourage their use when deemed necessary.

Preventive discipline is similar to preventive health care. These are actions taken to instill a sense of discipline before a problem arises. Preventive discipline entails doing those program activities that encourage employees to perform in the expected manner. Such activities include safety orientation, job safety training, recognition for proper work procedures, setting the example, and safety observation.

When preventive discipline fails, a discipline problem will be encountered. These are triggered by incorrect work practices, failure to follow safe work rules, or failure to wear furnished PPE. These situations must be corrected by reinstruction, persuasion, warnings, interviews, and eventual penalties. Lax enforcement of safe work practices and a missing sense of safety discipline usually occur because managers and supervisors have not done a sufficient job of preventing disciplinary problems. Building an attitude of safety discipline starts with measures that encourage employees to work safely.

As a complement to the three traditional control measures, safe work practices are extremely important to any preventive strategy. General safety rules that apply to every employee, and job rules that relate to specific jobs, are two program components used for the prevention and control of occupational hazards. These rules and practices can be as general or as specific and detailed as necessary, but every employee should understand the rules that they must follow. How these rules are to be enforced must also be addressed by the program.

This first recommended element, "ensuring the timely prevention and control of hazards," is all-encompassing. However, OSHA has included three additional elements that are considered essential in the hazard prevention and control component of a safety program.

*(ii) Provide for facility and equipment maintenance, so that hazardous breakdown is prevented.*

Equipment maintenance is important to preventing both personal injury and capital loss. A regular schedule of servicing, replacing, or repairing equipment at intervals frequent enough to avoid foreseeable breakdowns is an integral part of hazard control.

*(iii) Plan and prepare for emergencies, and conduct training and drills as needed, so that the response of all parties to emergencies will be "second nature."*

*(iv) Establish a medical program which includes availability of first aid on site and physician and emergency medical care nearby, so that harm will be minimized if an injury or illness does occur.*

Planning and training for emergencies and the availability of first aid and emergency health care are essential in minimizing the harmful consequences of accidents and injuries. An occupational health nurse strengthens this component of an occupational safety and health program in multiple ways.

An occupational health nurse on site will decrease health care costs by providing services that normally would be contracted to an outside provider. In many cases, the accident victim can receive emergency care in the health unit that is on site and be back at work very quickly. Preparing for emergencies by ensuring that supervisors and other employees receive first aid and CPR training by instructors certified by the American Red Cross or the American Heart Association is another important function.

Today, occupational health nurses are being challenged to utilize their knowledge and expertise in the identification, control, and practical abatement of hazards. This requires a close working relationship with line supervision, maintenance, engineering, and purchasing to determine practical resolutions.

Hazard prevention and control encompasses a variety of elements such as engineering changes, preventive maintenance, and emergency planning. Training of the workforce, managers, and the safety staff is essential for implementation of the hazard prevention and control program. OSHA's fourth component addresses safety and health training for all employees.

## Safety and Health Training

Safety and health training need not be elaborate, formal, or solely related to safety and health. Safety and health information and instruction is often most effective when incorporated into other training concerning performance requirements and job practices. This includes management training in performance evaluation, supervisors' training in the reinforcement of good work practices and the correction of poor ones, and employee training in the operation of a particular machine.

*(i) Ensure that all employees understand the hazards to which they may be exposed and how to prevent harm to themselves and others from exposure to these hazards, so that employees accept and follow established safety and health protections.*

Many places within the OSHA regulations mention the duty to inform employees about workplace hazards and to provide training that will enable employees to avoid work related injuries or illnesses. OSHA has found that successful safety and health management includes educating employees about their workplace hazards and training them to perform their work without harm. The cooperation of employees in identifying and controlling hazards is critical, not only for their own safety and health, but also for that of others.

The importance of education and training is reflected in the dispropor-

tionately high injury rates among workers newly assigned to work tasks. Although these injuries may be attributable to other causes, a substantial number are directly related to inadequate knowledge of job hazards and safe work practices (Jensen, 1988).

The extent of information needed by workers for self-protection varies, but would include:

- The general hazards and safety rules of the worksite.
- Specific hazards, safety rules, and practices related to particular work assignments.
- The employee's role in emergency situations.

Such information and training is particularly relevant to hazards that may not be readily apparent to, or within the ordinary experience and knowledge of, the employee.

When training is discussed, most assume that it is the employee group who needs the training. OSHA makes the point, in the following two sections, that the training of supervisors and management is also crucial.

*(ii) So that supervisors will carry out their safety and health responsibilities effectively, ensure that they understand those responsibilities and the reasons for them, including:*

*(A) Analyzing the work under their supervision to identify unrecognized potential hazards;*

*(B) Maintaining physical protections in their work areas; and*

*(C) Reinforcing employee training on the nature of potential hazards in their work and on needed protective measures, through continued performance feedback and through enforcement of safe work practices.*

First-line supervisors are especially critical in safety and health protection because of their immediate supervision of the work being performed. Their training and the training they present to their workers are emphasized by OSHA. Since they are responsible for the safety and health of their work force, and must communicate the aspects of the program to their workers, training merits particular attention.

**The occupational health nurse has all the necessary skills to play a critical role in the development and operation of an effective safety program.**

*(iii) Ensure that managers understand their safety and health responsibilities, as described under "Management Commitment and Employee Involvement," so that the managers will effectively carry out those responsibilities.*

Since many businesses consider safety and health a staff function, training of line managers in these responsibilities is frequently ignored. Managers who understand the way effective safety and health protection impacts on production and their critical role in ensuring effective protection are far more likely to ensure the effective operation of necessary safety and health management systems.

Training should be presented in a multitude of modalities and forums. Examples of different types of training include new employee orientation, on the job training, tool box meetings, and formal classroom sessions. A variety of tools can be utilized to maximize the training experience.

Job hazard analyses are an invaluable method of teaching employees to identify hazards specific to their jobs. Movies, audio-visual aids, and reading materials are helpful in the classroom setting. Posters and signs maintain the employees' awareness of safe work practices on the workfloor, in the cafeteria, or in the shower room. Safety newsletters and bulletins can be used in the tool box meetings or as supplemental reading. An effective program will use a variety of methods to "get the message out."

Occupational health nurses have an excellent repertoire of skills in teaching and motivating behavioral change. They are able to educate employees with different educational levels and ethnic backgrounds utilizing a variety of learning modalities.

Ultimately, every employee should receive safety and health training. This is essential if everyone is going to understand and accomplish "safe production."

The occupational health nurse has all of the necessary skills to play a critical role in the development and operation of an effective safety program. Those skills need only be applied to the areas of hazard prevention and control. Additional knowledge may be needed, but the basic skills are in place. When the occupational health nurse begins to direct these skills at the important job of hazard prevention and control, a safe and healthful workplace will result.

A quote from Goldsmith serves as an excellent conclusion:

> Finally, we must address the age-old problem of individual responsibility and the "it's not my job" syndrome which is a major concern and, unfortunately, is prevalent in any walk of life. To illustrate what I mean, here is an anecdote that I came across a while ago which I believe amply explains the problem.
>
> *The Story of Nobody*
>
> This is a story of four people named Everybody, Somebody, Anybody, and Nobody. There was an important job to be done, and Everybody was sure that Somebody would do it. Anybody could have done it, but Nobody did it. Somebody got angry about that because it was Everybody's job. Everybody thought Anybody could do it, but Nobody realized that Everybody wouldn't do it. It ended up that Everybody blamed Somebody when Nobody did what Anybody could have done (Goldsmith, 1987).

Be a "Nobody." Do the important job. Get involved with safety.

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## ADDITIONAL RESOURCES


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### Safety and Health Program IN SUMMARY

**Guidelines for an Occupational Safety and Health Program. Stanevich, R.S., Stanevich, R.L. *AAOHN Journal* 1989; 37(6):205-214.**

1. OSHA has suggested that safety and health programs contain, at a minimum, the following four components: management commitment and employee involvement; worksite analysis; hazard prevention and control; and safety and health training.

2. Goals and objectives must be communicated to *all* employees so that everyone understands the direction the organization wants to take.

3. Periodic comprehensive surveys of the worksite provide an opportunity to step back from the routine checks for previously recognized hazards and look for others.

4. Ultimately every employee should receive safety and health training. This is essential if everyone is going to understand and accomplish "safe production."


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