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Survey on Healthcare Hazard Control Responsibilities, Practice and Analysis

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ABSTRACT

Healthcare is one of the fastest growing sectors of the US economy, employing over 12 million workers with women representing about 80% of the healthcare workforce. Rates of occupational injury to healthcare workers have risen over the past decade. Safety issues facing by the organizations include back injuries, slips and falls, laser hazards, chemical exposures, biological hazards, workplace violence, and community safety issues. A cause of accident is a result of hazard. A careless or uncontrolled hazard results in a major accident or a minor hazard. Now- a-days; orientation, training, education has been dine as a record for documentation. This kind of activity results in poor knowledge in job and hazard. The objective of this paper is to know about the responsibility of an individual based on leadership approach to be carried out in an organization, their work practice of effective management along with hazard control analysis and job hazard analysis (JHA), also called a job safety analysis (JSA), a technique to identify the dangers of specific tasks in order to reduce the risk of injury to workers. This promotes to know what the hazards are; reduce or eliminate them before anyone gets hurt. Also impacts on both overt and covert cultures of organization. This helps the organization to maintain revenues, minimize losses, serve communities and meet regularities and accreditation requirements.

Keywords: hazard, Safety, Job hazard, risk, healthcare.

A. INTRODUCTION

Hazard control effectiveness impacts both the overt and covert cultures of any healthcare organization.

The safety culture of healthcare organizations must be recognizable by those served. Healthcare organizations seeking to maintain revenues, minimize losses, serve their communities, and meet regulatory or accreditation requirements need effective safety functions. Healthcare is one of the fastest growing sectors of the US economy, employing over 12 million workers with women representing about 80% of the healthcare workforce. Rates of occupational injury to healthcare workers have risen over the past decade. Safety issues facing healthcare organizations include needle sticks, back injuries, slips and falls, laser hazards, chemical exposures, biological hazards, workplace violence, and community safety issues.

An increased emphasis on topics such as emergency management, indoor air quality, and patient safety indicates that safety will remain a key function in healthcare organizations.

Effective healthcare hazard control management continues to be overlooked despite the number of workers employed in healthcare-related occupations. Advances in medical technology and clinical treatment techniques expose workers and patients to a variety of potential hazards.

The Occupational Safety and Health Administration (OSHA) continues to highlight the importance of safety and health for all healthcare organizations including hospitals, nursing homes, surgery centers, and physician practices

B. INTERNATIONAL BOARD FOR CERTIFICATION OF SAFETY MANAGERS

The International Board for Certification of Safety Managers (IBFCSM), founded in 1976 as a not-for-profit credentialing organization, operated for some time as the Board of Certified Hazard Control Management (BCHCM). The board offers qualified working healthcare professionals an opportunity to earn their Certified Healthcare Safety Professional (CHSP), Certified Healthcare Emergency Professional (CHEP),

Certified Patient Safety Officer (CPSO) credential. Many healthcare professionals hold more than one credential. The board offers CHSP and CHEP credential holders with the opportunity to add the healthcare Fire Safety Management (FSM) designation to their primary certification.

The board now offers a registration credential for frontline environmental services personnel. The registered healthcare safety technician-environmental services (RHST-EVS) designation fills a vital need for a credential for those responsible for cleaning and disinfecting healthcare facilities.

The board also offers qualified candidates the opportunity to earn their Certified Hazard Control Manager (CHCM), Certified Hazard Control Manager-Security (CHCM-SEC), or Certified Product Safety Manager (CPSM) credential.

C. HAZARD CONTROL

IBFCSM defines a *hazard* as "any solid, gas, or liquid with the potential to cause harm when interacting with an array of initiating stimuli including human-related factors."

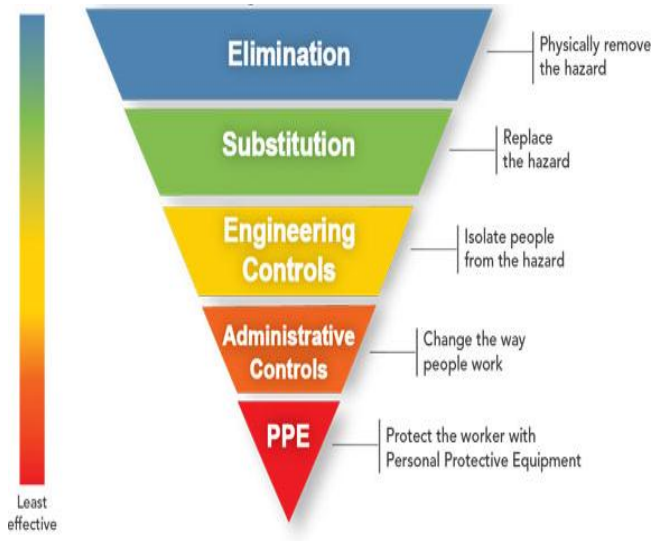

Fig 1: Hierarchy of controls

The scope of a hazard can include any activity, behavior, error, event, incident, occurrence, operation, process, situation, substance, or task with potential to cause human harm, property damage, risk to the environment, or a combination of all three.

The board defines *hazard closing* as the process of two or more hazards or causal factors attempting to occupy the same space at the same time. Some hazard control professionals refer to this interaction of causal factors as the *accident generation cycle*. Accidents, mishaps, and hazardous exposures can result in injuries, illnesses, property damage, and work interruptions. Companies, businesses, and institutions must make hazard control a *priority* organizational function. Proactive hazard control can improve operational efficiency, organizational effectiveness, and the bottom line.

The hazard control profession should focus on using management, leadership, and improvement principles to prevent accidents, injuries, and other losses. Senior leaders must ensure that organizational members promptly report accidents, hazards, close-call incidents, and unsafe behaviors. Organizations can unknowingly promote activities that do little to improve safety-related behaviors or encourage continuous learning processes. Passive hazard control efforts can communicate a general awareness about the importance of working safely.

Most organizations must comply with a number of safety and environmental standards. When organizational leaders and supervisors make people the priority, adherence to established policies and compliance standards becomes easier to achieve. Most experienced hazard control managers understand the importance that engineering principles play in preventing accidents and injuries.

Some well-known engineering innovations such as fire prevention technologies and safer machine designs make workplaces much safer for everyone. Effective hazard control managers must use leadership to minimize risky and unsafe behaviors. Failing to so can impact morale, operational productivity, and result in higher accident rates.

Hazard Control Management

Using the phrase of hazard control management does not diminish the importance of safety and other disciplines such as risk management, occupational health, or industrial hygiene. Hazard control management must focus on developing processes or systems that can help prevent harm and loss. An uncorrected hazard or hazardous situation could contribute to an event resulting in property damage, job interruption, personal harm, or adverse health effects.

Table 1: Proactive Vs. Reactive Hazard Control

Si. No	Proactive	Reactive
1.	Anticipates, recognizes, and identifies hazards	Evaluates and investigates past incidents or accidents
2.	Analyzes and determines risks	Uses risk management to control losses
3.	Controls hazards to reduce accident potential	Satisfied with reducing accident recurrence
4.	Educates and encourages safe behaviours	Disciplines unsafe actions and behaviours
5.	Focuses in preventing losses	Accepts some losses if not too severe
6.	Analyzes to determine root causes	Documents errors and primary causes
7.	Operates to open and hidden cultures	Responsive to formal culture expectations
8.	Involves leaders in hazard control	Leaders delegate responsibilities to others

The process of controlling hazards may require development of written policies, plans, or procedures. Never consider hazard control as a program but as a function of the organization. The hazard control function must connect with organizational structures and operational philosophies.

Hazard control is good Business

Senior leaders must make hazard control a priority function. Proactive efforts can help reduce workers' compensation premiums, injury costs, and lost productivity.

Liberty Mutual sent a survey to hundreds of chief financial officers in 2005.

More than 60% of those responding to the survey indicated that they could document a return on investment (ROI) for money allocated to hazard control related initiatives.

OSHA reports that the average work site participating in the OSHA Voluntary Protection Program (VPP) documented days away, restricted, or transferred (DART) rates of 52% below the national average for their industrial classification.

Organizational leaders making hazard control part of a good business initiative must understand accidents impact their organization in the terms of cost, time, performance, and morale.

Proactive hazard control can also help achieve compliance with the myriad of regulatory requirements placed businesses today.

Hazard Control Responsibilities

Many organizations with high accident or injury rates fail to outline specific hazard control responsibilities in their plans, procedures, directives, and job descriptions.

The concept of responsibility relates to a person's obligation to carry out assigned duties in an efficient, effective, and safe manner.

Senior leaders must ensure that managers and supervisors understand the importance of their assigned hazard control responsibilities.

Senior leaders must ensure that job descriptions address hazard control responsibilities inherent with each position or task.

Hazard control efforts will yield results when leaders encourage participation and hold key managers accountable. Senior leaders and hazard control managers must learn to focus on the hazards, behaviors, and risks that pose the most potential harm.

Senior Management Responsibilities

Develop, sign, and publish an organizational hazard control policy statement. Describe key expectations related to accomplishing hazard control objectives. Ensure that all organizational members can explain the major objectives. Develop methods to track progress and provide feedback to all organizational members.

Require managers and supervisor to visibly support established objectives. Senior leaders must ensure that managers and supervisors understand the importance of their assigned hazard control responsibilities.

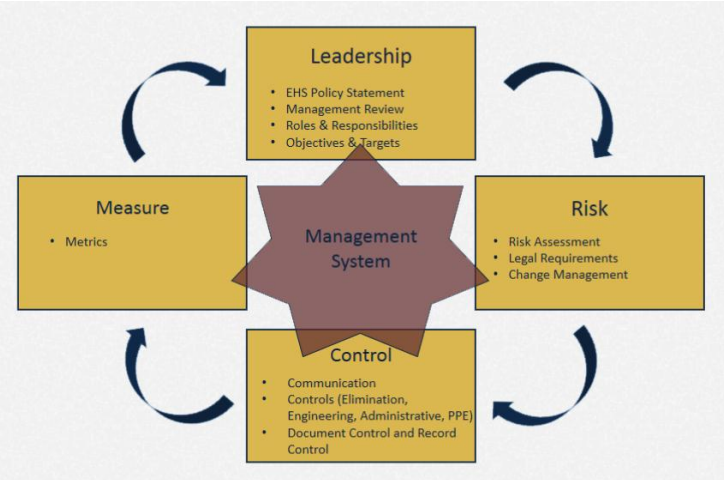

Fig 2: Risk control by management

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Hazard Control Manager Responsibilities

An effective hazard control manager serves as a consultant and adviser to managers at all operational levels. Hazard control managers must persuade management action rather than attempt to correct every hazardous situation.

The need for improving hazard control efforts must remain proportional to the need for improving other organizational functions. Hazard control objectives must focus on accident prevention, reducing operating costs, and efficiently using human and other organizational resources.

Hazard control managers learn to compile and disseminate important safety-related information to managers throughout the organization. Hazard control managers must teach others about accident prevention principles and solicit their input. When seeking senior leader's approval for hazard control expenditures, use a well-prepared cost–benefit analysis document.

Hazard control managers should anticipate opposition from certain segments within their organization. When dealing with opposition, use effective human relation and communication skills to persuade others to support hazard control objectives.

Hazard control managers should *know what they know* and acknowledge the things they *don't know*. However, they must know where to go to find answers.

Hazard control managers must acknowledge that many operational managers and supervisors face issues beyond their control. Understanding this important concept can help hazard control managers gain their respect. Conducting periodic perception surveys can reveal what people in the organization truly think or believe about hazard control efforts.

Behaviour Correction Process

Step 1: Identify the unsafe action.
Step 2: State concern for worker's safety.
Step 3: Demonstrate the correct and safe way.
Step 4: Ensure the worker understands.
Step 5: Restate concern for personal safety.
Step 6: Follow-up.

D. HAZARD CONTROL PRACTICE STATEMENTS

A hazard control policy statement should clearly address an organization's philosophy and objectives related to accident prevention. The policy statement should cover broad hazard control expectations and outline some key responsibilities. The policy statement, when written in precise and unambiguous language, should communicate organizational commitment to a safe and healthy work environment. Senior leadership must sign and disseminate the policy statement to all organizational members. Some organizations publish a well-written policy statement that conflicts with actual operational reality.

Ensure the published policy reflects the *real* organizational beliefs and expectations. For most organizations, policy statements should facilitate the decentralization of the hazard control

function. The decentralization of hazard control occurs when an organization promotes accident prevention efforts as part of everyone's job. As discussed previously, the hazard control manager's role becomes primarily focused on coordinating, promoting, and communicating accident prevention techniques.

Hazard control Plan

Hazard control managers can take some planning tips from emergency and disaster planners. Emergency management planners develop their emergency operations plans by using results obtained from a hazard vulnerability analysis (HVA). Hazard control managers should use a similar approach when beginning to develop their master hazard control directive. Conducting a thorough *hazard vulnerability assessment* would provide a solid foundation on which to build necessary procedures, policies, and action plans. Hazard control plans must *direct* some type of action, intervention, or behavior. Many well-meaning safety programs look good on paper but fail to provide direction on how to reduce hazards, accidents, and injuries.

Developing a master hazard control plan based on accurate assessments can provide direction to all accident prevention efforts. The plan should focus on the immediate correction of hazards discovered by the use of hazard assessment data, periodic inspection results, and accident investigation reports.

A master hazard control plan should function as *the directive* for all organizational accident prevention efforts. An effectively written document should provide the road map for meeting organizational hazard control expectations, objectives, and goals During an on-site hazard control assistance visit, the existence of two *conflicting* OSHA emergency action plans for the same facility.

During an actual emergency situation, the existence of two plans could contribute to confusion. Hazard control managers must monitor a plan's effectiveness. Hazard control plans should stress the importance of establishing procedures for the immediate reporting of accidents, incidents, mishaps, and other *close-call* events.

Poor management practices can contribute directly and indirectly to the generation of accidents. The best written plans will fail if leaders tolerate or ignore known management deficiencies or inefficiencies. The hazard control coordinator did not know or understand that this flammable substance created *fire load* hazard at several locations throughout the facility. This situation created other hazard control issues such as human exposure risks, sprinkler system coverage, proper storage room configuration, and portable fire extinguisher assessments.

Common Inspection Observations

- Operating vehicle at unsafe speeds or violating safe practice rules.
- Removing machine or equipment guards and tampering with safety devices
- Using defective tools and equipment or using them in unsafe ways
- Handling materials in unsafe or careless ways and lifting improperly
- Repairing/adjusting equipment while in motion, under pressure, or electrically charged
- Failing to use or improperly using PPE
- Unsafe, unsanitary, or unhealthy conditions including poor housekeeping practices
- Standing or working under suspended loads, scaffolds, shafts, or open hatches

E. HAZARD ANALYSIS

Organizations can use a variety of processes to analyze workplace hazards and accident causal factors. Hazard evaluations and accident trend analysis can help improve the effectiveness of established hazard controls. Routine analysis enables an organization to develop and implement appropriate controls for hazardous processes or unsafe operations. Analysis processes

rely on information collected from hazard surveys, inspections, hazard reports, and accident investigations.

This analysis process can provide a *snapshot* of hazard information. Effective analysis can then take the *snap- shots* and create viable pictures of hazards and accident causal factors.

Change Analysis

Change analysis helps hazard control personnel identify hazards inherent in new processes and job related tasks. Change analysis actually works as a proactive problem-solving technique. To solve a problem, hazard control personnel must look at situations using some type of logic process. Change analysis must attempt to identify all anticipated hazards and concerns generated by the change. Begin by defining a problem or concern. Attempt to determine what happened. Next, determine the norm or standard.

Creative Hazard Analysis

Creative hazard analysis combines innovation with human expertise to identify, discover, and analyze hazards of a process, operation, or system.

Ensure the analysis team understands the problem statement. Provide the team with sufficient information such as known hazards, related technologies, operational procedures, equipment design issues, instrumentation controls, and necessary historical information. As the team works through each step of the hazard process, it should collectively generate a list of *what or why* questions related to hazards.

Categorizing Hazard Correction Priorities

Table 2: Category of hazards

Si. No	Category	Hazard
1.	**Category 1 or A**	Major hazards that require immediate correction
2.	**Category 2 or B**	Serious hazards that require short-term correction
3.	**Category 3 or C**	Minor hazards that require correction as soon as possible
4.	**Category 4 or D**	Hazard identified but corrected on the spot

F. JOB HAZARD ANALYSIS

Job hazard analysis (JHA) permits the examination of job-related tasks, operations, and process to discover and correct inherent risks and hazards. Supervisors and other experienced personnel can perform the process by working sequentially through the steps of a job process or task. JHA can help tools, machines, and materials used to perform a job. JHA does require an understanding of potential job hazards. Personnel conducting the analysis must possess knowledge of hazard control including use of PPE.

A well-developed JHA can also serve as an effective teaching tool. Organizations should develop a JHA for all tasks, processes, or phase-related jobs. Conduct and update a JHA when a process changes or an accident occurs. Recommend that each organization develops standardized procedures and formats for conducting the analysis. An effective analysis provides the basis for developing and implementing appropriate control measures. Post analysis results at appropriate workstations and other job or process locations.

G. CONCLUSION

Organizations must use the concept known as hierarchy of controls to reduce, eliminate, and control hazards or hazardous processes. Hazard controls can also include actions such as

using enclosure, substitution, and attenuation to reduce human exposure risks. An enclosure keeps a hazard physically away from humans. Attenuation refers to taking actions to weaken or lessen a potential hazard. Attenuation could involve weakening radioactive beams or attenuating noise to safer levels. The use of system safety methods, traditional hazard control techniques, and human factors must begin at the initial stages of any design process. Passive hazard controls would not require continuous or even occasional actions from system users.

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Conflict of Interest

None of the authors have any conflicts of interest to declare.