The Maryland Fire and Rescue Institute of the University of Maryland is the State’s comprehensive training and education system for all emergency services.

The Institute plans, researches, develops, and delivers quality programs to enhance the ability of emergency service providers to protect life, the environment, and property.
Student Performance Objectives

- Given information from discussion, handouts, and reading materials, describe the role of the health safety officer in today’s fire service environment.

Overview

- The Health and Safety Officer as a Safety Advocate
- Health and Safety Officer Job Functions
- Occupational Safety and Health Committee
The Health and Safety Officer as a Safety Advocate

• Manage and administer occupational safety and health programs
• Manage risk
  – Organizational risk management
  – Operational risk management

Health and Safety Officer Job Functions

• HSO job functions are defined by the occupational safety and health program

Health and Safety Officer Job Functions

• The HSO must be able to
  – Ensure safety training and education
  – Manage the accident or loss prevention program
  – Investigate accidents or incidents
  – Maintain a records management system
  – Analyze data
Health and Safety Officer Job Functions

• The HSO must be able to
  – Develop or revise standard operating procedures/guidelines
  – Review equipment specifications and assist in acceptance testing
  – Ensure program compliance
  – Comply with health maintenance requirements

Health and Safety Officer Job Functions

• The HSO must be able to
  – Serve as internal and external liaisons
  – Act as infection control officer
  – Develop a critical incident stress management plan
  – Ensure a procedure to include a safety and health component in the post-incident analysis

Health and Safety Officer Job Functions

• The HSO must be able to
  – Submit recommendations and reports to the fire chief
  – Conduct facility inspections
  – Participate in safety committee meetings
  – Identify deviations from SOPs/SOGs
Health and Safety Officer Job Functions

• The department's occupational safety and health program consists of several important components
  – Risk management plan
  – Accident, injury, and illness prevention program
  – Medical exposure management program
  – Member physical fitness and wellness program
  – Member assistance program

Health and Safety Officer Job Functions

• Positive culture change is seen through
  – Improvements in teamwork
  – Professional development
  – A diverse workforce
  – Continued training and education programs
  – Initiatives to promote a safe work environment
Health and Safety Officer Job Functions

• HSOs must be advocates for culture change
  – Understanding what the current culture is and its foundations
  – Recognizing the need for change and the barriers that may inhibit it

• Recognizing the results of the change and knowing the benefits it will bring
• Being aware of the various programs and initiatives that can be used to support the change to a new safety culture
Occupational Safety and Health Committee
• The role of the HSO
  – Manager
  – Leader
  – Communicator
  – Advocate
  – Credible individual
  – Researcher

Occupational Safety and Health Committee
• Committee roles and responsibilities
  – Identify situations that may be a source of danger to members
  – Investigate reported violations of the safety policy
  – Make recommendations on matters reported to the committee
  – Evaluate safety rules and regulations

Occupational Safety and Health Committee
• Committee roles and responsibilities
  – Review the annual injury and illness report trends
  – Review the safety and health inspections reports
  – Evaluate the incident investigations conducted to determine if corrections have been made
  – Evaluate the accident and injury prevention program
Occupational Safety and Health Committee

• Committee roles and responsibilities
  – Make recommendations to administration and member for the improvement of safety and health
  – Recommend, maintain, and monitor safety and health programs and procedures
  – Consider forwarded reports from the outside agencies addressing safety and health
  – Take and post meeting minutes

Occupational Safety and Health Committee

• Committee roles and responsibilities
  – Conduct research
  – Develop recommendations while considering
    • Accidents
    • Injury, death, and illness reports
    • Trends

Occupational Safety and Health Committee

• Recommendations should be presented in a report which should include
  – Behavior or conditions that caused an accident
  – Previously unrecognized hazards
  – Apparatus/equipment defects or design flaws
  – Additional training needs
Occupational Safety and Health Committee

• Recommendations should be presented in a report which should include
  – Improvement needs in safety policies and procedures
  – Facts that could have legal impact on an accident case
  – Historical trends

Student Performance Objectives

• Given information from discussion, handouts, and reading materials, describe the role of the health safety officer in today’s fire service environment.

Review

• Health and Safety Officer as Safety Advocate
• Health and Safety Officer Job Functions
• Occupational Safety and Health Committee
Student Performance Objectives

• Given information from discussion, handouts, and reading materials, describe the various safety and health laws, codes, regulations and standards.
Laws, Codes, Regulations, and Standards Defined

• HSO Responsibilities
  – Developing SOP/Gs
  – Developing corrective actions
  – Creating a safe work environment
  – Investigating accidents
  – Reporting accidents and injuries

• HSO Responsibilities
  – Reporting exposures
  – Analyzing an incident
  – Recommending safety-related changes
  – Conducting safety inspections

• HSO Responsibilities
  – Developing incident risk management plans (and hazard analysis)
  – Distributing safety and health information
  – Managing a health program
  – Establishing an occupational safety and health committee
Laws, Codes, Regulations, and Standards Defined

Federal Laws, Codes, and Regulations
Federal Laws, Codes, and Regulations

- Health Insurance Portability and Accountability Act
- Freedom of Information Act
- Ryan White HIV/AIDS Treatment Extension Act

Federal Laws, Codes, and Regulations

- Occupational Safety and Health Act (commonly referred to as the Williams-Steiger Occupational Safety and Health Act)
  - Occupational Safety and Health Administration
  - Institute for Occupational Safety and Health

Federal Laws, Codes, and Regulations

- OSHA Regulations
  - Occupational Noise Protection
  - Hazardous Waste Operations and Emergency Response
  - Permit-Required Confined Spaces
  - Fire Brigades
  - Protective Equipment
  - Respiratory Protection
  - Bloodborne Pathogens
Federal Laws, Codes, and Regulations

- Public Safety Officers Benefits Act
- Hometown Heroes Survivors Benefits Act
- National Incident Management System
- National Response Framework
- Federal Emergency Management Agency

State/Provincial and Local Laws, Codes, and Regulations

Legal Stringency vs. Legal Authority

- Less Stringency
  - Federal Law
  - State/Provincial Law
  - Municipal Jurisdictional Law
- More Stringency
State/Provincial and Local Laws, Codes, and Regulations

- Occupational Safety and Health Administration Regulations in the U.S.
- Maryland Fire Service Health and Safety Consensus Standard - Maryland Occupational Safety and Health (MOSH)

Examples of Public Records

- Criminal History
- Meeting Minutes, Agendas, and Proceedings
- Expense Reports
- Organizational Email
- Text, Photos, Video on Organizations, Electronic Devices
- Work and Certification History
- Inspection Reports
- Safety Audits

- Record Retention

DIY can release records due to:

- License renewal or request
- Voluntary
- Insurer/underwriting
- Court order
- Conviction of someone's driver's licence
-Bulk distribution for research or survey
- Made of nature or direct safety

Source: Internet Privacy Protection Act 910-1-10-120 at any State Law 10-200.
National Standards

• NFPA 1250—Recommended Practice in Fire and Emergency Services Organization Risk Management

National Standards

• NFPA 1403—Standard on Live Fire Training Evolutions

National Standards

• NFPA 1451—Standard for Fire and Emergency Services Vehicle Operations Training Program
National Standards

• NFPA 1500—Standard on Fire Department Occupational Safety and Health Programs

National Standards

• NFPA 1561—Standard on Emergency Services Incident Management System and Command Safety

National Standards

• NFPA 1581—Standard on Fire Department Infection Control Program
National Standards

- NFPA 1582—Standard on Comprehensive Occupational Medical Programs for Fire Departments

National Standards

- NFPA 1583—Standard on Health-Related Fitness Programs for Fire Department Members

National Standards

- NFPA 1851—Standard on Selection, Care and Maintenance of Protective Ensembles for Structural Fire Fighting and Proximity Fire Fighting
National Standards

• NFPA 472—Standard on Competence of Responders to Hazardous Materials/Weapons of Mass Destruction Incidents

National Standards

• NFPA 1006—Standards for Technical Rescuer Professional Qualification

National Standards

• NFPA 1026—Standard for Incident Management Personnel Professional Qualifications
National Standards

- NFPA 1584—Standard on the Rehabilitation Process for Members During Emergency Operations and Training Exercises

National Standards


National Standards

- NFPA 1720—Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations and Special Operations to the Public by Volunteer Fire Departments
National Standards

• NFPA 1951—Standard on Protective Ensembles for Technical Rescue Incidents

National Standards

• The Fire Service Joint Labor Management Wellness-Fitness Initiative
  — Promotes improvement in the wellness

National Standards

• The National Volunteer Fire Council Heart-Healthy Firefighter Program
  — Promotes nutrition, fitness, lifestyle, and basic cardiac health
National Standards

- 16 Firefighter Life Safety Initiatives
  1. Culture change
  2. Accountability
  3. Risk Management
  4. Empowerment
  5. Training and Certification
  6. Medical and Physical Fitness
  7. Research Agenda
  8. Technology

National Standards

- 16 Firefighter Life Safety Initiatives (cont.)
  9. Fatality, Near-Miss Investigation
  10. Grant Support
  11. Response Policies
  12. Violent Incident Response
  13. Psychological Support
  14. Public Education
  15. Code Enforcement & Sprinklers
  16. Apparatus Design and Safety

National Standards

- Manual on Uniform Traffic Control
  - Provides a standardized approach to highway markings and signage
<table>
<thead>
<tr>
<th>Activity</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Insert 9224 and Maryland</td>
<td>Click on the Activity</td>
</tr>
<tr>
<td>OSHA Specific Standard Citation under the Law</td>
<td></td>
</tr>
</tbody>
</table>
Student Performance Objectives

- Given information from discussion, handouts, and reading materials, describe the various safety and health laws, codes, regulations and standards.

Review

- Laws, Codes, Regulations, and Standards Defined
- Federal Laws, Codes, and Regulations
- State/Provincial and Local Laws, Codes and Regulations
- National Standards
Student Performance Objectives

• Given information from discussion, handouts, and reading materials, describe the various aspects of record keeping and data analysis.

Overview

• Record Keeping
• Records Involving Other Departments
• Documentation for the Safety and Health Program
• Collecting and Compiling Data
• Data Analysis
Record Keeping

• Information Management
  – Includes the acquiring, analyzing, organizing, distributing, and storing of data and information that provides managers with timely and useful information

• Records
  – Permanent accounts of past events or of actions taken by an individual, unit, or organization

Record Keeping

• OSHA 1904
  – Record and Reporting Occupational Injuries and Illness

Record Keeping

• Records Management
  – Is the maintenance, review, and securing of records
  – Includes controlling access; ensuring that records are organized, current, and searchable; and ensuring that record keeping is compliant with applicable laws, codes, and regulations.
Record Keeping

• The duties of the HSO
  – Develop safety and health SOP/Gs
  – Maintain records pertaining to periodic inspections
  – Develop and maintain a wellness program
  – Test safety of department apparatus and equipment

• The duties of the HSO
  – Verify the inspection and testing of in-service protective clothing and equipment
  – Inspect department facilities
  – Investigate accidents
Record Keeping

• Electronic records can be
  – Scans of legacy
  – Paper documents or saved digital files
  – Databases
  – Fillable online forms
Record Keeping

- Privacy requirements apply to
  - Personnel files
  - Administrative investigations
  - Individual training records
  - Medical files
  - Training records
  - Quality improvement reviews

Record Keeping

- Centralization of records
  - All fire department records should be centrally located
Record Keeping

• Access to records
  – Having readily accessible records and reports improves the risk management program

Record Keeping

• Confidential Health Databases
  – Personnel medical records
    • Medical records are kept by the physician or medical provider
    • The HSO serves as the liaison between the department and the physician

Record Keeping

• Confidential Health Databases
  – Physical fitness for duty records
    • NFPA 1500 provides detailed guidelines for a department physician or medical provider to evaluate a member for fitness for duty requirements
Record Keeping

• Confidential Health Databases
  – Exposure reports should be completed for the following exposures
    • Infectious agents/diseases
    • Chemical agents
    • Biological agents
    • Radiological agents
    • Nuclear agents

Record Keeping

• Confidential Health Databases
  – State regulations for health records
    • Federal and state OSHA regulations provide the minimum standard

Record Keeping

• Confidential Health Databases
  – Release of health records
    • Is done at the request of the fire department member
    • Is done during investigation of an injury, fatality, illness, or exposure
Records Involving Other Departments

- Training program records
- Records of corrective actions
- Member assistance program records
- Inspection and service testing records

Records Involving Other Departments

- Training program records (for all training activities)
  - All health and safety training should be documented

Records Involving Other Departments

- Records of corrective actions
  - Corrective actions
    - Are recommended to prevent unsafe practices from continuing
    - Can decrease hazards faced
    - Can improve the workplace environment
Records Involving Other Departments

- Member assistance program records
  - Are maintained by the providing agency

- Inspection and service testing records
  - Facilities
  - Apparatus
  - Equipment
  - Protective clothing
  - Code violations
Records Involving Other Departments

- Code violations
  - Should be documented and then added to the record-keeping system
Documentation for the Safety and Health Program

- Accident, injury, or occurrence investigation documentation and reports
  - The HSO is responsible for
    - Collecting information during investigation
    - Establishing checks for completion
    - Addendums
Documentation for the Safety and Health Program

• Reports on department functions
  – Vehicle incident reports
  – Near-miss reports
  – Equipment malfunction or failure reports

• Training documentation

• Documentation of corrective actions
  – Corrective actions are implemented for various reasons
    • Improve the workplace
    • Reduce hazards
    • Correct any unsafe actions
  – The goal of a corrective action is to reduce the occurrence of an incident in the future
Documentation for the Safety and Health Program

• Technology specifications
  – The HSO plays a big part in the design and review of new specifications for apparatus, equipment and PPE

• Facilities inspection documentation
  – Facilities inspections are completed by
    • The station crew
    • Fire administration staff
    • Jurisdictional risk management personnel
    • Building safety personnel
    • Third-party vendors

• Infection control documentation must contain
  – Name
  – Social security number
  – Copy of Hepatitis B vaccination status
  – Copy of the results of all examinations, medical testing, and follow-up procedures
  – Copy of the fire department physician’s written opinion
Documentation for the Safety and Health Program

• Infection control documentation must contain
  – A description of the employee's duties at the time of the incident
  – Documentation of the circumstances of the exposure
  – Results of the source individual's blood testing
  – All medical records relevant to the treatment of the employee

Documentation for the Safety and Health Program

• Personnel interaction, interviews, and surveys
  – Accident prevention information
  – Training information
  – Recommendations for the Health and Wellness Program
  – Interactions with personnel and other departments
Documentation for the Safety and Health Program

Collecting and Compiling Data

- Data mining
  - The process of collecting data and analyzing it for meaning

Collecting and Compiling Data

- Knowing what to look for
  - Local accident, injury, and line-of-duty-death reports
  - Similar reports for other fire departments in the region
  - National statistics
  - Data compiled by government agencies
Collecting and Compiling Data

• Knowing what to look for
  – Statistics on similar injuries and deaths in other high-risk occupations
  – Insurance industry statistics
  – Pension program statistics
  – Worker's comp data

Collecting and Compiling Data

• Record categories should be created for
  – Injuries
  – Fatalities
  – Illnesses
  – Exposures
  – Accidents
  – Incidents and Near-Misses
  – Financial losses
Collecting and Compiling Data

• Summarizing Fire Department Experience is a way to document the experience of a fire department.

• Resources for safety and health data comparisons.
Collecting and Compiling Data

- Resources for safety and health data comparisons
  - Department of Labor and OSHA Investigations
  - National Institute for Occupational Safety and Health
  - United States Fire Administration
  - National Fire Protection Association
  - National Institute of Standards and Technology

- Resources for safety and health data comparisons
  - Underwriters’ Laboratories
  - American National Standards Institute
  - ASTM International
  - Center for Public Safety Excellence
  - Colleges and Universities
Data Analysis

- Comparing data
  - Comparing to national trends
  - Comparing to other jurisdictions
  - Comparing to other occupations and industries

Quantitative Data
- Deals with data that can be measured
- Is the what, when, and where information
- Can be analyzed using mean, median, and mode
- Deals with facts
- Is objective (not based on personal feelings)

Qualitative Data
- Deals with descriptions
- Can be observed but is not always measured
- May suggest why or how something occurred
- Is subjective (based on personal feelings)
- May be quantified when analyzing results

Quantitative ➔ Quantity
Qualitative ➔ Quality

Example of Mean, Median, and Mode

Number Set: Slip and Fall Injuries at the 9 Stations in the District Over the Past 6 Months

Mean: \[10, 10, 13, 36, 6, 8, 20, 4, 10\]
\[\text{Mean} = \frac{10 + 10 + 13 + 36 + 6 + 8 + 20 + 4 + 10}{9} = 13\]

Median: 4, 6, 8, 10, 13, 10, 20, 36, 10
\[\text{Median} = 10\]

Mode: 13, 35, 6, 8, 20, 4, 10
\[\text{Mode} = 10\]
Data Analysis

- Qualitative analysis
  - Examination of nonmeasurable data
    - Concerns
    - Suggestions
    - Strengths
    - Weaknesses
    - Similar experiences
  - Program inputs
  - Recommendations
  - Outputs
  - Outcome indicators

Data Analysis

- Data analysis methodology
  - Top-down approach
  - Topic-based approach

Data Analysis

<table>
<thead>
<tr>
<th>POSSIBILITY SUBCATEGORYIZATION OF SPRAINS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>EXAMPLE 1</strong></td>
</tr>
<tr>
<td>Subcategory: Anatomical Location</td>
</tr>
<tr>
<td>Back 10</td>
</tr>
<tr>
<td>Neck 2</td>
</tr>
<tr>
<td>Elbow 1</td>
</tr>
<tr>
<td>Shoulder 4</td>
</tr>
<tr>
<td>Ankle 3</td>
</tr>
<tr>
<td>20 Sprains</td>
</tr>
</tbody>
</table>
Data Analysis

Cost/benefit analysis
- What is the cost of implementing the control measure?
- What is the benefit of implementing a control measure?
- Historically, what is the cost associated with not implementing a control measure?
- What is the benefit of not implementing a control measure?

Student Performance Objectives

- Given information from discussion, handouts, and reading materials, describe the various aspects of record keeping and data analysis.
Review

- Record Keeping
- Records Involving Other Departments
- Documentation for the Safety and Health Program
- Collecting and Compiling Data
- Data Analysis
Student Performance Objective

• Given information from discussion, handouts, and reading materials, describe the process and methods used to form policies and procedures related to health and safety operations.

Overview

• Occupational Safety and Health Program Procedures
• Live-Fire Training Procedures
• Medical Emergency Procedures
• Accident and Injury Reporting Procedures
• Facility Inspection Procedures
• Infection Control Procedures
Occupational Safety and Health Program Procedures

• Why procedures need to be created
  – A safety issue is identified
  – Changes have occurred in industry standards, etc.
  – A safety work behavior is identified

• Steps for determining the need for a new policy or procedure
  – Identify the problem or requirement for a policy or procedure
  – Collect data to evaluate the need
  – Select the evaluation model

• Steps for determining the need for a new policy or procedure
  – Establish a timetable for making the needs evaluation
Occupational Safety and Health Program Procedures

• Steps for determining the need for a new policy or procedure
  – Conduct the evaluation
  – Select the best response to the need
  – Select alternative responses
  – Establish a revision process or schedule

Occupational Safety and Health Program Procedures

• Steps for determining the need for a new policy or procedure
  – Recommend the policy or procedure that best meets the need
  – Consider the need for legal adoption of the policy and procedure

Occupational Safety and Health Program Procedures

• Effectiveness assessment and criteria
  – Did the incident or exercise come to a successful conclusion?
  – Did the SOP/Gs provide enough guidance for a coordinated team effort?
  – Were the typical SOP/Gs applicable and relevant to current practices?
Occupational Safety and Health Program Procedures

- Effectiveness assessment and criteria
  - Did the SOP/Gs provide enough flexibility for crews to adapt to the situations?
  - Did any injuries, fatalities, illnesses, or exposures occur?
  - Did the incident risk analysis lead to a positive incident strategy and subsequent tactics?

Occupational Safety and Health Program Procedures

- Effectiveness assessment and criteria
  - Did a deviation of SOP/Gs occur?
  - Did any SOP/Gs or actions of responders violate any laws, codes, regulations, or standards?

Occupational Safety and Health Program Procedures

- Fire department operations SOP/Gs should
  - Be standardized
  - Provide direction or guidance
  - Consider mutual/automatic aid
Occupational Safety and Health Program Procedures

- Training practices
  - SOP/Gs should be in place so that training evolutions are realistic yet safe
Occupational Safety and Health Program Procedures

• Materials added from other sources
  – Laws, codes, regulations, or standards
  – Other jurisdictions’ SOP/Gs
  – Reports from research and investigative agencies
  – Manufacturer recommendations
Live-Fire Training Procedures

- Topics that should be addressed include the inherent dangers of
  - Class A, B, C, D and K fires
  - Interior versus exterior setting requirements
  - Fuel loading and location of fire
  - Bad weather
Live-Fire Training Procedures

- Topics that should be addressed include
  - Safety Officer(s)
  - Safety Officer training
  - RIC
  - Rehabilitation and emergency medical procedures
Live-Fire Training Procedures

• Topics that should be addressed include
  – Preburn inspection procedures
  – Case law dictating the use of manikins during training
  – Reassessment of the structure/facility after each live-fire evolution

Live-Fire Training Procedures

• Procedures should address
  – PPE
  – Water supply needs
  – Emergency plans
  – Communication plans
  – Resource allocation considerations

Live-Fire Training Procedures

• Requirements unique to fixed facilities
  – Defined by NFPA 1403
    • Preburn inspection
    • Annual structural inspection
    • 5-year structural inspection
Live-Fire Training Procedures

- Requirements unique to acquired structures

Live-Fire Training Procedures

- Preburn inspections of acquired structures
  - Ensure the structural integrity of the building
  - Remove hazardous materials
  - Repair structural members that may create a hazard
  - Repair stair treads, risers and railings
  - Secure holes in floors

Live-Fire Training Procedures

- Preburn inspections of acquired structures
  - Secure loose floorboards
  - Secure or patch walls and ceilings
  - Secure or remove loose bricks in masonry walls or chimneys
  - Provide adequate roof level ventilation
  - Shut off utilities
Live-Fire Training Procedures

- Preburn inspections of acquired structures
  - Remove trash and debris
  - Remove low-density combustibles
  - Remove vermin and insects
  - Provide exposure protection
  - Remove vegetation from the area of the burn building

Live-Fire Training Procedures

- Preburn inspections of acquired structures
  - Provide sufficient egress routes
  - Develop a predetermined evacuation plan
  - Ensure that all participants understand the incident management system to be used

Medical Emergency Procedures

1. Recognizing the signs and symptoms of injuries and illnesses
2. Providing stabilization at emergency scenes and training incident
3. Evaluating the seriousness of the injury/illness
4. Treating the incident/illness
5. Notifying the immediate supervisor of the injured/illness
6. Obtaining the right medical transportation resource for the member(s)
7. Having the member(s) transported to the appropriate medical facility, if necessary
Medical Emergency Procedures

- Additional responsibilities that the immediate supervisor may have
  - Notifying the fire chief through the chain of command
  - Notifying other fire department members
  - Notifying the family

- Ensuring the proper paperwork is completed and forwarded
- Having CISM services available
Medical Emergency Procedures

- Identification of appropriate medical facilities
  - Burn centers
  - Trauma centers
  - Neurological specialty centers
  - Cerebrovascular specialty centers
  - Cardiovascular specialty centers
  - Hyperbaric oxygen therapy centers

Medical Emergency Procedures

- Treatment
  - BLS
  - ALS

- Transport
  - Ground BLS
  - Ground ALS
  - Air medical
Accident and Injury Reporting Procedures

OSHA 29 CFR 1904 requires reporting of any of the following occurrences:
- Death
- Days away from work
- Restricted work or transfer to another job
- Medical treatment beyond first aid
- Loss of consciousness
- A significant injury or illness

Accident and Injury Reporting Procedures

Investigation procedures are followed to identify the following:
- The root cause of an accident
- Previously
- Apparatus/equipment obsolescence, defects, or design flaws
- The need for additional training
**Accident and Injury Reporting Procedures**

- Investigation procedures are followed to identify the following:
  - The need for improvements in safety policies and procedures
  - Facts that could have legal impact on an accident case
  - Methods to prevent future accidents from occurring
  - Historical trends

**Facility Inspection Procedures**

**Infection Control Procedures**

- Infection control officers are responsible for:
  - Managing the infection control program
  - Investigating exposures to infectious agents
Infection Control Procedures

• Infectious agents
  – Biological agents that cause disease or illness to their hosts

Infection Control Procedures

• Topics that should be covered in infection control SOP/Gs include
  – Training and education
  – Fire department facilities
  – Fire department apparatus, equipment, and clothing
  – Immunizations and infectious disease screenings
  – Biohazard disposal and identification

Student Performance Objective

• Given information from discussion, handouts, and reading materials, describe the process and methods used to form policies and procedures related to health and safety operations.
Review

• Occupational Safety and Health Program Procedures
• Live-Fire Training Procedures
• Medical Emergency Procedures
• Accident and Injury Reporting Procedures
• Facility Inspection Procedures
• Infection Control Procedures
Student Performance Objective

• Given information from discussion, handouts, and reading materials, describe the process and methods used to develop an organizational risk management plan.

Overview

• Organizational Risk Management Plan Components and Development
• Risk Identification
• Risk Evaluation
• Establishment of Priorities for Action
• Risk Control Techniques
• Risk Management Plan Implementation
• Risk Management Monitoring
Organizational Risk Management Plan Components and Development

• The risk management plan
  – A written plan that identifies and analyzes the exposure to hazards, selects appropriate risk management techniques to handle exposures, implements those techniques, and monitors the results

• An organizational risk management plan
  – A portion of the overall risk management plan that focuses on safe work practices outside of the operational environment
Organizational Risk Management Plan
Components and Development

- Development strategies
  - Correlating the plan to the organization’s mission
  - Reviewing reports
  - Identifying, implementing, and monitoring control measures
  - Cooperating with other agencies
  - Being proactive
  - Involving organizational membership
  - Using additional resources

Risk Identification
Possible Responses Other Than Fire

- Natural Disasters
  - Earthquakes
  - Flood
  - Hurricane

- Terrorism/Civil Unrest
  - Evacuation
  - Bombings
  - Shooters

- Large Scale Events
  - Train derailment
  - Wildfires
  - Industrial fire
  - High-rise collapse

Risk Identification

- Input should be sought from
  - Department personnel
  - Trade journals
  - Workers’ compensation insurers
  - NFPA annual injury reports
  - State Fire Marshals
  - Professional associations
  - Other service providers
Risk Identification

- Emergency risks
  - Response
  - PPE: Proper use, selection, and limitations
  - Emergency operational risks
  - Risks associated with expanding services

Risk Identification

- Response
  - Policy and procedures
  - Crew supervision
  - Driver/operator training

Risk Identification

- Response
  - The use of spotters
  - Geographical layout of the jurisdiction
  - Preemptive signaling device options
Risk Identification

- Response
  - Weather
  - Speed zones
  - Road hazards
  - Other drivers and distracted drivers

Risk Identification

- Protective clothing and equipment: proper use, selection, and limitations
  - Selection of appropriate PPE for the response environment
  - Inspection, care, and regular cleaning of PPE
  - Years of service for each type of PPE
  - Discarding or destroying of PPE
Risk Identification

- Emergency operational risks involving
  - Apparatus
  - Equipment
  - Personnel
  - Facilities
  - PPE
  - Training

Risk Identification

- Nonemergency risks
  - Administrative activity risks
  - Facilities risks
  - Training risks
  - Vehicle inspection and maintenance risks
Risk Evaluation

- Risks are evaluated for
  - Frequency
  - Severity
  - Probability
Risk Evaluation

- Skills proficiency evaluation
  - Fire company proficiency skills
  - Emergency medical proficiency skills
  - Hazardous materials proficiency skills
  - Technical rescue proficiency skills
  - Driver/operator proficiency skills
  - Incident Commander proficiency skills
Risk Evaluation

- Frequency of Risk

- Severity of Risk
  - The degree of negative consequences that could result from any given risk
    - Lost time away from work
    - Cost of damage
    - Cost and time for equipment repair or replacement
    - Service disruption
    - Insurance loss
    - Legal costs
Establishment of Priorities for Action

- Setting priorities requires an in-depth look at community risks
  - Chemical plants
  - Industrial process plants
  - Transportation infrastructure (road, rail, air, water)
  - Environmental hazards
  - Target hazards
  - Geographical hazards

Establishment of Priorities for Action

- Setting priorities requires an in-depth look at organizational risks
  - Administration
  - Facilities
  - Training
  - Vehicle operations
  - PPE
  - Emergency scene operations
  - Nonemergency scene operations
  - Other activities
Establishment of Priorities for Action

- Identifying ways to minimize risks
  - Mitigation
    - The reduction of the probability, frequency, and severity of risks

Establishment of Priorities for Action

- Identifying ways to minimize risks
  - Building construction standards
  - Fire and life safety code adoption and enforcement
  - Apparatus, equipment, and clothing specification and purchasing
  - Training and education of members on safety and health topics

Establishment of Priorities for Action

- Identifying ways to minimize risks
  - NIMS/ICS adoption
  - Health and safety program implementation
  - Comparing national statistics and trends in the fire and emergency services industry and related occupations
Establishment of Priorities for Action

• Setting goals gives the risk management planning process a target to aim for.
• Goals must be
  – Attainable
  – Desirable
  – Quantifiable

Establishment of Priorities for Action

• Establishing objectives creates steps that are necessary to reach a goal.
• Objectives must be attainable within the limits of the resources available.

Risk Control Techniques

• Risk avoidance
  – The identified risk is completely removed as a possible hazard
Risk Control Techniques

- Risk transfer
  - The individual who should assume the risk instead transfers or shares the risk with others

Risk Control Techniques

- Risk control measures: Specific actions taken to reduce risks through a reduction in either the frequency or severity of the risk

<table>
<thead>
<tr>
<th>Control Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Safety Programs</td>
</tr>
<tr>
<td>Wellness Programs</td>
</tr>
<tr>
<td>Health Programs</td>
</tr>
<tr>
<td>Training</td>
</tr>
<tr>
<td>Personnel Accountability</td>
</tr>
<tr>
<td>Protective Clothing</td>
</tr>
<tr>
<td>Respiratory Protection</td>
</tr>
<tr>
<td>Rapid Intervention Cover</td>
</tr>
</tbody>
</table>

Risk Control Techniques

Hierarchy of Controls

- Process Controls
  - Protective Clothing
  - Training
  - Administrative Controls

- Engineering Controls
  - Altering the Design or System

- Substitution
  - Change of process or new system

- Derivative
  - Mitigation techniques
Risk Management Plan Implementation

- Creating an action plan for risk management
  - PERT
  - CPM
  - Gantt chart
Risk Management Plan Implementation

- Communicating the plan to the organization
  - A statement of administration support must be included
  - Communication of the plan can be in print or digital format
  - Training must occur and must be organization-wide

- Safety and health programs should include
  - An accident, injury, and illness prevention program
  - A medical exposure management program
  - An employee physical fitness and wellness program
Risk Management Plan Implementation

- Implementing safety and health programs
  - Follow the same procedures as implementing a risk management program

Risk Management Monitoring

- Formative evaluation
  - The intent is to improve a program, isolate any evident weaknesses, or understand the program's strengths and build on them.

- Summative evaluation
  - The intent is to assess the achievements or outcome of the program.
Risk Management Monitoring

• Evaluating safety and health programs:
  – The desired results and the actual results should be compared.
  – Any variance between policy and practice should be identified.

Risk Management Monitoring

• Evaluating the effectiveness of the plan
  – Requires the collection and appraisal of data

Risk Management Monitoring

• Reasons to revise a risk management plan:
  – An increase in injury, fatalities, or loss
  – An increase in medical leave requests
  – An increase in risk-related costs
  – No apparent change in the risk result
  – An ineffective cost/benefit ratio
  – Changes in the target risks
  – Ineffective training
Risk Management Monitoring

• Plan modification and revision
  – Revision procedures are included in the risk management plan

Student Performance Objective

• Given information from discussion, handouts, and reading materials, describe the process and methods used to develop an organizational risk management plan.

Review

• Organizational Risk Management Plan Components and Development
• Risk Identification
• Risk Evaluation
• Establishment of Priorities for Action
• Risk Control Techniques
• Risk Management Plan Implementation
• Risk Management Monitoring
Lesson 4-2: Operational Risk Management

Student Performance Objective

• Given information from discussion, handouts, and reading materials, describe the process and methods used to develop an operational risk management plan.

Overview

• Preincident and Pre-Emergency Planning
• The Operational Risk Management Plan
Preincident and Pre-Emergency Planning

- Preincident planning
  - Preparing to manage an incident at a particular location or a particular type of incident before an incident occurs
Preincident and Pre-Emergency Planning

• Preincident Surveys provide information about
  – Site access
  – Structure
  – Change in occupancy through remodeling
  – Available water supply
  – Utilities and supplemental sources of power and water
  – Resources needed
  – Neighboring risks

Preincident and Pre-Emergency Planning

• Preincident surveys usually include information on
  – Life safety concerns
  – Building construction type and materials
  – Building services
  – Building access and egress
  – Building age
  – Building area and height
Preincident and Pre-Emergency Planning

- Preincident surveys usually include information on
  - Building contents
  - Building use
  - Exposures
  - Collapse zone
  - Location and capacity of water supply
  - Location of fire control and protection system control valves and connections

Preincident and Pre-Emergency Planning

- Preincident surveys usually include information on
  - Hazardous materials processes
  - Location of Safety Data Sheets as revised in the GHS of Classification and Labeling of Chemicals
  - Occupancy load at all hours
  - Names and telephone numbers of contacts or responsible persons for owner/occupant
  - Estimated quantity of water required to extinguish a fire in the structure or portion of it
  - Emergency evacuation plans
Preincident and Pre-Emergency Planning

• District surveys
  – Are evaluations of an entire response district to identify hazards on a broader scale than preincident planning

Preincident and Pre-Emergency Planning

• Providing information to personnel
  – Hazards that could affect operations
  – Locations that present safety and health risks
  – Examples of target hazards
  – Site safety plans

Preincident and Pre-Emergency Planning

• Hazards that could affect operations:
  – Impediments on the way to the response
    • Construction zones, busy traffic, etc.
  – Potentially violent situations
    • Civil unrest, weapons events
  – Bad weather
    • Thunderstorms, significant natural events
Preincident and Pre-Emergency Planning

• Locations that present safety and health risks
  – Government buildings
  – Prominent structures
  – Locations with high content or structure value

Preincident and Pre-Emergency Planning

• Examples of target hazards
  – Locations with life-safety concerns
  – Locations with hazardous processes or storage
  – Locations with high contents/structure value
Preincident and Pre-Emergency Planning

• Site safety plans
  – Are facility plans that identify potential hazards and risks to employees and the public at businesses that meet certain hazardous criteria

Preincident and Pre-Emergency Planning

• Safety plans should illustrate any site features that might hinder emergency response at the site
  – Access and egress points
  – Building construction and characteristics
  – Limited or no water supply
  – Fuel type and load
  – Security features
Preincident and Pre-Emergency Planning

- Recommending control measures
  - Eliminating hazards at the source
  - Reducing the substituting processes to mitigate the hazard
  - Implementing management or administrative controls that ensure resource needs are identified and addressed
  - Identifying PPE needs

The Operational Risk Management Plan

- The operational risk management plan should address
  - The Incident Management System
  - Communications
  - Risk management during emergency operations
  - Personnel accountability during emergency operations
The Operational Risk Management Plan

• The operational risk management plan should address
  – Members operating at emergency incidents
  – Established hazard control zones
  – Traffic incident procedures
  – Rapid Intervention Crews

The Operational Risk Management Plan

• The operational risk management plan should address
  – Rehabilitation during emergency operations
  – Violent scenes, civil unrest and terrorism
  – Post-incident analysis

The Operational Risk Management Plan

• The Incident Management System must include
  – Common terminology
  – Modular organization
  – Integrated communications
  – Unified command structure
The Operational Risk Management Plan

• The Incident Management System must include
  – Consolidated action plans
  – Manageable span of control
  – Predesignated incident facilities
  – Comprehensive resource management

The Operational Risk Management Plan

• Establishment of an Incident Safety Officer
  – The types of situations that may need a specific SOP/G for a safety officer include
    • Commercial and residential fires
    • Multiple-alarm fires
    • Firefighter injury or firefighter transported for treatment
    • Hazardous materials incidents
    • Technical rescue incidents
    • Incident command requests
The Operational Risk Management Plan

- Tactical-level management
  - Division
  - Group
  - Span of Control
The Operational Risk Management Plan

- Scalability for size and complexity
  - Personnel should assess incidents for their cause, needs, size, and complexity when establishing the IC structure
  - The HSO is responsible for ensuring that SOP/Gs address the establishment of an ICS from the first arriving unit

The Operational Risk Management Plan

- Staff organization
  - Command
    - Incident Commander
The Operational Risk Management Plan

- Staff organization
  - Command staff
    - Safety Officer
    - Liaison Officer
    - Public Information Officer

- Staff organization
  - General Staff
    - Planning
    - Operations
    - Logistics
    - Finance/administration

The Operational Risk Management Plan

- Safety enforcement
  - The IC is responsible for the safety and health of all members operating at an emergency incident
Student Performance Objective

• Given information from discussion, handouts, and reading materials, describe the process and methods used to develop an operational risk management plan.

Review

• Preincident and Pre-Emergency Planning
• The Operational Risk Management Plan
Student Performance Objective

• Given information from discussion, handouts, and reading materials, describe the process and methods used to develop a safety and health program.

Overview

• General Guidelines for Program Coordination
• Health Maintenance Programs
• Accident Prevention Programs
General Guidelines for Program Coordination

- Safety and health program SOP/Gs must include
  - Statement of purpose
  - Strategies for accomplishing the purpose
  - The expected performance of members
  - Administrative oversight responsibilities
  - Methods of measuring the program
  - Processes to recommend and implement improvements

General Guidelines for Program Coordination

- Safety and health programs should be derived from
  - A well communicated definition of safety and health that guides the program
  - Clarification of the program mission, vision, and values
  - Clearly defined goals, objectives, and action items
  - Input and validation from organizational members
Health program analysis

- Options for organizations without in-house exercise equipment and resources
  - Establish agreements with local businesses that can provide these services
  - Use apparatus bays or other areas at the station for exercise sessions
  - Use facilities at local schools or public recreational centers
  - Collaborate with colleges and universities that have fitness programs/equipment

Safety precautions

- Proper physical fitness exercises
- Proper stretching exercises
- Proper weight lifting techniques
- Proper nutrition and fluid replenishment
General Guidelines for Program Coordination

- Health program analysis
  - Safety precautions
  - Proper use of fitness equipment

- Recognition of injury, illness, or overexertion
General Guidelines for Program Coordination

- Fire department physician
  - Designated by a fire department to treat members of the department

General Guidelines for Program Coordination

- Fitness for duty evaluations
  - Health evaluations administered by a fire department physician to determine an individual's ability to perform fire service tasks

General Guidelines for Program Coordination

- Fitness for duty evaluations
  - Medical requirements
    - Annual medical evaluations
    - Return-to-duty criteria
    - Medical leave criteria
    - Disability separation or termination criteria
    - Limited duty guidelines
General Guidelines for Program Coordination

- Fitness for duty evaluations
  - Performance requirements
    - Job task analysis
    - Job performance requirements
    - Candidate physical ability tests
    - Incumbent physical ability tests

General Guidelines for Program Coordination

- Fitness for duty evaluation
  - Fitness requirements/programs
    - Fire Service Joint Labor Management
      Wellness-Fitness Initiative
    - Everyone Goes Home
    - Heart Health Firefighter Program

General Guidelines for Program Coordination

- Fitness for duty evaluations
  - NFPA 1583’s five fitness categories
    - Body composition
    - Muscular strength
    - Muscular endurance
    - Aerobic capacity
    - Flexibility
General Guidelines for Program Coordination

• Monitoring changes in personnel performance
  – Three levels of assessment
    • Level I: Organizational/Annual assessments
    • Level II: Individual/self-care
    • Level III: Supervisory

Health Maintenance Programs

• Medical surveillance programs
  – Are a series of medical evaluations based upon medical fitness-for-duty requirements for firefighters

Health Maintenance Programs

• Medical surveillance programs should follow the legal mandates and standard guidelines outlined in
  – OSHA 29 CFR 1910.120
  – NFPA 1500
  – NFPA 1582
  – NFPA 1583
Health Maintenance Programs

• Physical Fitness Program
  – Physical performance requirements
  • Fitness level benchmarks based upon recommended industry standards which firefighters must meet to be considered fit-for-duty

Health Maintenance Programs

• Job task analysis for physical fitness
  – Who is responsible for preparing the task analysis and employee physical fitness component?
  – Who should be on the physical fitness subcommittee?

Health Maintenance Programs

• Physical fitness plan
  – Individualized or department-wide plans that firefighters can follow to maintain fitness-for-duty and improve overall health
Health Maintenance Programs

- Physical fitness plans include
  - Physical rehabilitation programs
  - Physical performance assessments
Health Maintenance Programs

• Wellness programs
  – Ongoing programs that provide information, education, and counseling to fire service members on various topics
    • Nutrition
    • Tobacco cessation
    • Injury prevention
    • Substance abuse

Health Maintenance Programs

• Wellness programs include
  – Nutrition information

Health Maintenance Programs

• Wellness programs include
  – Health fitness instructor training programs
Health Maintenance Programs

• Wellness programs include
  – Tobacco policy and cessation information

• Wellness programs include
  – Injury and illness prevention programs
  – Injury and illness rehabilitation

• Member Assistance Programs
  – Help employees and their families work with personal problems including
    • Substance abuse
    • Family assistance
      – Smoking cessation assistance
      – Substance abuse assistance
      – Domestic violence counseling
      – Child abuse counseling
      – Family issue counseling
      – Financial management counseling
Health Maintenance Programs

- Occupational exposure to atypically stressful events
  - Mass casualty incidents
  - Firefighter line-of-duty fatality
  - Any other circumstance that falls outside the ordinary experience of members

Accident Prevention Programs

- Engineering controls
  - Are barriers to a hazard that is built into the design of a building, apparatus, or piece of equipment
    - Fire doors
    - Smoke evacuation systems
    - Sprinkler systems
Accident Prevention Programs

• Protective clothing and equipment policies
  – Must address the availability and use of PPE
  – Should include the type of PPE that should be worn or used in certain situations

Accident Prevention Programs

• Protective clothing and equipment policies
  – The HSO should evaluate PPE for
    • Limitations
    • Condition
    • Care and maintenance
    • Cleaning and disinfecting
    • Replacement procedures

Accident Prevention Programs

• Crew resource management (CRM)
  – Promotes better teamwork, improved communication and problem solving, and team member input while preserving legal authority
  – Provides for proactive accident prevention
Accident Prevention Programs

• Leaders who follow CRM must develop certain critical leadership skills
  – Authority
  – Mentoring
  – Conflict resolution
  – Mission analysis

Accident Prevention Programs

• CRM Team members are required to
  – Respect authority
  – Be safe
  – Keep fellow workers and leaders safe
  – Accept that authority goes with responsibility
  – Know the limits of their own authority

Accident Prevention Programs

• CRM Team members are required to
  – Help the leader succeed
  – Possess good communication skills
  – Develop and maintain a positive learning attitude
  – Keep their egos in check
  – Demand clear assignments
**Accident Prevention Programs**

- CRM Team members are required to
  - Establish an assertiveness/authority balance
  - Accept direction and information as needed
  - Publicly acknowledge mistakes
  - Report status of work
  - Be flexible

**Accident Prevention Programs**

- Safe work practices
  - Are the responsibility of every member of the fire and emergency services organization and include
    - Monitoring safety
    - Working in the safest manner possible for the given circumstances

**Student Performance Objective**

- Given information from discussion, handouts, and reading materials, describe the process and methods used to develop a safety and health program.
Review

• General Guidelines for Program Coordination
• Health Maintenance Programs
• Accident Prevention Programs
Student Performance Objective

• Given information from discussion, handouts, and reading materials, describe the process and methods used to develop a safety and health program.

Overview

• Safety Audit Programs
• Infection Control Programs
• The Emergency Vehicle Safety Program
Safety Audit Programs

• The safety audit
  – Is a comprehensive evaluation of the fire and emergency services organization and how safety compliance is achieved

• Safety audits include
  – Evaluation of policies, procedures, practices, inspection reports, and firefighter behaviors
Safety Audit Programs

- Safety audit templates should include
  - A description
  - An appraisal
  - A plan
  - References
Safety Audit Programs

- Conducting the audit
  - Review of SOP/Gs
  - Review of the accepted practices
  - Review of personnel performance
  - Review of inspections
  - Review of defensive measures

Safety Audit Programs

- Identify Compliance and Violations
  - Where can the safety of personnel or the workplace be improved?

Infection Control Programs
Infection Control Programs

• The driving forces behind infection control programs
  – Title 29 CFR 1910.1030 Bloodborne Pathogens
  – NFPA 1581, Standard on Fire Department Infection Control Program

Infection Control Programs

• Ensuring compliance with regulations
  – Developing exposure control programs
  – Establishing the position of infection control officer who develops an adequate infection control plan
Infection Control Programs

- Infection control program objectives and components
  - Education and training requirements
  - Vaccination requirements
  - Documentation and record-keeping requirements
  - Cleaning, decontamination, and disinfection of personnel and equipment
  - Exposure control and reporting protocols

Infection Control Programs

- Infection control equipment and facilities
  - Equipment must be provided to all members and include all needed PPE to protect skin, eyes, nose, mouth, respiratory system
  - EMS equipment must be able to be cleaned and disinfected safely
  - Cleaning stations must be available

Infection Control Programs

- Infection control program assessment and revision
  - The program should be reviewed annually or as needed
  - Any changes must be communicated, and may require training
Infection Control Programs

• The infection control officer must maintain communication with the
  – Fire department physician
  – HSO
  – Infection control representative at health care facilities
  – Health care regulatory agencies

Infection Control Programs

• Additional responsibilities of the infection control officer
  – Notification, verification, treatment, and medical follow-up of members after an infectious exposure
  – Documentation of the exposure
  – Examining compliance procedures and engineering controls

Infection Control Programs

• Additional responsibilities of the infection control officer
  – Serving on the occupational safety and health committee
  – Being knowledgeable and cognizant of issues associated with bioterrorism pathogens and emerging infectious diseases
The Emergency Vehicle Safety Program

• Types of emergency vehicles
  – Aerial ladders or elevating platforms
  – Wildland fire apparatus
  – Tankers/tenders
  – Ambulances
  – Heavy/medium/light rescue trucks

The Emergency Vehicle Safety Program

• Types of emergency vehicles
  – Hazardous materials trucks
  – Mobile command centers
  – Aircraft rescue and fire fighting vehicles
  – Marine vessels
  – Fuel and supply trucks

The Emergency Vehicle Safety Program

• Types of emergency vehicles
  – Staff cars
  – Trailers
  – Battalion/district chief’s vehicles
  – Incident Command/Command post vehicles
The Emergency Vehicle Safety Program

- Contributions to apparatus-related firefighter injuries
  - Lack of seat belt use
  - Disabling safety warning devices in apparatus
  - Backing apparatus without a spotter
  - Unsafe apparatus operations under given conditions

- Vehicle modifications not performed or based on manufacturer recommendations
- Repurposing of vehicles for unintended uses
- Mounting or dismounting the apparatus

- Components of a vehicle safety program
  - Driver/operator requirements and minimum qualifications
  - Driver/operator training program
  - Vehicle inspections and maintenance
  - Vehicle refurbishment requirements
The Emergency Vehicle Safety Program

• Components of a vehicle safety program
  – Roadway operations and apparatus placement guidelines
  – Record-keeping requirements
  – General roadway safe-driving practices

The Emergency Vehicle Safety Program

• Resources for vehicle safety programs
  – US DOT, Manual on Uniform Traffic Control Devices
  – USFA-336, Emergency Vehicle Safety Initiative
  – USFA FA-330, Traffic Incident Management Systems

The Emergency Vehicle Safety Program

• Resources for vehicle safety programs
  – NFPA 1091, Standard for Traffic Control Incident Management Professional Qualifications
The Emergency Vehicle Safety Program

- Apparatus safety policies should address
  - All aspects of vehicle operation
- Reference materials
  - Manufacturer’s operation manual
  - Local and state traffic laws
  - NFPA standards
  - US DOT regulations

The Emergency Vehicle Safety Program

- General apparatus safety
  - NFPA 1500
  - NFPA 1451

The Emergency Vehicle Safety Program

- Apparatus safety features
  - Airbag protection systems
  - Computerized systems that sense when a person is seated and/or seatbelt is fastened
The Emergency Vehicle Safety Program

- Apparatus emissions safety
  - Vehicle exhaust ventilation systems are recommended/mandated as part of facility design

The Emergency Vehicle Safety Program

- Training and certification
  - The National Safety Council defensive driving course
  - Volunteer Firemen’s Insurance Services driver training programs
  - State driver training programs

The Emergency Vehicle Safety Program

- Training on traffic laws should include
  - Driver’s license requirements
  - Speed allowance when all warning devices are activated
  - Intersections and stop signs
  - Marked school zones
  - Stopped school buses with red lights activated
The Emergency Vehicle Safety Program

• Training on traffic laws should include
  – Railroad crossings
  – Overtaking or passing another vehicle
  – Right-of-way between emergency vehicles with all warning devices activated
  – Highway driving
  – Seatbelt use

The Emergency Vehicle Safety Program

• Traffic preemption devices
  – Wireless systems on apparatus that can communicate with traffic signals

The Emergency Vehicle Safety Program

• Traffic preemption device training should include
  – Why right-of-way may not be granted
  – The use of these devices in neighboring jurisdictions
The Emergency Vehicle Safety Program

- Emergency Vehicle Operators Courses
  - Provide the medium for potential driver/operators and current driver/operators to be certified or recertified
  - Originated with the NHTSA
  - Are usually combined with the National Safety Council’s Defensive Driving Course
  - Can be based on NFPA 1002

- Automatic Vehicle Location Devices (AVLs)
  - Use global positioning systems to transmit the location of an emergency vehicle to dispatch centers and networking-enabled mobile devices
Student Performance Objective

- Given information from discussion, handouts, and reading materials, describe the process and methods used to develop a safety and health program.

Review

- Safety Audit Programs
- Infection Control Programs
- The Emergency Vehicle Safety Program
Student Performance Objective

- Given information from discussion, handouts, and reading materials, describe the training functions of the health safety officer

Overview

- Safety and Health Information
- Training Personnel on Safety and Health
Safety and Health Information

- Development of safety and health information should be based on
  - Legal mandates
  - Data analysis
  - Near-miss reporting
  - Policy and procedure review
  - NIOSH Fire Fighter Fatality Reports

- Development of safety and health information should be based on
  - Peer-reviewed journals
  - Professional organizations
  - Regulatory and government agencies
  - Other personnel
Safety and Health Information

- Access to medical advise
  - NFPA 1500, Standard on Fire Department Occupational Safety and Health Program
  - NFPA 1582, Standard on Comprehensive Occupational Medical Program for Fire Departments

Training Personnel on Safety and Health

- Coordinating training with training personnel
  - The HSO is responsible for
    - Reviewing all training evolutions
    - Providing the members of the training division with training in applicable national standards and safety-related topics
Training Personnel on Safety and Health

- The training officer should be able to
  - Recognize potential safety hazards
  - Evaluate the need for proper infection control
  - Understand and apply all vehicle operation laws
  - Follow the procedures outlined in the safety and health program

Training Personnel on Safety and Health

- Incorporating safety provisions
  - Ensure that the organization has provided training, facilities, education, equipment, and clothing which meet the requirements of each member’s position
  - Ensure that the appropriate level of rehab is provided at emergency and training events
  - Reinforce that “every day is training day”

Training Personnel on Safety and Health

- Meeting operational safety goals
  - Outlining operational safety goals in the SOP/Gs and engraining them in the safety culture
  - Identifying risks and hazards by analyzing
  - Identifying risks and hazards by conducting thorough training and education programs
Training Personnel on Safety and Health

- Identifying training materials and resources
  - The training division
  - The HSO
  - Local public schools

---

Training Personnel on Safety and Health

- Possible ways that tasks may be performed in order to complete a job
  - Sequentially
  - Using cause and effect
  - Using a model-based approach
  - Focusing on the cognitive aspect
Training Personnel on Safety and Health

• Implementing safety and health training
  – In-service training
    • Is formal or informal training received while on the job
    • Is generally performed in-house at the station

Training Personnel on Safety and Health

• Class scheduling considerations
  – How will the training schedule affect other job activities?
  – When are instructional resources most readily available?
  – What is the most appropriate time for training?
  – How quickly must the training be completed?

Training Personnel on Safety and Health

<table>
<thead>
<tr>
<th>Table 8.1: Factors That May Affect Scheduling</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health of the Organizational Safety Culture</td>
</tr>
<tr>
<td>Training Requirements</td>
</tr>
<tr>
<td>— Local, State, and Government Mandates</td>
</tr>
<tr>
<td>Physical Resources</td>
</tr>
<tr>
<td>— Availability of Resources</td>
</tr>
<tr>
<td>Instructor Availability</td>
</tr>
<tr>
<td>Minimum Staffing Levels</td>
</tr>
<tr>
<td>Budgetary Considerations</td>
</tr>
<tr>
<td>Environmental Conditions</td>
</tr>
<tr>
<td>— Adverse Weather</td>
</tr>
<tr>
<td>— Temperature Extremes</td>
</tr>
</tbody>
</table>
Training Personnel on Safety and Health

- Training on safe work practices
  - Safe practices at emergency operations
    - The Incident Management System
    - The Incident Safety Officer
    - Accountability
    - Communications
    - Incident Operations
    - Special operations

Training Personnel on Safety and Health

- Training on safe work practices
  - Safe practices at emergency operations
    - The RIC
    - PPE
    - Equipment and tools
    - Apparatus placement and operators
    - Rehabilitation

Training Personnel on Safety and Health

- Safe practices at nonemergency operations
  - Include everything that is included with emergency operations
Training Personnel on Safety and Health

- Infection control training
  - NFPA 1581, Standard on Fire Department Infection Control Program, Section 4.3.1

Training Personnel on Safety and Health

- Evaluating the effectiveness of training
  - Surveying the satisfaction of the program recipients
  - Surveying of supervisory personnel
  - Surveying long-term effectiveness of the program
Student Performance Objective

- Given information from discussion, handouts, and reading materials, describe the training functions of the health safety officer

Review

- Safety and Health Information
- Training Personnel on Safety and Health
Student Performance Objective

• Given information from discussion, handouts, and reading materials, describe the role of the health safety officer in accident investigation and postincident analysis

Overview

• Gathering Information
• Postincident Analysis
• Identifying the Root Cause of the Accident
• Corrective Action Plans
• The HSO should explore resources and recommendations from the following parties
  – OSHA
  – Local law enforcement
  – Safety officer organizations
  – Workers’ compensation carriers
  – Risk management offices
  – Professional accident investigation organizations

• Conflicts of interest may exist when the investigator
  – Is a witness
  – Is or was a part of the involved fire company
  – Has a relation to anyone in the investigation
  – May benefit from any disciplinary action against another
Gathering Information

- Conflicts of interest may exist when the investigator
  - Has been involved with a previous disciplinary action with anyone under investigation
  - Has a financial stake in the outcome
  - Is a part of the original command team

Gathering Information

- Technical knowledge research may come from
  - Manufacturers
  - Law enforcement personnel
  - Fire behavior scientists
  - Structural engineers
  - Forensic scientists
  - Public health officials

Gathering Information

- Technical knowledge research may come from
  - Medical doctors or coroners
  - Bioterrorism specialists
  - Technical rescue specialists
  - Hazardous materials specialists
  - Aviation specialists
Gathering Information

• Necessary investigation information
  – The culture, habits, behaviors, or conditions that caused the accident
  – Previously unrecognized hazards
  – Apparatus/equipment defects or design flaws
  – Additional training needs
  – Improvements needed in safety policies and procedures

Gathering Information

• Necessary investigation information
  – Trends
  – Timeline
  – Environmental factors
  – Communications
  – Procedural inconsistencies

Gathering Information

• Coordination with other entities
  – Fire investigators
  – Law enforcement
  – OSHA and NIOSH
Gathering Information

• Personnel interviews
  – Should occur as soon as possible
  – Should occur during a one-on-one session
  – Should include witness written statements

Gathering Information

• Evidence documentation and preservation
  – Documentation
    • Written notes, audio/videotapes, printed forms, sketches, and/or photographs that form a detailed record of the scene, evidence recovered, and actions taken during the search of the crime scene

Gathering Information

• Evidence documentation and preservation considerations
  – Securing the scene
  – Securing any involved apparatus or equipment
  – Preserving the scene
  – Obtaining a search warrant
  – Taking and obtaining photographs and videos
  – Following the evidence chain of custody
Gathering Information

- Policy and procedure for criminal investigation
  - Notification procedures
  - Legal representation
  - Work duties during investigation

Postincident Analysis

- An overview and critique of an incident by members of all responding agencies, including dispatchers.

<table>
<thead>
<tr>
<th>Table 9.1 Postincident Analysis Components</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Strategy and Tactics Analysis</strong></td>
</tr>
<tr>
<td>Interviews of witnesses and participants</td>
</tr>
<tr>
<td>News media photographs and video</td>
</tr>
<tr>
<td>Contents of the Incident Action Plan (IAP)</td>
</tr>
<tr>
<td>Communication logs and tapes</td>
</tr>
<tr>
<td>Preincident site plans and inspections</td>
</tr>
<tr>
<td>Structural reports</td>
</tr>
<tr>
<td>Owner/occupant statements</td>
</tr>
</tbody>
</table>
Postincident Analysis

- Health and safety components of a Postincident Analysis
  - Use of PPE
  - The personnel accountability system
  - Rehabilitation operations
  - Hazardous conditions
  - Other issues relating to the safety of personnel at the incident

Postincident Analysis

- What information on rehabilitation should be included in SOP/Gs:
  - The criteria for establishing a rehabilitation area
  - Who is responsible for establishing a rehabilitation area
  - Location of the rehabilitation area
  - Rehabilitation manager responsibilities
  - Rehabilitation rehydration and nutrition
  - Medical evaluation
  - Restroom and washing facilities
Postincident Analysis

• Review of the SOP/Gs based on the post-incident analysis allows for
  – An opportunity to review all relevant SOP/Gs
  – An assessment on
    • The performance of the IC
    • Decisions made
    • Communications
    • Strategies and tactics employed
  – An opportunity to address and correct any deviations from SOP/Gs

Postincident Analysis

• Corrective actions based on the incident should address
  – Critical needs to improve the safety and health of personnel during incident operations
  – The complexity of certain circumstances
  – The need for flexibility

Postincident Analysis

• SOP/G revision should be based on an evaluation of
  – Recommendations
  – Research
  – Training needed
  – Unintended consequences
  – Financial effect on the organization
  – Effect on personnel
Identifying the Root Cause Of the Accident

- Root Cause
  - The cultural and attitudinal reasons that led to the circumstances or behavior surrounding an accident, injury, fatality, illness, exposure, or near-miss
Identifying the Root Cause Of the Accident

• A root cause analysis should be conducted for
  – Accidents
  – Near-misses
  – Injuries
  – Fatalities
  – Occupational illnesses
  – Occupational exposures
  – Any other incident with special circumstances

Identifying the Root Cause Of the Accident

• Hindsight bias
  – The tendency during investigations to see events as more predictable than they actually were or to judge events differently based upon the outcome of the event rather than the behavior that transpired
### Identifying the Root Cause Of the Accident

- **Gathering facts about the incident**
  - Choice of equipment
  - Performance and use of equipment
  - Environmental factors

<table>
<thead>
<tr>
<th>Improper attitude</th>
<th>Lack of knowledge or skill</th>
<th>Physical unsuitability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Responders might have displayed</td>
<td>Responders might have</td>
<td>Responders might have</td>
</tr>
<tr>
<td>• Wilful disregard</td>
<td>• Displayed insufficient knowledge</td>
<td>• Have hearing or vision problems</td>
</tr>
<tr>
<td>• Recklessness</td>
<td>• Misunderstood an aspect of the situation</td>
<td>• Be overweight</td>
</tr>
<tr>
<td>• Laziness</td>
<td>• Displayed indecisiveness</td>
<td>• Have allergies</td>
</tr>
<tr>
<td>• Lack of loyalty</td>
<td>• Displayed indecisiveness</td>
<td>• Show fatigue</td>
</tr>
<tr>
<td>• Uncooperativeness</td>
<td>• Reflected poor training</td>
<td>• Have skin reactions</td>
</tr>
<tr>
<td>• Pigginess</td>
<td>• Failed to recognize potential hazards</td>
<td>• Have disabilities</td>
</tr>
<tr>
<td>• Greediness</td>
<td></td>
<td>• Be intoxicated</td>
</tr>
<tr>
<td>• Arrogancy</td>
<td></td>
<td>• Have physical limitations</td>
</tr>
<tr>
<td>• Impulsiveness</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Corrective Action Plans

- Corrective action plans
  - Will address items that are determined to be deficient
  - Should not be used as a quick fix
  - Should focus on items that, when corrected, will prevent a future recurrence of an accident or incident

Corrective Action Plans

- Corrective action recommendations
  - Should be based on a comprehensive assessment
  - Should address risk
  - Should not assign blame

Needs for Corrective Action

1. Detailed Documentation
2. Assigned Authority
3. Realistic and Defined Time Frame
Corrective Action Plans

- Corrective action plan development should include the following procedural considerations
  - Use a team of personnel to develop the plan
  - Have a process to review SOP/Gs
  - Have a process to review accident reports
  - Have a process to review injuries, fatalities, illnesses and exposures
  - Have a process to review near-miss reports

Corrective Action Plans

- Corrective action plan development should include the following procedural considerations
  - Have a process to observe the current practice to evaluate the need for systemic change
  - Include a time frame for implementation of changes
  - Include direction for what training is needed
  - Have a process for how the plan will be disseminated through the organization

Student Performance Objective

- Given information from discussion, handouts, and reading materials, describe the role of the health safety officer in accident investigation and postincident analysis
Review

- Gathering Information
- Postincident Analysis
- Identifying the Root Cause of the Accident
- Corrective Action Plans
Student Performance Objective

• Given information from discussion, handouts, and reading materials, describe the role of the safety and health officer when preparing for, conducting, and concluding safety inspections.

Overview

• Conducting Inspections
• Recognizing Violations
Conducting the Inspection

• Scheduling inspections
  – Daily
  – Weekly
  – Monthly
  – Quarterly/semi-annually
  – Annually
  – Post-damage
  – Upon request

Conducting the Inspection

• Mandatory items to inspect
  – Carbon monoxide and smoke detectors
  – Air quality
  – Separation of living and work environments
  – Noise level
  – Quick access fire pole safety
  – Operational readiness
Conducting the Inspection

• Common hazards
  – Health
  – Physical
  – Ergonomic

Conducting the Inspection

• Health hazards
  – Avoid cross-contamination by inspecting and cleaning the following areas
    • Designated cleaning and disinfecting areas
    • Laundry facilities
    • Restrooms
    • Kitchens
    • Sleeping quarters

Conducting the Inspection

• Health hazards
  – Avoid cross-contamination by inspecting and cleaning the following areas
    • Living/dining/office areas
    • Exercise rooms
    • Training rooms or facilities
    • Apparatus bays
    • Storage areas
Conducting the Inspection

• Health hazards
  – Avoid cross-contamination by inspecting and cleaning the following areas
    • Areas with floor weight limitations
    • Areas where fuel is stored
    • Machine rooms
    • Areas where there are staircase railings
    • Boiler rooms

Conducting the Inspection

• Health hazards
  – Avoid cross-contamination by inspecting and cleaning the following areas
    • Areas where there is general hazardous materials use and storage
    • Areas where there is safety signage
    • Common areas
    • EMS patient walk-in areas

Conducting the Inspection

• Physical hazards
  – Areas/situations where slips, trips, and falls could occur
  – Areas poorly illuminated
  – Areas with poor air quality
  – Noisy areas
  – Areas where there are electrical components
Conducting the Inspection

• Ergonomics
  – The applied science of equipment and workplace design intended to maximize productivity by reducing operator fatigue and discomfort

• Musculoskeletal disorders (MSDs)
  – Carpal tunnel syndrome
  – Rotator cuff syndrome
  – De Quervain’s disease
  – Trigger finger
  – Tarsal tunnel syndrome
  – Sciatica
Conducting the Inspection

- Musculoskeletal disorders (MSDs)
  - Epicondylitis
  - Tendinitis
  - Raynaud’s phenomenon or disease
  - Carpet layer’s knee
  - Herniated spinal disk
  - Lower back issues

Conducting the Inspection

- Ergonomics programs should address
  - Management leadership and employee participation
  - Hazard information and reporting
  - Job hazard analysis and control
  - Training
  - MSD management
  - Program evaluation
Conducting the Inspection

- Necessary resources and equipment
  - Laptop or tablet computer
  - Flashlight
  - Cell phone
  - Pen
  - Clipboard
  - Digital camera

Conducting the Inspection

- Refrigerator temperature gauge
- Noise level measuring device
- Electrical ground tester
- Fire and life safety code manual
- Safety and health inspection checklist
- Inspection form to document violations and track corrections

Conducting the Inspection

- Coordinating facility personnel and contractors
  - Fire prevention staff
  - Operational personnel
  - External agencies
Conducting the Inspection

- Safety precautions
  - Do not interfere with work
  - Pay attention to apparatus or equipment in use
  - Don PPE
  - Conduct the inspection with another person

Recognizing Violations

- Include the following when documenting violations
  - Address of facility
  - Name of facility
  - Date of inspection
  - Name of inspector
  - Type of inspection
  - Compliance violation reference
  - Compliance violation description
  - Date of reinspection
  - Signatures

Recognizing Violations

- Correcting and closing violations
  - Some things may require immediate correction
  - Some things could require an extended period of time for compliance
  - Follow up is always needed
Student Performance Objective

• Given information from discussion, handouts, and reading materials, describe the role of the safety and health officer when preparing for, conducting, and concluding safety inspections

Review

• Conducting Inspections
• Recognizing Violations
Student Performance Objective

- Given information from discussion, handouts, and reading materials, describe the functions of the health and safety officer concerning apparatus, equipment, and protective clothing purchase and maintenance.

Overview

- Apparatus, Equipment, and Protective Clothing Specifications
- Apparatus and Equipment Service Testing
- Protective Clothing and Equipment Program
Apparatus, Equipment, and Protective Clothing Specifications

• Researching new technology and requirements
  – The HSO should stay current with technology and requirements for apparatus, equipment, and protective clothing

• Keep up to date on current technology by reading journals, attending trade shows, joining national organizations, and networking
• Research new technology and requirements by reviewing
  – NFPA standards
  – Manufacturer information
  – Departmental inspection and maintenance records
  – Current departmental specifications
Apparatus, Equipment, and Protective Clothing Specifications

- Assessing specifications
  - Consult the current standards and guidelines from
    - NFPA
    - ANSI
    - ASTM
    - OSHA
    - EPA
    - US DOT

- Other ways to assess specifications
  - Examine
    - Historical records
    - Surveys of other jurisdictions
    - Reviews of manufacturer business histories
  - Compare products
  - Evaluate products

- Ensuring code compliance
  - Compare researched information to the detailed specification sheet to identify and correct gaps and deficiencies prior to purchase
Apparatus, Equipment, and Protective Clothing Specifications

- Ensuring training on equipment
  - Training should be developed and delivered to all personnel who will operate or use any apparatus, equipment, or PPE

Apparatus, Equipment, and Protective Clothing Specifications

- Personnel should be trained on
  - Normal operational use
  - Product limitations
  - Basic maintenance
  - System checks
  - Cleaning and disinfecting procedures

Apparatus, Equipment, and Protective Clothing Specifications

- Personnel should be trained on
  - Testing requirements and procedures
  - Safety systems
  - Override operations
  - Field troubleshooting
  - Fit testing
Apparatus, Equipment, and Protective Clothing Specifications

- Developing new recommendations
  - Any purchase of new apparatus, equipment, or protective clothing provides an opportunity to examine improved safety features
- Revising existing specifications
  - Existing specifications are revised as needed

Apparatus and Equipment Service Testing

- Preservice tests
  - Tests performed on fire pumps or aerial devices before they are placed into service
    - Manufacture's tests
    - Road test and hydrostatic tests
    - Pump certification tests
    - Acceptance tests

- Service tests—A series of tests performed on apparatus and equipment in order to ensure operational readiness of the unit
Apparatus and Equipment Service Testing

- Apparatus and equipment testing requirements
  - Ladder testing
  - SCBA testing
  - SCUBA regulator and cylinder testing
  - SCBA air compressor testing
  - Fit testing
  - Hose testing
  - PPE testing

Apparatus and Equipment Service Testing

- Annual evaluation plan
  - Plan development
    - Implementing an annual evaluation plan creates a consistent assessment of the organization’s apparatus, equipment, and protective clothing

Apparatus and Equipment Service Testing

- NFPA 1912, Standard for Fire Apparatus Refurbishing, describes the minimum requirements for refurbishing apparatus
  - Level I refurbishment
  - Level II refurbishment
Protective Clothing and Equipment Program

- Clothing and equipment selection
  - PPE must meet design standards of
    - NFPA
    - OSHA
    - State OSHA regulations
    - NIOSH/MSHA

- Other sources for design criteria of PPE
  - ANSI
  - UL and ULC
  - SAFER
  - FIERO
  - SEI
Protective Clothing and Equipment Program

- Clothing and equipment care and maintenance
  - NFPA 1851, Standard on Selection Care, and Maintenance of Protective Ensembles for Structural Fire Fighting and Proximity Fire Fighting

Protective Clothing and Equipment Program

- Clothing and equipment can become contaminated with toxic gases and particulates
  - Carbon monoxide
  - Benzene
  - Hydrogen cyanide
  - Acrolein
  - Nitrogen oxides

Protective Clothing and Equipment Program

- Clothing and equipment can become contaminated with toxic gases and particulates
  - Sulphur dioxide
  - Ammonia
  - Polycyclic aromatic hydrocarbons
  - Asbestos
  - Arsenic
Protective Clothing and Equipment Program

- Cleaning and care procedures for PPE
  - Never use bleach on protective clothing
  - Clean PPE in the designated cleaning area
  - Remove liners from shells and wash separately
  - Clean contaminated PPE in the designated decontamination sink

Protective Clothing and Equipment Program

- Cleaning and care procedures for PPE
  - Keep PPE in assigned storage area
  - Wash PPE in a designated washer
  - Do not clean PPE at home
  - Dry protective clothing in a designated dryer or by hanging
  - Do not store protective clothing in direct sunlight
Protective Clothing and Equipment Program

• Clothing and equipment storage
  – PPE must be stored properly
    • Well ventilated lockers
    • Adjacent to apparatus room
  – PPE should never be found in living quarters

Protective Clothing and Equipment Program

• There are five occasions on which PPE are inspected
  – When accepted by the department
  – On a regular basis
  – On a formal schedule
  – Following repairs
  – Following an injury/illness

Protective Clothing and Equipment Program

• Formal inspections should include
  – Checking the manufacture date
  – Checking the conditions of the clothing
  – Looking for unauthorized alterations or modifications
  – Checking for cleanliness
  – Checking for correct size on the wearer
**Student Performance Objective**

- Given information from discussion, handouts, and reading materials, describe the functions of the health and safety officer concerning apparatus, equipment, and protective clothing purchase and maintenance.

**Review**

- Apparatus, Equipment, and Protective Clothing Specifications
- Apparatus and Equipment Service Testing
- Protective Clothing and Equipment Program
Student Performance Objective

- Given information from discussion, handouts, and reading materials, describe the process of writing reports and making recommendations to reduce accidents, injuries, and loss.

Overview

- Reports
- Recommendations for Change
• There are several skills necessary for writing reports
  – Reports must be
    • Legible
    • Well-researched
    • Concise
    • Accurate
    • Complete
    • Objective
Reports

• SOP/G topics that should be reviewed for compliance:
  – Risk management
  – Training and education
  – Accident prevention
  – Records management

Reports

• SOP/G topics that should be reviewed for compliance:
  – Accidents and equipment
  – Facility and equipment inspections
  – Health maintenance
  – Infection control
Reports

- Reports should address the adequacy of current SOP/Gs
  - SOPs must address all accepted practices and procedures that are expected to be followed
- Reports must also include information on
  - Any flexibility of guidelines in the SOPs
  - Any gaps between SOP/Gs and practices/procedures
  - Any normalization of deviation

Reports

- Reports should include information on the effectiveness of current SOP/Gs
  - SOP/Gs are effective if they address risk management concerns and provide needed guidance

Reports

- Reports on training program compliance
  - Has the department achieved mandatory safety and health training?
    - Annual OSHA refresher training
    - Training on infection control and prevention
    - Bloodborne pathogens training
    - Annual HIPAA compliance training
Reports

- Has the department achieved mandatory safety and health training?
  - Training on OSHA Hazard Communication
  - Training on new apparatus, equipment, and protective clothing in-service
  - Training on new or revised operating procedures

Reports

- Reports on accidents, occupational injuries, illnesses, deaths, and exposures should include
  - Information on current local and national fire service trends
  - Comparisons with identified trends
  - Prevention or mitigation recommendations
Recommendations for Change

• Recommendations for change may come from a number of sources
  – Components of the accident prevention program
  – The occupational safety and health committee
  – The HSO, as the main point of contact for all safety and health programs
  – Safety audits, accident reports, and root cause analysis reports

Recommendations for Change

• Recommendations may be based on the following components from the accident prevention program
  – Laws, codes, regulations, and standards
  – Training rules
  – Accident or incident injury investigation
  – Treatment and transportation of injured department members
  – Standard operating guidelines, certifying courses, and recertifying criteria for driver/operators
  – Safety audits
  – Postincident analysis

Recommendations for Change

• Recommendations may come from the occupational safety and health committee
  – The occupational safety and health committee serves in an advisory capacity because it
    • Conducts research
    • Develops recommendations
    • Studies and reviews matters pertaining to occupational health and safety
Recommendations for Change

• Recommendations may come from the HSO, who is the main point of contact for all safety and health programs
  – The HSO can show how an existing program is deficient or obsolete

Recommendations for Change

• Recommendations can come from safety audits, accident reports, and root cause analysis reports
• The goal in making changes is to improve the safe working environment

Student Performance Objective

• Given information from discussion, handouts, and reading materials, describe the process of writing reports and making recommendations to reduce accidents, injuries, and loss.
Review

• Reports
• Recommendations for Change