

Human Resources Management

HRM 611

Week 11

Occupational Health & Safety



Chapter

10

LEARNING OUTCOMES

- Discuss the importance of employees safety
- Explain in basic causes of accidents.
- Explain how to prevent accidents at work.
- Discuss major health problems at work and how to remedy them.
- Discuss the main elements in an occupational security and risk management programs

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Deepwater Horizon: A Case of Catastrophic Failure

In April 2010, the Deepwater Horizon, a semi-submersible mobile offshore drilling unit operated by BP in the Gulf of Mexico, experienced a catastrophic explosion. This event tragically claimed the lives of 11 workers and resulted in the largest marine oil spill in history. The incident began with a blowout, a sudden and uncontrolled release of crude oil and natural gas from a well. The explosion and subsequent fire destroyed the rig, which eventually sank, leaving the wellhead gushing oil into the Gulf for 87 days.



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Deepwater Horizon: Accident Causes

Malfunctioning BOP: Investigations revealed that the BOP, a complex piece of machinery, had multiple failures, including a faulty battery and hydraulic system.

Inadequate Cementing: The cement seal at the bottom of the well, intended to prevent hydrocarbons from escaping, was poorly executed, creating pathways for gas to rise.

Pressure Testing Misinterpretation: Critical pressure tests were misinterpreted, leading to a false sense of security regarding the well's integrity.



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Deepwater Horizon: Accident Causes

Cost-Cutting and Schedule Pressures: Concerns were raised that BP and its contractors prioritized cost reduction and speed over safety, leading to shortcuts and compromised safety procedures.

Insufficient Oversight: Regulatory oversight was deemed inadequate, failing to catch critical safety lapses.

Poor Risk Assessment: BP's risk assessments did not adequately account for the potential for a deepwater blowout of this magnitude.



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Deepwater Horizon: Accident Effects

Loss of Life: 11 workers perished, and many others were injured.

Environmental Damage: Millions of barrels of oil spilled into the Gulf, causing extensive damage to marine ecosystems, coastal habitats, and wildlife.

Economic Impact: The spill severely impacted the fishing and tourism industries in the region, leading to significant economic losses.

Legal and Financial Repercussions: BP faced billions of dollars in fines, settlements, and cleanup costs.

Reputational Damage: The disaster significantly damaged BP's reputation and public trust.

Regulatory Changes: The incident led to stricter regulations for offshore drilling safety.



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Deepwater Horizon: Lessons Learned

- **Prioritization of Safety**
- **Robust Risk Management**
- **Effective Regulatory Oversight**
- **Importance of Equipment Reliability**
- **Clear Communication and Decision-Making**
- **Culture of Safety**
- **Accountability**



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Importance of Employees Safety

High Incidence of Workplace Accidents:

The raw numbers of workplace fatalities and injuries highlight the inherent risks present in various industries. These statistics aren't just abstract figures; they represent real people, families, and communities impacted by preventable accidents.

Employee Prioritization of Safety:

Employees recognize that their well-being is paramount. When safety is compromised, it creates anxiety, reduces morale, and negatively impacts productivity. A safe workplace is a fundamental expectation.



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Importance of Employees Safety

Financial Costs of Accidents:

The economic burden of workplace accidents extends far beyond immediate healthcare costs. Indirect costs, such as lost productivity, equipment damage, and legal fees, can significantly amplify the financial impact. Moreover, the psychological trauma suffered by injured workers can have long-lasting effects.

Safety Concerns Across Industries:

Regardless of the industry, workplace hazards exist in various forms. Even seemingly low-risk environments can harbor hidden dangers. Proactive safety measures are essential in all sectors.



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Management's Role in Safety

Safety Starts at the Top:

A strong safety culture must be driven by management's unwavering commitment. This involves setting clear expectations, providing necessary resources, and holding everyone accountable for safety performance.

Organizational Commitment to Safety:

Companies with exemplary safety records have ingrained safety into their core values. This involves creating a culture where safety is prioritized above all else.



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10**Actions Top Management Can Take**

Institutionalize a Safety Policy: A written safety policy communicates management's commitment and provides clear guidelines for safe work practices.

Prioritize Safety in Meetings: Explanation: Regularly discussing safety in meetings reinforces its importance and allows for proactive problem-solving.

Incentivize Safety Performance: Explanation: Tying managerial bonuses to safety performance motivates managers to prioritize safety and hold themselves accountable.



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Actions Top Management Can Take

Lead by Example: Management must demonstrate their commitment to safety through their own actions.

safety activities: any proactive action taken by the company to prevent workplace injuries, such as: Safety training programs, implementing safety protocols and procedures, providing personal protective equipment (PPE), conducting safety inspections and audits, and investing in safer equipment and technologies.



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Supervisory Responsibility for Safety

Supervisors are the frontline of safety implementation. They are the direct link between management's safety policies and the employees carrying out the work.

- Supervisors must be thoroughly trained in safety regulations and company safety procedures.
- They need to possess the authority to enforce safety rules and address unsafe practices immediately.
- They should foster open communication with employees, encouraging them to report safety concerns without fear of reprisal.
- They must understand the specific safety requirements for their work environment (e.g., trenching, confined spaces, electrical work).
- They should conduct regular "toolbox talks" or safety briefings to reinforce safety procedures.
- They need to be able to identify and assess potential hazards, taking immediate corrective action.

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10**Importance of Daily Safety Inspections:**

Daily inspections aren't just about ticking boxes; they're about maintaining a constant state of vigilance. Regular walk-throughs allow supervisors to identify emerging hazards, monitor the effectiveness of safety controls, and reinforce safe work practices.

- Supervisors should develop a systematic approach to inspections, covering all critical areas of the work site.
- They should document their inspections, noting any hazards identified and corrective actions taken.
- They should actively engage with employees during inspections, soliciting their input and addressing their concerns.



Week
10**Proactive Safety Measures:**

Safety checklists are valuable tools for ensuring comprehensive inspections and preventing oversights. They provide a structured framework for evaluating safety conditions and documenting findings.

- Supervisors should customize checklists to address the specific hazards present in their work environment.
- They should use checklists consistently and thoroughly.
- They should use safety checklists as a tool to train employees on safety standards.
- They should continuously update and improve checklists based on feedback and incident analysis.



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Occupational Safety and Health Administration (OSHA)

OSHA stands for the Occupational Safety and Health Administration. It is a federal agency of the United States Department of Labor.

Purpose: OSHA's mission is to ensure safe and healthful working conditions for workers by setting and enforcing standards and providing training, outreach, education, and assistance.

Key Objectives of the OSH Act:

- To assure safe and healthful working conditions for working men and women.
- To provide research, information, education, and training in the field of occupational safety and health.
- To provide for the development and promulgation of occupational safety and health standards.
- To provide for enforcement of the standards.
- To assist and encourage the States in their efforts to assure safe and healthful working conditions.

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OSHA's key requirements and functions

- **Setting Standards:** OSHA creates and enforces safety and health standards for various industries, covering hazards like chemical exposure, machine guarding, fall protection, and personal protective equipment (PPE).
- **Enforcement:** It conducts workplace inspections to ensure compliance, issues citations for violations, and prioritizes inspections based on hazard severity and industry risk.
- **General Duty Clause:** Employers must provide a workplace free from recognized hazards likely to cause serious harm, even without specific OSHA standards.



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OSHA's key requirements and functions

Record-Keeping and Reporting: Employers are required to maintain records of workplace injuries and illnesses, and report fatalities or serious incidents to OSHA

Training and Education: OSHA offers training resources, including courses and on-site education, to promote workplace safety and health awareness.

State Plans: States can run their own OSHA-approved programs, provided they are as effective as the federal program.

Consultation Services: OSHA provides free consultations to help small businesses comply with safety standards, independent of enforcement activities.



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Causes of Accidents

1- Chance Occurrences: Unpredictable events like natural disasters; requires emergency plans and insurance.

2- Unsafe Conditions: These are tangible hazards in the workplace that increase the risk of accidents such as:

- **Faulty Equipment:** Regular maintenance and proper procedures mitigate risks.
- **Storage, Illumination, Ventilation:** Improved environmental conditions reduce accidents.
- **High-Danger Zones:** Strict protocols and training are vital for safety.
- **Toxic Safety Climate:** Strong leadership and communication foster safer behaviors.
- **Work Schedules & Fatigue:** Reasonable schedules and breaks prevent fatigue-related risks.
- **Other Factors:** Layoff rates, hostility, and poor conditions impact well-being and safety.

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Causes of Accidents

3-Unsafe Acts: These are human errors or violations of safety procedures that contribute to accidents.

Human errors require clear procedures, supervisor enforcement, and addressing psychological factors.

Accident-Prone Individuals: Some personality traits can increase the risk of accidents.

- Employers should consider personality traits during the hiring process, especially for high-risk jobs.
- Safety training should address individual differences and promote safe behaviors.

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10**Accident Prevention: Reducing Unsafe Conditions**

- **Multifaceted Approach:** Recognizing that accidents stem from a combination of factors, a comprehensive prevention plan should address both physical hazards and human behavior. This means that a company can not just focus on one area, but must address all possible areas.

Reduce Unsafe Conditions**1- Safety Engineers and Job Design:**

Safety engineers play a crucial role in designing workspaces and processes that minimize risks from the outset. This might involve ergonomic considerations, equipment layout, and material handling procedures.

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Examples of Hazard Elimination/Minimization

- **Non-slip mats (slippery floors):** This addresses a common hazard in kitchens and other wet environments, preventing slips and falls.
- **Guardrails (moving machines):** Guardrails act as physical barriers, preventing workers from coming into contact with dangerous moving parts.
- **Emergency stop devices:** These devices allow workers to quickly shut down machinery in case of an emergency, preventing or minimizing injuries.
- **Lockout/tagout procedures (disabling equipment):** This procedure prevents the accidental startup of machinery during maintenance or repair, protecting workers from electrical or mechanical hazards.

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Accident Prevention: Hazard Analysis & Reviews

Utilize Safety Checklists:

- Safety checklists provide a systematic way to identify and address potential hazards. They ensure that all critical safety aspects are considered during inspections.

Job Hazard Analysis (JHA):

A step-by-step process to identify potential hazards in tasks and their consequences.

Considers the worker, task, tools, and environment to proactively create countermeasures like engineering controls, administrative policies, or PPE.

○ Retraining of employees in safe methods:

- After an accident, it is very important to retrain employees on safe procedures. This will help to reinforce safe work practices, and help to prevent future incidents.

Operational Safety Reviews:

- Conducted by regulatory bodies to ensure compliance with safety laws (e.g., IAEA reviews of nuclear plants).
- Focuses on unbiased assessments of safety performance to prevent accidents.

Personal Protective Equipment (PPE):

- Serves as a last line of defense when other controls are insufficient.
- Must be reliable, well-fitted, comfortable, durable, and easy to maintain/use.
- Employers must train workers on proper usage and maintenance.

**Week
10****Accident Prevention Strategies: Hazard Analysis & Reviews****Reducing Unsafe Acts:****Human Error:**

- Caused by fatigue, stress, distractions, or complacency.
- Requires safety awareness, focus on eliminating physical risks, and minimizing distractions.

Prevention Strategies:

- Screening employees for risky traits (non-discriminatory).
- Engaging, ongoing safety training with hands-on simulations.
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10**Safety Training via HRIS****Internet-Based Solutions:**

Websites (e.g., PureSafety) provide customizable safety training.
OSHA, NIOSH, and vendors offer online courses.
Facilitates efficient program launch and course delivery.

Example: online driver safety courses.



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Safety Incentives

Incentive Types:

Cash Bonuses for Safety Goals: Financial rewards tied to measurable safety achievements; While potentially effective, this approach can incentivize underreporting if not carefully managed.

Suggestion Box Rewards: Gift certificates for contributing safety improvement ideas, fostering proactive safety culture.

Point Systems for Safety Activities: Rewards for engaging in safety actions, encouraging ownership of safety practices.



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Safety Incentives

Key Caveats:

Incentives Cannot Replace Comprehensive Safety Programs: Incentives are most effective when integrated into a robust safety management system.

High-Value Rewards May Discourage Injury Reporting: Can lead to underreporting; careful management is necessary.

Over-Reliance on Habitual Behavior: Safety requires conscious and mindful practices, not just automatic actions.



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Fostering a Culture of Safety

1- Management Commitment:

- Supervisors lead by example and actively participate in safety efforts.
- Positive reinforcement recognizes safe behaviors, promoting continuity.
- Regular safety discussions maintain awareness and address concerns.

2- Key Cultural Traits

- Teamwork emphasizes shared responsibility and collaboration in safety.
- Open communication builds trust and encourages hazard reporting
- Belief in accident prevention fosters a proactive safety mindset.
- Assigned roles and responsibilities ensure accountability
- Ongoing hazard identification and correction drive continuous improvement



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Fostering a Culture of Safety

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Fostering a Culture of Safety

3-Supportive Environment:

- Leadership training equips supervisors to promote safety effectively.
- Teamwork and mutual support create a collaborative atmosphere.
- Establishing safety as a core organizational value reinforces its importance.

4- Formal Policies & Goals

- Written safety policies outline guidelines and the organization's commitment.
- Specific & measurable safety goals track progress and drive improvements.



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Fostering a Culture of Safety

5- Safety Awareness & Behavior:

- Awareness programs provide clear, job-specific safety training.
- Behavior-based safety focuses on observed actions and constructive feedback.
- The "Zero 4 Life" approach emphasizes safe behaviors in all aspects of life.

6-Additional Measures:

- Employee-led safety committees address workplace hazards and solutions.
- Texting policies prevent distracted driving and ensure compliance.



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Job Stress, Burnout, and Depression

1. Job Stress:

- **Causes:** External factors (e.g., workload, deadlines, conflicts) and internal traits (e.g., perfectionism, workaholism).
- **Consequences:** Health issues (mental and physical), reduced productivity, absenteeism, and high turnover.
- **Reduction:** Personal strategies (time management, healthy habits) and employer initiatives (flexible work options, support programs).

2- Burnout:

- **Definition:** Extreme exhaustion from stress, marked by cynicism and reduced achievement.
- **Causes:** Unrealistic demands, overwork, lack of control/recognition.
- **Prevention:** Balance work and personal life, take breaks, engage in physical activities, and mentally detach after work.

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Job Stress, Burnout, and Depression

3. Depression:

- **Impact:** A serious condition affecting performance and well-being; costly for both employees and employers.
- **Employer Role:** Provide mental health resources, train managers to offer support, and foster a stigma-free workplace.
- **Signs:** Sadness, sleep/appetite changes, reduced focus, loss of interest.
- **Note:** Depression is a treatable medical condition.

Smart PPE & IoT in Safety



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From Traditional Safety to Smart & Predictive Safety

Traditional Safety

Focus: **Responding after incidents occur**

Process: Investigate → Report → Prevent recurrence

Tools: Incident logs, corrective actions

Smart & Predictive Safety

Focus: **Predicting risks before they happen**

Approach: Use **data & analytics** to detect risk patterns

Data Sources:

- Incident & injury records

- Overtime hours

- Equipment breakdowns

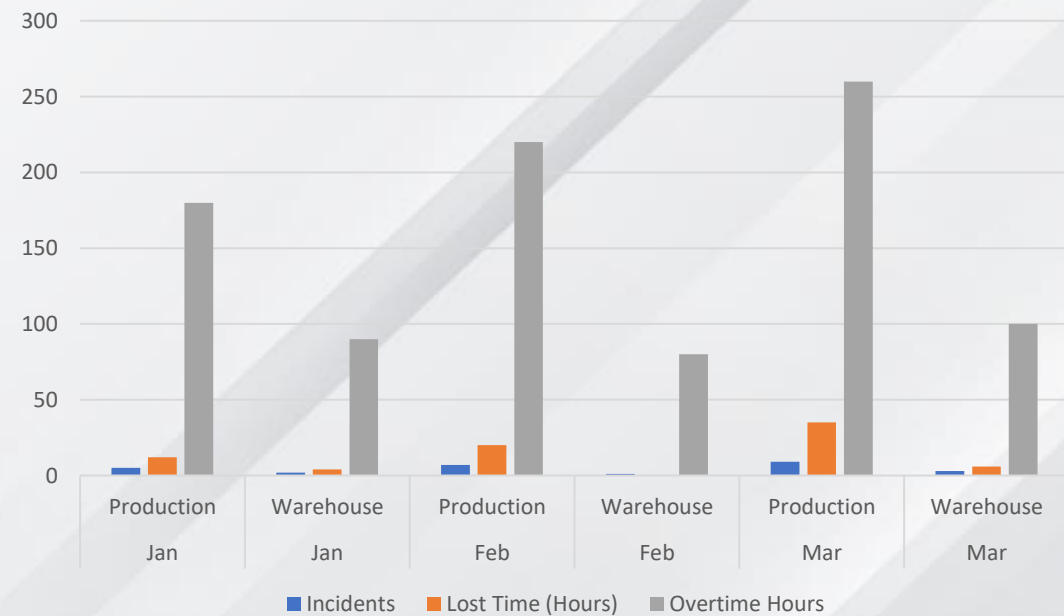
- Inspection reports

Tools: Excel, Power BI, advanced analytics

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Accident Trend Dashboards

Month	Department	Incidents	Lost Time (Hours)	Overtime Hours
Jan	Production	5	12	180
Jan	Warehouse	2	4	90
Feb	Production	7	20	220
Feb	Warehouse	1	0	80
Mar	Production	9	35	260
Mar	Warehouse	3	6	100



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Accident Trend Dashboards

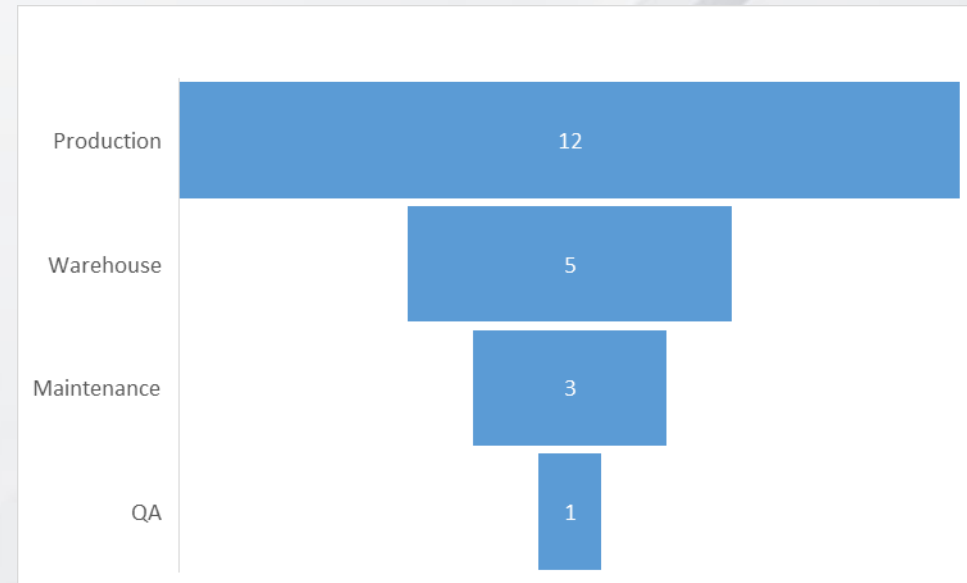
Month	Incidents
Jan	4
Feb	6
Mar	7
Apr	4
May	5



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Accident Trend Dashboards

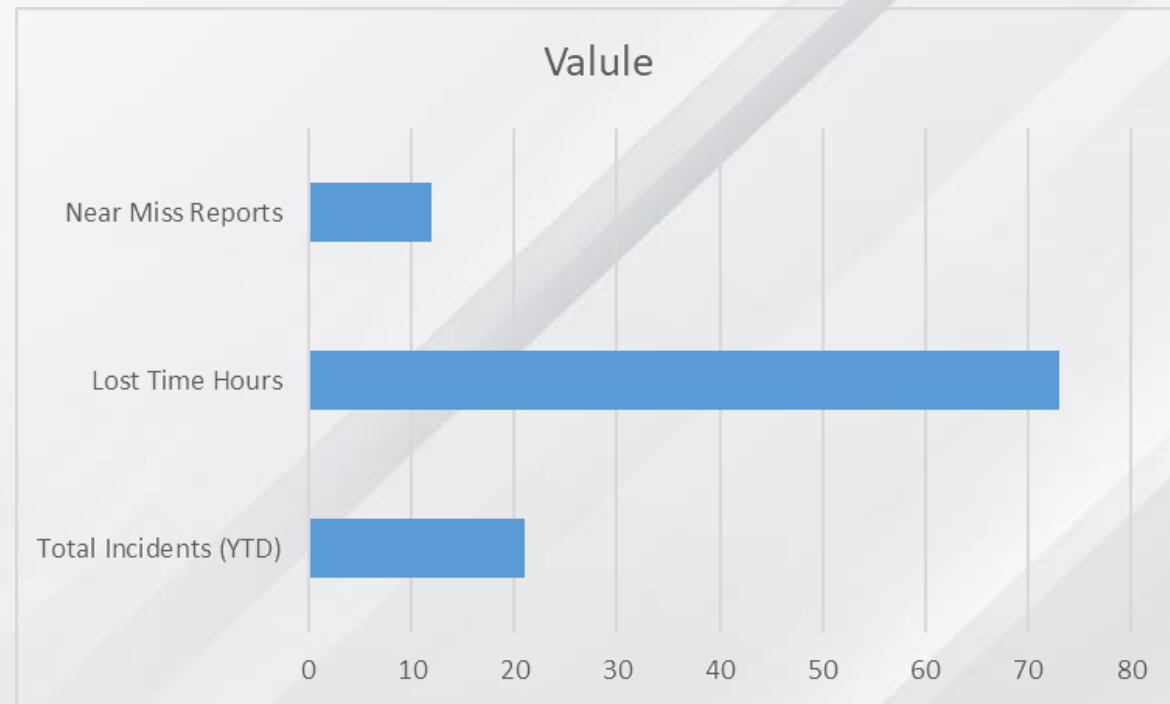
Department	Incidents
Production	12
Warehouse	5
Maintenance	3
QA	1



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Accident Trend Dashboards

KPI	Value
Total Incidents (YTD)	21
Lost Time Hours	73
Near Miss Reports	12



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Conclusion

Importance of Safety: High costs of accidents (human and financial).
Employee prioritization of safety.
Legal and ethical responsibilities.

Accident Prevention: Addressing unsafe conditions (engineering controls).
Managing unsafe acts (training, screening).
Utilizing PPE (hierarchy of controls).
Hazard analysis, and safety reviews.

Building a Safety Culture: Management commitment and leadership.
Employee involvement and communication.
Incentives and recognition programs.
Creating supportive environments.

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Conclusion

Workplace Health:

- Addressing hidden hazards (chemicals, etc.).
- Managing stress, burnout, and depression.
- Controlling exposure to asbestos, and repetitive motion.
- Infectious disease prevention.

Actionable Steps:

- Implement comprehensive safety programs. Prioritize hazard identification and control.
- Foster a strong safety culture through leadership and communication.
- Provide thorough employee training and education.
- Address both physical and mental workplace health.
- Promote proactive safety behaviors.

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Conclusion

Future Focus:

- Adapting to evolving workplace hazards (technology, etc.).
- Integrating mental health and well-being into safety programs.
- Leveraging technology (HRIS) for safety training and management.
- Promoting a "Zero 4 Life" or similar holistic safety philosophy.
- Continually improving safety policies, and procedures.

job stress, burnout, and depression pose significant threats to both employee well-being and organizational productivity. While personal strategies can mitigate some effects, employers must actively address these issues through supportive policies, accessible mental health resources, and a commitment to fostering a healthy work environment. Recognizing depression as a treatable medical condition is crucial for creating a workplace where employees feel supported and can thrive.

References

Main Reference

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Additional Resources for extra reading.

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Thank You