



How to Conduct a **MORE** Effective Accident Investigation

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Lorain County Safety Council

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Introduction

Bob Heater

- 40+ years' experience as workplace Ohio BWC safety consultant
- OSHA, ANSI, NFPA, and NEC safety rules, regulations and standards
- Experience with:
 - Private industry
 - Public employment
- Authorized OSHA 10- and 30-hour General Industry Outreach Program Trainer
- Professional member of KittyHawk Chapter of the American Society of Safety Professionals since 1989
- Certified Safety Professional since 1990
- Ohio Army National Guard (SFC Ret)
- Edison State Community College (adjunct instructor ret)



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Learning Objectives:

- The ripple affect of a workplace-related event on an organization
- Various hazard discovery techniques
- A short list of key workplace-related event definitions
- How to identify witnesses
- Different types of causes
- Recommendations, corrective action, treatment, etc.

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Types of Events that Should be Reported to the Supervisor:

- Near-miss (“close calls”)
- Forklift involved
 - Operated in an unsafe manner
 - Involved in a near-miss or an accident
- First-aid
- Property loss
- Illnesses
- Injuries



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What Are You Doing Now?

- What types of incidents do you investigate now?
- What are the disadvantages of investigating **only** incidents that have caused serious injury or damage?
- What are the benefits of investigating near-miss incidents?



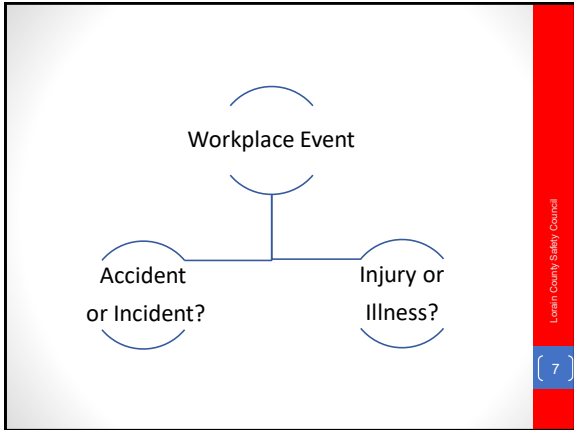
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Hazard Discovery Techniques:

- FMEA: Failure Modes and Effects Analysis
- FTA: Fault Tree Analysis
- AEA: Action Error Analysis
- HAZOP: Hazard and Operability Analysis
- MORT: Management Oversight and Risk Tree Analysis
- 5-ys: Five Whys



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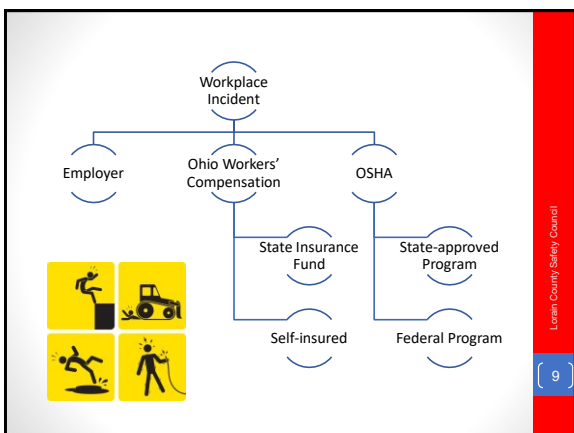
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Definitions:

- Accident – injuries and illnesses that were uncontrollable and unpredictable.
- Incident – injuries, illnesses, near misses, and other situations that have the potential to cause harm.
- Injury – caused by instantaneous events in the work environment.
- Illness – incidents resulting from anything other than instantaneous events

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What is Compensable (BWC)?

An industrial injury is defined as “a personal injury to an employee which has been caused by an accident or an occupational disease and which arises out of or in the course of employment which could entitle such employee to compensation under Workers’ Compensation Act, 1923”.

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Ohio BWC Definitions:

- Medical only claim – if a worker misses seven (7) or fewer calendar days from work due to the work-related injury.
- Lost-time claim – if the employee cannot return to work for 8 or more calendar days.

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BWC Medical Only vs. OSHA Medical Treatment

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What's the Difference?

BWC Medical Only Claims

- Defined as – if a worker misses seven (7) or fewer calendar days from work due to the work-related injury.

OSHA Medical Treatment Cases

- Not defined! However, first aid is!
- Question! What is first aid?

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"First aid" means the following:

- (A) Using a non-prescription medication at nonprescription strength;
- (B) Administering tetanus immunizations;
- (C) Cleaning, flushing or soaking wounds on the surface of the skin;
- (D) Using wound coverings such as bandages, Band-Aids™, gauze pads, etc.; or using butterfly bandages or Steri-Strips™;
- (E) Using hot or cold therapy;
- (F) Using any non-rigid means of support, such as elastic bandages, wraps, non-rigid back belts, etc.;

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"First aid" (cont'd)

- (G) Using temporary immobilization devices while transporting an accident victim (*e.g.*, splints, slings, neck collars, back boards, etc.).
- (H) Drilling of a fingernail or toenail to relieve pressure, or draining fluid from a blister;
- (I) Using eye patches;
- (J) Removing foreign bodies from the eye using only irrigation or a cotton swab;

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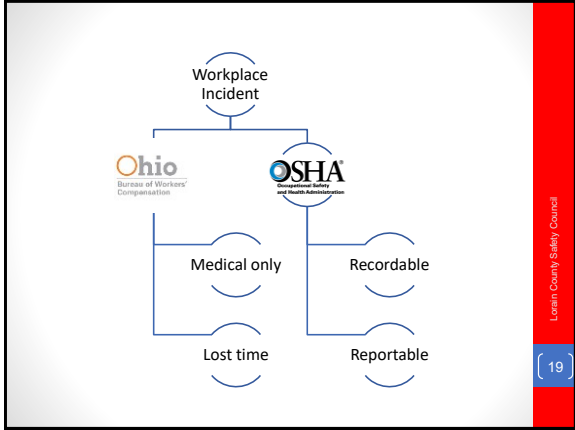
"First aid" (cont'd)

- (K) Removing splinters or foreign material from areas other than the eye by irrigation, tweezers, cotton swabs or other simple means;
- (L) Using finger guards;
- (M) Using massages (physical therapy or chiropractic treatment are considered medical treatment for recordkeeping purposes); or
- (N) Drinking fluids for relief of heat stress.

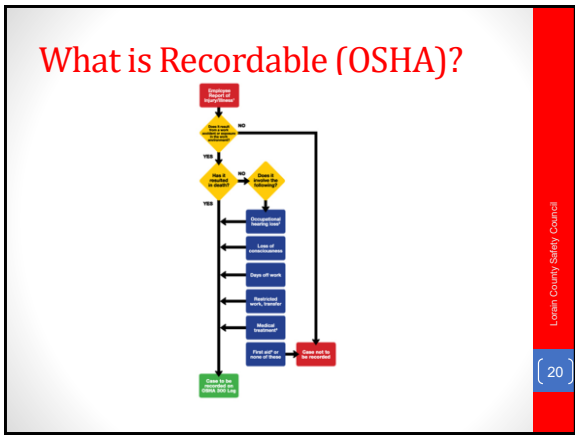
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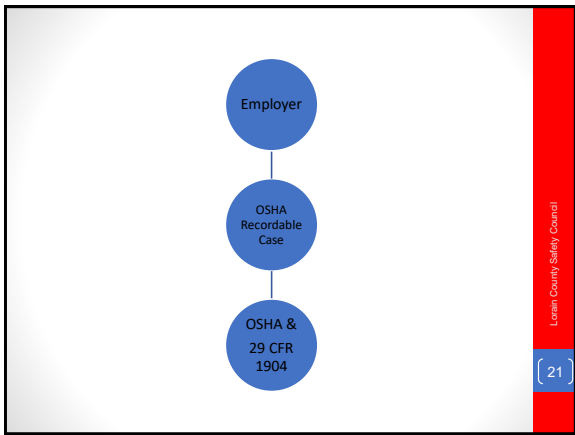
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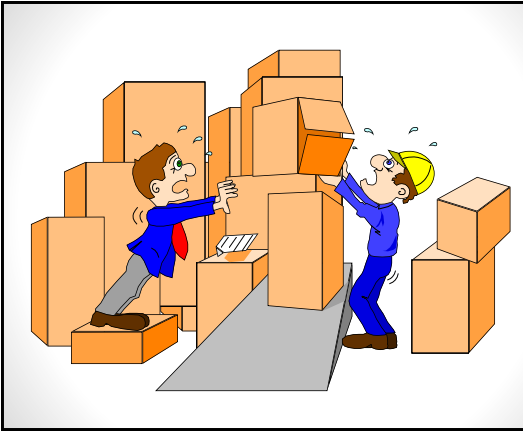
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What is Reportable (OSHA)?



- HOW DO I REPORT?**
1. Call 1-800-321-OSHA (6742) or
 2. Call your nearest area office during normal business hours or
 3. Report online at: www.osha.gov/report_online

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What's the primary objective of investigating and analyzing incidents?

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What is your primary objective?

- To file workers' compensation claim?
- To complete OSHA regulatory compliance records?
- To track lagging indicators?
- To prevent similar incidents from occurring?

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Effective Use of Witnesses

Identifying Witnesses

Avoid restricting the search for witnesses to those who **SAW** the incident happen!

Anyone who heard or knows something about the event may offer useful information.

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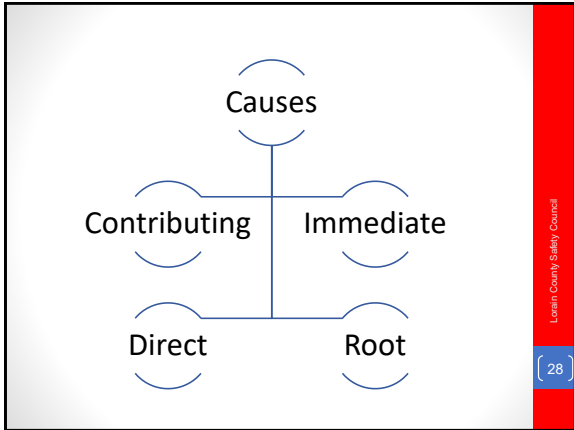
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Types of Causes

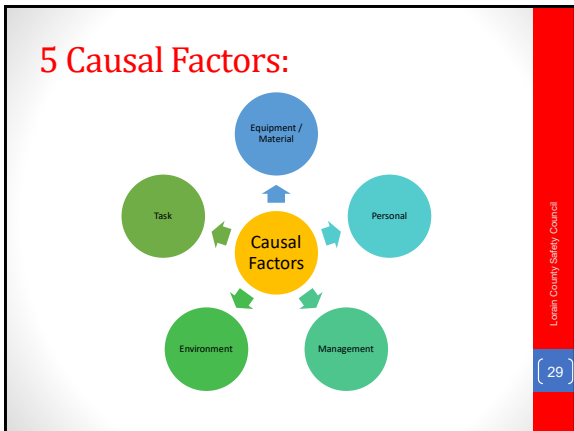
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Task:

Here the actual work procedure being used at the time of the incident is explored. You are looking for answers to questions such as:

- Was a safe work procedure used?
- Had conditions changed to make the normal procedure unsafe?
- Were the appropriate tools and materials available?
- Were the appropriate tools and materials used?
- Were safety guards and devices working properly?
- Was lockout used when required?

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Material:

To seek out possible causes brought about by the material and/or equipment used, you might ask:

- Was there an equipment failure?
- What caused the equipment to fail?
- Was the machinery poorly designed?
- Were hazardous substances involved?
- Were the hazardous substances clearly identified?
- Was a less hazardous alternative substances possible and available?
- Was the raw material substandard in some way?
- Should personal protective equipment (PPE) have been used?
- Was proper PPE used?

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Environment:

The physical environment, and especially sudden changes to that environment, are factors that need to be identified. Note that it is the situation *at the time of the incident* that is most important.

- What were the weather conditions?
- Was poor housekeeping a problem?
- Was it too hot or too cold?
- Was noise a problem?
- Was there adequate light?
- Were toxic gases, dusts, fumes or vapors present?

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Personal:

The physical and mental condition of those individuals directly involved in the event must be explored.

- Were workers experienced in the work being done?
- Had they been adequately trained?
- Were they physically capable of doing the work?
- What was the status of their health?
- Were they tired?
- Were they under stress (work or personal)?

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Process/Management:

Management holds the legal responsibility for the safety and health of the workplace and therefore the role of supervisors and higher management must always be considered.

- Were safety rules in effect?
- Were the safety rules being enforced?
- Was adequate supervision and training given?
- Had hazards been previously identified?
- Had procedures been developed to overcome them?
- Were unsafe conditions corrected?
- Was regular maintenance of equipment carried out?
- Were regular safety inspections carried out?

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Accident Investigation Control Options

| Category | Prevention | Control | Correction | Elimination |
|--------------------|------------|---------|------------|-------------|
| Task/Work | | | | |
| Material/Equipment | | | | |
| Environment | | | | |
| Personnel/Workers | | | | |
| Process/Management | | | | |

Examples:

| | | | |
|----------|-------------|--------------------------------|----------------|
| Personal | Human Error | Training on how to do property | Administrative |
|----------|-------------|--------------------------------|----------------|

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What is the Cause?

- **Direct** cause: condition or behavior that was immediate cause of incident.
- **Root** cause: underlying condition/behavior that will, once corrected, prevent similar incidents from occurring.

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Accident Investigation Control Options

| Control | Personnel | Engineering | Administrative | PPE |
|---------------------|-----------|-------------|----------------|-----|
| Task/Work | | | | |
| Machinery/Equipment | | | | |
| Environment | | | | |
| Personnel/Workers | | | | |
| Process/Management | | | | |

Details

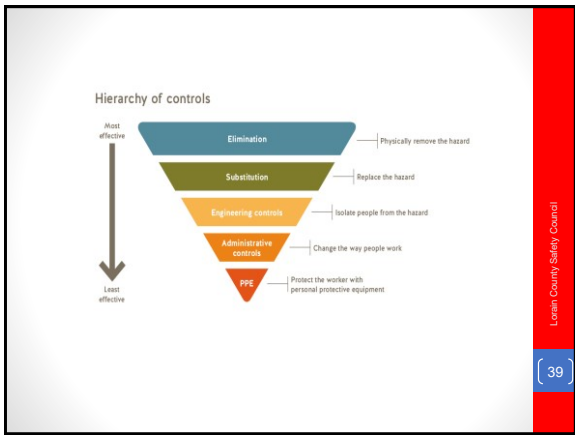
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|-----------|---------------------|---------------------------------|----------------|
| Personnel | Machinery/Equipment | Training on how to use properly | Administrative |
|-----------|---------------------|---------------------------------|----------------|

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Recommendations,
corrective action,
treatment, mitigation, etc.

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