COTTINGHAM & BUTLER

RISK MANAGEMENT SAFETY WEBINAR

Accident Investigation

TRAINING OBJECTIVES

- Understand Purpose of Accident Investigations
- Understand Techniques for Conducting Accident Investigations
- Root Cause Analysis
- Corrective Action Development

POLL QUESTION #1

What does your current Accident Investigation Process look like?

A) Informal process managed by Human Resources

B) Involves completing a workers compensation report, but no root cause analysis, or corrective actions

C) Formal process involving root cause analysis, corrective action development, and training that is all documented and tracked too completion

D) No Accident Investigation program

WHAT IS ACCIDENT/INCIDENT INVESTIGATION?

An investigation has the following elements:

- A systematic approach to incident investigation
- The identification of root causes
- Implementation of corrective actions

WHY WE INVESTIGATE

- Prevent recurrence
- Improve your safety management
- Demonstrate your commitment

INVESTIGATION REPORT

- Info about injured employee
- Info about the injury
- Description of incident
  - What was the employee doing, position, unexpected event, what happened
- List witnesses
- At-risk act or condition
- Causes of injury
- Corrective action

INVESTIGATION GOALS

- Identify the cause(s) to help prevent reoccurrence.
- Identify trends or problem areas.
- Permit comparisons on safety performance.
- Satisfy workers' compensation and other legal requirements.
- Identify (without placing blame) the basic causal factors that contributed directly or indirectly.
- Identify deficiencies in management systems.
- Suggest corrective action for:
  - Management system
  - Incident

WHO SHOULD INVESTIGATE?

- Team Approach
- Supervisor
- Safety manager
- Human resource manager
- Safety committee representatives
- Employee
- Team members
- Maintenance workers
- Subject matter experts

GATHERING FACTS

- What was the exact injury or damage?
- What was the damaging energy source?
- What event(s) immediately preceded the damaging event?
- What else was going on at the time of the incident?
- Was anyone else involved?

GATHERING FACTS

Ensure observation and recording of fragile, perishable, or transient evidence:

- Instrument readings
- Control panel settings
- Weather and other environmental conditions
- Skid Marks (Forklift Incident)

GATHERING FACTS

Other things to check:

- Maintenance or other records
- Manufacturers, vendors, and suppliers
- Review operations factors (data, trends)
- Review photographs, video
- Other?

Sources of information can extend far beyond the incident site

INTERVIEWING WITNESSES

- Witnessed events leading up to the incident.
- Was involved in the incident.
- Saw what happened.
- Came upon the scene immediately after the incident.
- Knowledgeable about procedures or equipment related to the incident.

Interviews should be conducted as soon as possible after the incident

INTERVIEWING WITNESSES

Stage 1: Prepare for the interview

- Plan the interview
- Plan to answer interviewee questions
- Establish the physical setting

Witness needs to have confidence in the investigation

"Employee Perceptions"

INTERVIEWING WITNESSES

Stage 2: Open the interview

- Greet the interviewee.
- Exchange small-talk.
- State the purpose of the interview.
- Answer interviewee questions.

The purpose is to gather facts to prevent reoccurrence – not establish fault

INTERVIEWING WITNESSES

Stage 3: Conduct the Interview

- Avoid “yes” and “no” questions.
- Use open-ended questions.

INTERVIEWING WITNESSES

Exploratory questions:

- “What caused the accident?”
- “Describe the situation that led to…”
- “What can you tell me about…”

Follow-up questions – complete the picture:

- “What do you mean by…?”
- “Tell me more about…”

INTERVIEWING WITNESSES

- Voice – pitch, rate, volume.
- Use nodding of head and say, “I see,” “okay,” etc.
- Watch body language - never show surprise, facial expressions, rolling of eyes, sighing, etc.

Permit a slight pause in the conversation

INTERVIEWING WITNESSES

Stage 4: Close the interview

- Summarize the complete interview.
- Tell interviewee to get back in contact if he/she recalls new details.
- Thank the interviewee.

INVESTIGATION TRAPS

Set your emotions aside

- Don’t let your feelings interfere - stick to the facts!

Do not pre-judge

- Find out what really happened.
- Do not let your beliefs cloud the facts.

Never ASSUME anything

INCIDENT CAUSATION

Incidents may have many contributing factors.

These include:

- Management policies and procedures
- Unsafe acts
- Unsafe conditions

INCIDENT CAUSATION

- An incident always involves a person.
- Incomplete investigations often conclude that the person committed an unsafe act.
- Unsafe acts may have underlying causes.

"Immediate causes are only the symptoms"

ROOT CAUSES

Root Cause Definition:

A root cause is the underlying reason an incident occurs. It is often related to a deficiency in management systems designed to control hazards. Root causes are the reasons management systems fail. A root cause does not apply to one incident only, but has generic implications to a broad group of credible occurrences.

Root Causes = Why a Management System Fails

ROOT CAUSE ANALYSIS (RCA) PROCESS

Various processes available

- Fishbone
- 5-Why

Root Cause: can be reasonably identified and managed if we identify issues covering the basic elements of:

- Human Behavior/Actions
- Physical Failures
- Operating Systems
- Work Environment
- Other

ROOT CAUSES

Human Behavior/Actions:

- Lack of knowledge or skill
- Improper motivation (not wearing PPE)
- Physical or mental conditions
- Literacy or ability
- Poor decision making
- Taking shortcuts

ROOT CAUSES

Physical Failures:

- Physical environment
- Sub-standard equipment
- Abnormal usage
- Wear & tear
- Design & maintenance
- Purchasing standards

ROOT CAUSES

Operating Failures:

- Inadequate instructions
- Failure of SOPs
- Rules not enforced
- Hazards not corrected
- Devices not provided
- Lack of policy
- Policy not enforced
- Standards not measurable
- Incorrect performance not corrected

OTHER

- Ergonomics
  - Force
  - Repetition
  - Postures

MOST OF THE TIME . . .

Our root causes are too shallow

and our corrective actions too narrow!

We Need to **DIG DEEPER** for **ROOT CAUSES** and

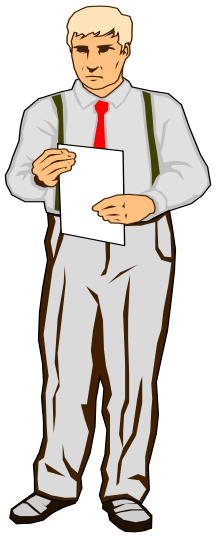
TRANSLATE corrective actions more broadly

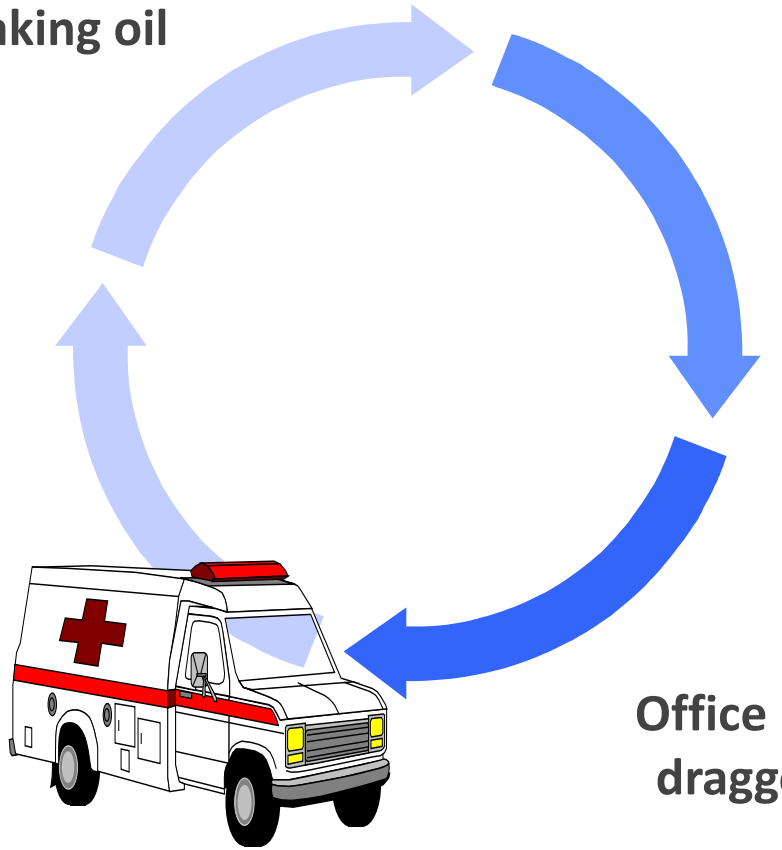
so they become **PREVENTATIVE** actions.

THE KEY QUESTION - WHY?

Employee doesn't clean up spill

Machine is leaking oil into aisle



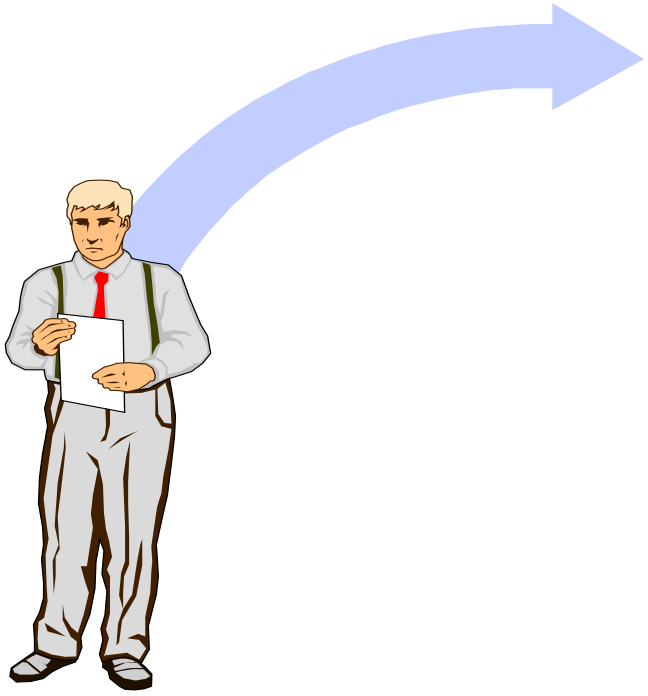


Another employee walks through oil spill without cleaning it up

Office manager slips on oil dragged across the floor.

THE KEY QUESTION - WHY?

Machine is leaking oil into aisle



- Why is the machine leaking oil?
- Why wasn't the work order completed?
- Why wasn't the leak contained?

THE KEY QUESTION - WHY?

Machine is leaking oil into aisle

Employee doesn't clean up spill

- Why didn't the employee clean up the spill?
- Why weren't cleaning supplies available?
- Why didn't the employee report the machine was leaking oil?

THE KEY QUESTION - WHY?

Machine is leaking oil into aisle

Employee doesn't clean up spill

Another employee walks through oil spill without cleaning it up

- Why didn't this employee clean up the spill?
- Why did this employee walk through the spill?
- Why didn't the employee use the cleaning supplies in the area?

THE KEY QUESTION - WHY?

Machine is leaking oil into aisle

Employee doesn't clean up spill

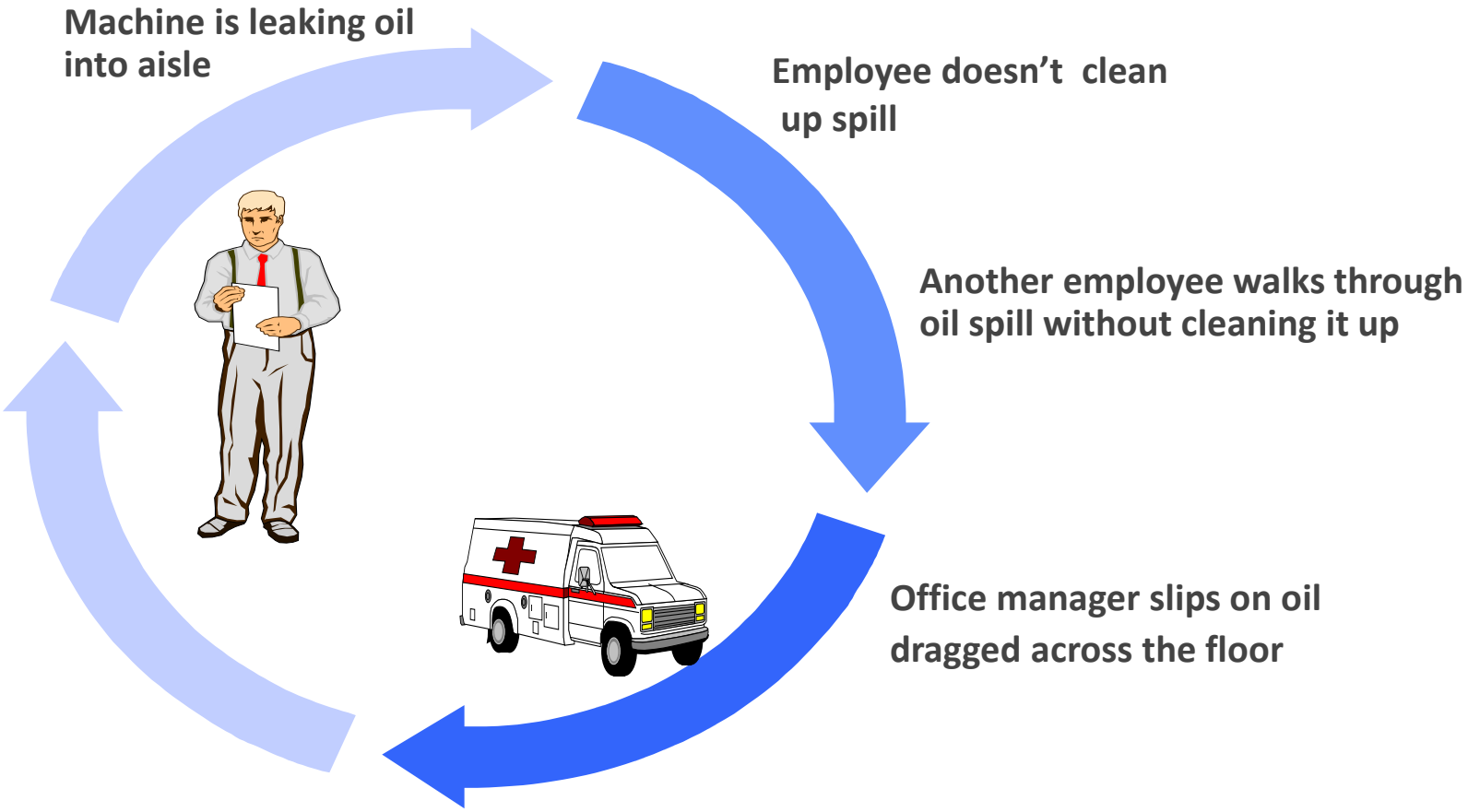
Another employee walks through oil spill without cleaning it up

Office manager slips on oil dragged across the floor

- Why was the office manager walking through this area?
- Was the spill identified with cones/sign, etc.?

TAKE CORRECTIVE ACTIONS

Step through the sequence of events, looking for corrective actions where possible.



FOLLOW UP!

Corrective measures:

- Assigned
- Implemented
- Documented
- Progress reports for longer time frames

EFFECTIVE CORRECTIVE ACTIONS

- ... address the root cause.
- ... clearly state an intended action.
- ... are practical, feasible, and achievable.
- ... eliminate or decrease risk.
- ... affect a change.
- ... have a target date for completion.
- ... designate responsible person(s).

A well-written recommendation describes the action to be taken

PREPARE A REPORT

Accident Reports should contain the following:

- Description of incident and injuries.
- Sequence of events.
- Pertinent facts discovered during investigation.
- Conclusions of the investigator(s).
- Recommendations for correcting problems.

PREPARE A REPORT

Be objective!

- State facts.
- Assign cause(s), not blame.
- If referring to an individual's actions, don't use names in the recommendation.
  - Good: All employees should…
  - Bad: George should…

A GOOD REPORT

Accurate and complete

Clear and complete description of the sequence of events (time-line)

- Leading up to incident
- Following incident

Description of any injuries

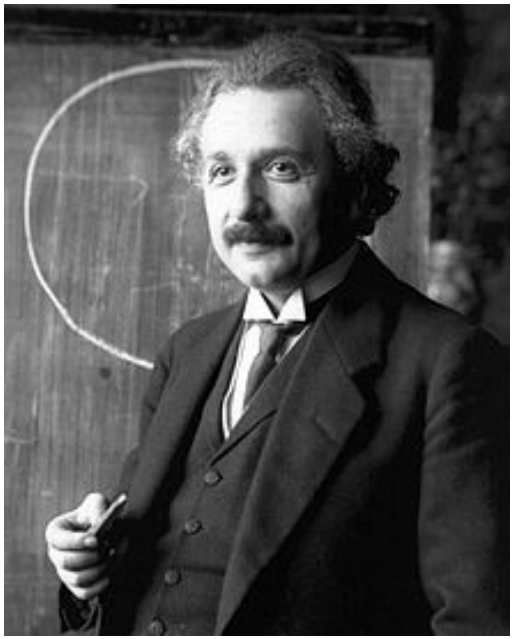
Identification of all causal factors

Recommendations for corrective actions

Proper review and sign-off

“Insanity: doing the same thing over and over again and expecting different results...”

- Albert Einstein



QUESTIONS?