

10 INCIDENT INVESTIGATION, ANALYSIS, AND COSTS

ANSWERS—QUIZ 1

1. b
2. a
3. b
4. b
5. a
6. a
7. c
8. b
9. c
10. d
11. c
12. The four Ms are man, machine, media, and management.
13. A safety and health professional should verify the supervisor's findings because the supervisor may attempt to cover up a supervisory error.
14. The four factors are: (1) the study of all working areas to detect and control or eliminate hazards; (2) the study of all operating procedures and administrative controls; (3) education, training, and discipline to minimize human factors; and (4) thorough investigation and analysis.
15. The four contributing incident factors are equipment, environment, people, and management.
16. These two categories are incidents resulting in work injuries or illnesses and incidents causing property damage or interfering with production.
17. This is the cost of paying employees who stopped working to watch or assist after the incident or to talk about it, or who lost time because they needed the equipment damaged in the incident or because they needed the output or the aid of the injured worker.
18. A new worker does not produce at the same level as an experienced worker and his or her decreased productivity indirectly increases costs for the company.
19. A narrative description and incidence sequence provides information about the exact location of the incident and the investigator should include any maps or diagrams with his or her report. It also provides a complete, specific breakdown of the sequence of events leading to the injury or near-miss; what objects

or substances were involved in the incident; conditions such as temperature, light, noise, and weather; and how the injury occurred and the specific object that was involved in the incident. The description should explain any preventive measures that had been in place and what, if anything, happened after the injury occurred. An investigator should include only the facts and not record any opinions or place blame.

20. There are two types of analysis that can be done. First, an investigator can examine the individual incident to determine the corrective action or actions to prevent further occurrences of this specific sequence of events. Second, the investigator can do a statistical analysis to examine a group of similar occurrences for patterns lending themselves to corrective actions. Over time, statistical analysis can show which corrective actions have been more effective than others.

ANSWERS—QUIZ 2

1. b
2. b
3. a
4. b
5. a
6. a
7. a
8. c
9. d
10. b
11. a
12. An unintentional injury is the preferred term for accidental injury in the public health community. It refers to the result of an accident.
13. The dual purpose of an investigation is: first, to identify facts about each injury and the incident that produced it and to record those facts; and second, to determine a course of action to eliminate a recurrence.
14. These categories are: employer characteristics, employee characteristics, characteristics of the injury, a narrative description and incident sequence; characteristics of the equipment, characteristics of the task, time factors, task and activity factors, supervision information, casual factors, and corrective actions.
15. Employers should require the use of a permit system to ensure that workers have the skills to perform

their jobs, understand the hazards of any equipment, chemicals, or processes, and know basic safety and emergency procedures.

16. The uninsured medical cost is usually that of medical services provided at the plant dispensary. Reducing the number of incidents could result in lower costs for the plant dispensary.
17. The purpose of a pilot study is to develop average uninsured costs for different classes of incidents that can be applied to future incident totals.
18. Generally, a supervisor should investigate an incident.
19. An investigator may decide to include an estimate of the costs associated with the incident, exposure data that can be used to calculate incidence rates for injuries associated with certain injuries, and management data for use in performance reviews. He or she may also include information required for special studies, such as monitoring corrective action, and information on incident patterns specific to a particular division, company, or industry.
20. A Class 3 incident involves injuries that are not OSHA-recordable (most first aid cases) and less than \$100 in property damage. From a cost perspective, they are the most difficult to analyze because the time lost is likely to occur repeatedly and only for short periods. Also, the injuries can occur so frequently that an undue burden is placed on the supervisor and safety director if a complete report form and data sheet are required for each case.
 - b. If departmental records do not contain this information, assign an investigator to observe a random sample of 50 or more persons visiting the dispensary. To determine average time, add all estimated periods of absence and divide by the total number of persons observed.
 - c. Estimate the average cost of providing medical attention for each visit by dividing the total cost of operating the dispensary for a year by the total number of treatments given during the year.
 - d. Calculate the average number of visits to the dispensary per case by dividing the number of treatments of Class 3 injuries in a representative period by the number of Class 3 injuries reported during the same period of time.
 - e. Calculate the average amount of supervisor's time required per case by observing the amount of time representative supervisors spend working on first aid cases.

ANSWERS—CASE STUDY

1. Information that is essential to the analysis includes the average amount of working time lost per trip to the dispensary, the average dispensary cost per treatment, the average number of visits to the dispensary per case, and the average amount of supervisor's time required per case.
2. For organizations with a dispensary, such as Goreman Manufacturing, this information can be determined by taking the following steps:
 - a. Secure an estimate of average working time lost per trip to the dispensary for first aid. Departmental time records should be consulted as they may show the amount of time each worker is absent from the job while receiving first aid. If so, a random sam-