Accident Investigation

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The Investigation Process

All accidents and near misses should be investigated, however, not all to the same extent and depth. Managers need to assess each incident to identify where the most benefit from carrying out an investigation can be gained. "The greatest effort should be concentrated on significant events where there has been serious injury, ill health or loss as well as those which had the potential to cause widespread or serious injury or loss" .
The systematic and chronological investigation procedure set out in this guidance should be the basis of, and a source of reference for, an investigation.

Typically an investigation should:

- Determine the events leading up to the accident;
- Formulate conclusions as to the likely causes of the accident; and
- Recommend action to prevent a recurrence of the same or similar accidents.

Who Should Investigate?

The approver selected by the person reporting the accident. If a Head of Department has been selected, please seek support form Gareth Broad, Mary Cherry, or Emilie Darabasz if you are unsure.

Timing

The investigation must commence as soon as possible after the accident, as the quality of evidence deteriorates with time. The early stages of the investigation will need to establish a general picture of what happened and determine whether any short-term measures need to be identified and communicated promptly to all relevant parties.
The investigation report must be produced as soon as possible. In more serious cases where it is not possible to produce the report quickly, an interim report should be produced.

Suggested Framework for Collecting Evidence

The following are some fundamental questions which can help focus on the main points of evidence, reveal the chain of events and analyse the causes:

- Where and when did the accident occur?
- Who was involved and were any injuries sustained?
- Were there any witnesses?
- What was the activity, was it planned and why were things planned as they were?
- Was a specific risk assessment necessary? Had it been produced, how accurately did it reflect the activity and were the identified controls followed?
- Was there a safe system of work or safe working procedure for the activity, and if so, was it being followed?
- How should the activity have been carried out and what actually happened?

- Were there any changes from the requirements stipulated in the risk assessment(s) and/or the safe system of work?
- What training and/or instructions had been given?

Finding the Facts – People

The reason for questioning, obtaining statements and conducting subsequent interviews with eye-witnesses and others involved with the activity is not only to find out what happened chronologically, but also why certain things were done or omitted and whether there were any deviations from the safe systems of work or safe working procedures.
It is very important in the early stages to identify who is being, or is likely to be, interviewed as witnesses.
The significance of causation should be made known to all those being interviewed and the giving of answers which have not been researched should be avoided.

Who Can Provide Evidence/Help with the Investigation?

People to be considered for questioning, providing a statement or attending interview includes:
Those present before, during and after the accident happened, whether or not they saw the accident, including any injured person(s);
The manager who was in charge of the activity or people involved;
Staff / contractors responsible for the systems, guidance or equipment in use and possibly equipment providers;
Specialists with particular technical expertise on the activity, equipment etc.

Questioning Technique

To obtain reliable information, it is essential to obtain the full co-operation of each individual particularly as they may be injured, feeling apprehensive or showing signs of emotion. All employees have a contractual obligation to co-operate with an investigation process. Record where potential witnesses cannot be identified or are unable to provide a statement.

It is important to encourage the witness to tell things chronologically and in their own way. Keep an open mind and avoid making any assumptions. Investigators should aim to gain information in the key areas such as people, competency, equipment, working practices and location/environment.

Most questions posed by the investigator during the fact-finding stage of an investigation should be open, for example:

- *Describe in your own words what happened?*
- *What did you see, hear, feel?*

- *What did you do next?*
- *Why was that done?*

More direct questions may then be used to clarify or check what is meant.

Interviews and Statements

Face to face discussions and telephone conversations with relevant parties serve as a primary route for gaining initial evidence about an accident. Notes should be made of any such discussions.
As soon after the accident as possible, investigators should ask all relevant parties to write an account of their recollection of the events leading up to, during and after the accident. These statements enable the investigator to develop a broader picture of the accident and to identify any missing information or conflicting evidence.
Statement providers must write or dictate their account in their own words, but should be chronological and comprehensive. Statements must include the accident title, date of the accident, statement providers' name, job title, if appropriate, and work address together with the date the statement was written as well as a description of the events.
Interviews with key individuals can help clarify any points made in a statement or discussion and explain why certain things were done or omitted and how such actions deviated away from expected, normal or best practice.
All persons to be interviewed must be offered the right to be accompanied by a colleague or Trade Union / Safety Representative. Care should be taken to avoid the interviewee feeling intimidated by the style of questioning, the location of the interview or by the number of interviewers.
Where practicable, notes should be made as the interview progresses. Alternatively the investigator may write summary notes after the interview has been conducted. At the end of the interview, the account as told, including the key points of information should be summarised so that the interviewee can indicate any omissions and clarify misunderstandings.

Finding the Facts – The Location/Equipment Involved

The initial inspection should disturb the site as little as possible until all relevant evidence has been gathered but should be carried out as soon as possible.
In some instances clearance to disturb the site might need to be obtained from the Health and Safety Executive or Police. Consult with the Schools' Health and Safety Team if in any doubt.

Physical Evidence

A record must be created of the area in which the accident occurred and the physical evidence gathered during the investigation. Make notes, sketches, measurements and take photographs or video as necessary.

Typical things to check include:

- Anything that may have changed since the accident occurred. Has the area/room been secured?
- Who has attended since the accident occurred?
- Environmental conditions e.g. light, noise, weather;
- Position and condition of equipment and any obvious omissions;
- Condition of the ground and any surfaces;
- General state of housekeeping;
- State of warning signs, barriers, physical safeguards etc.
- Evidence of excessive forces, high temperatures, burn marks etc.

All potential evidence, e.g. equipment involved in an accident, photographs or video footage must be labelled, dated and retained securely for at least three years. If the injured party is a young person (e.g. under 18) the records must be held until they are 21 years old.

Release the Location

Where possible, once the investigation team is satisfied that the area where the accident occurred has been examined completely it can then be released back for use. If the investigator considers any special precautions are needed to allow safe use of that area, these must be made clear (e.g. the display of warning signs).

Finding the Facts – Documents and Records

Documents may provide evidence of what should have happened and provide a benchmark for what actually happened. Consideration should be given to the adequacy of the documentation, whether its terms were observed, how any instructions etc, were passed on and whether they were understood.
Documents and records to be collected and reviewed may include:

- The completed accident report form;
- First Aid/Occupational Health/Medical reports;
- Initial and interim investigation reports;
- Safety representative report (if any);
- Minutes of meetings where accident was considered;
- Pre-accident and post-accident Risk Assessments and Permits to Work;
- Other relevant Standards, Guidance, Procedures, Codes of Practice;
- Employee health and safety training records and course syllabus;
- Records of repair, maintenance, inspections and testing;
- Manufacturer's literature relating to personal protective equipment supplied to employee;
- Housekeeping and general inspection records;
- Hazard warning signs or notices;
- Health surveillance records.

Compile and Check the Evidence

The evidence that has been gathered from the various sources should be compiled to form the complete picture. It should also be checked for completeness but some gaps, uncertainties and conflicting information may have to be accepted.
It may be necessary at this stage to re-interview a witness or have further technical examinations undertaken to complete the picture.

Analyse the Evidence and Draw Conclusions

Once the necessary information has been gathered on the circumstances surrounding the incident, the investigator will then need to determine the causes.
It is important to look beyond the primary causes of an incident in order to identify the contributory and underlying causes
In general, the immediate or primary causes of incidents usually relate to:
An unsafe condition in the workplace such as poor housekeeping, defective machinery, inadequate lighting, ineffective control measures; and/or
Unsafe acts carried out by employees such as failure to use personal protective equipment or using unauthorised equipment.
The majority of primary causes are attributable to secondary (contributory/underlying) causes that generally relate to the management systems and working arrangements in place.
Examples of secondary causes include:

- A lack of suitable and sufficient risk assessments and/or safe systems of work;
- A lack of, or insufficient task instructions and training;
- A poorly designed activity or location;
- Poorly designed or misuse of equipment;
- A lack of, or unsuitable maintenance procedures and reporting systems;
- Hours of work and fatigue:
- Pressure to meet time targets/deadlines;
- A lack of, or insufficient supervision.

Did anything prevent escalation?

Any factors that prevented the accident reaching its full potential severity should also be analysed.

Identify and Recommend Corrective Actions

Recommendations must follow from the conclusions and should be appropriate for each of the causes identified. Where possible, recommendations should not be restricted to issues immediately affected by the accident, but should consider the broader application across the establishment.
The following are some possible areas for action:

- Development and review of risk assessments, policies, guidance or systems;
- Re-design of jobs, activities or areas;
- The use of more appropriate equipment;
- Review of maintenance schedules;
- Provision of barriers;
- Warning signs/notices;
- Changes to personal protective equipment / clothing;
- Introduction or revision of instructions;
- Introduction or revision of training courses;
- Enhanced methods of communication on specific safety issues;
- Selection procedures for staff and contractors;
- Adjustment of environmental controls.

Write Report and Disseminate Findings

A report should be produced as soon as practicable after the accident date, and should aim for:

- Conciseness as far as is compatible with providing a complete analysis of the accident and its subsequent investigation;
- Clarity and consistency of style in writing throughout;
- Factual accuracy based on clear evidence;
- The identification of inconsistencies and matters of dispute;
- The elimination of speculation and emotional language;
- The avoidance of repetition.