

HEALTH AND SAFETY MANAGEMENT SYSTEM GUIDANCE REGISTER		Guidance	G012
 PRIFYSGOL ABERYSTWYTH UNIVERSITY	Accident & Incident Investigation Guidance	Issue	2
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The following guidance is intended to highlight key considerations to facilitate the effective co-ordination and management of local incident investigations by Faculties and Professional Service Departments.

Related Procedure

[P001 Procedure for the Reporting of Incidents and Cases of Occupational Ill Health document](#)

Introduction

All incident investigations should be conducted by a responsible person, who will have the appropriate knowledge, skills and experience to undertake incident investigations. This may be the local Health and Safety Co-ordinator, or another colleague within the Faculty or Professional Service Department. The determination of competency to conduct investigations may include, but may not be limited to, knowledge of the work activities and procedures, skills in data collection and analysis, and experience in carrying out incident investigations.

All incidents and near misses should be subject to local investigation following receipt of an incident report form. The level and nature of each investigation will be dependent on the severity of the incident and likelihood of recurrence for each event. For clarity, incidents, accidents and near misses can be distinguished according to the following definitions:

Accident = *Unplanned event that results in injury or ill-health of people, or damage or loss to property, plant, materials or the environment.*

Incident = *Undesired event that has caused or could have caused damage, death, injury or ill-health.*

Near Miss = *Incident that results in no injury or damage, but which had the potential to do so.*

Undesired Circumstance = *A set of conditions or circumstances that have the potential to cause injury or ill health, e.g. untrained nurses handling heavy patients.*

Dangerous Occurrence = One of a number of specific, reportable adverse events, as defined in the Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 2013 (RIDDOR). These can include the failure or collapse of lifting equipment or the release/escape or potential release/escape of a biological agent likely to cause severe human infection or illness, as examples.

Undertaking local investigations will facilitate a deeper understanding of the risks associated with certain work activities. Blaming individuals is ultimately fruitless and sustains the myth that incidents and cases of ill health are unavoidable when, in fact, the opposite is true. Well thought-out control measures, combined with adequate supervision, monitoring and effective management will ensure that work activities are safe. An incident whether that is a near miss or an undesirable circumstance may result in more serious consequences should it happen again, therefore the primary aim of any investigation should be to prevent any reoccurrences by implementing additional or improved control measures where required.

Incident Reporting Procedure

The undertaking of local incident investigations should be completed in accordance with the University's Incident Reporting Procedure. The University's Incident Reporting Procedure is available at:

<https://www.aber.ac.uk/en/hse/proc-prac/incident-reporting/>.

All accidents and incidents, regardless of their severity, should be investigated as soon as is practicable. At such a point, witnesses' memories are at their best, and the motivation for action and required change is at its greatest following an adverse event.

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Benefits of Conducting Incident Investigations

By conducting suitable investigations for all incident and near misses, Faculties and Professional Service Departments will be able to:

- Identify why or how existing control measures failed and what improvements or additional measures are required;
- Plan and introduce measures to prevent such incidents from reoccurring;
- Identify areas where the relevant risk assessments require reviewing;
- Improve future risk control arrangements in the workplace.

Initial Stages

Following any accident or incident, the immediate priority should be the emergency response. This will include taking the appropriate emergency action (e.g. provision of first aid) and/or immediate efforts to make the area safe.

Following the reporting of an incident or near miss, colleagues should consider the following steps:

- Ensure that the correct people are involved in the investigation;
- Make the scene safe and gather information, measurements, photographs, etc.;
- Gather relevant documents e.g. risk assessments, maintenance records, training records, etc.;
- Find causes and address them to prevent reoccurrences;
- Interview any witnesses and record details of any statements;
- Review requirements for further statutory reporting e.g. RIDDOR.

Regardless of the responsibility for conducting incident investigation within each Faculty or Professional Service Department, it's imperative that relevant managers and employees are fully involved throughout the process.

All investigations should be evidence based, which will involve gathering the following three main types of evidence:

1. Physical – debris, equipment, substances, photographs, etc.
2. Human – interviews, witness statements, etc.
3. Documented information – risk assessments, procedures, training records etc.

Checklist for Information Gathering

The nature of the information required will generally vary depending on the nature and/or severity of the incident, however, as a minimum, colleagues should consider the following questions:

- Where and when did the adverse event happen?
- Who was injured/suffered ill health or was otherwise involved with the adverse event?
- How did the adverse event happen?
- What activities were being carried out at the time?
- Was there anything unusual or different about the working conditions?
- Were there adequate safe working procedures and were they followed?
- What injuries or ill health effects, if any, were caused?
- If there was an injury, how did it occur and what caused it?

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- Was the risk known (for example identified in the relevant risk assessment)? If so, why wasn't it controlled? If not, why not?
- Did the way the work was organised or arranged influence the adverse event?
- Was maintenance and/or cleaning sufficient? If not, explain why not.
- Were the people involved competent and suitable?
- Did the workplace layout influence the adverse event?
- Did the nature or shape of the materials involved influence the adverse event?
- Did difficulties using the plant and equipment influence the adverse event?
- Was the safety equipment suitable and sufficient?
- Did other conditions influence the adverse event?

Identifying Causes

Incidents and adverse consequences may have been the result of a sequence of failings across a number of areas. The different categories of causes can be categorised as follows:

1. Immediate Causes – agent of injury or ill health (e.g. object, substance, etc.);
2. Underlying Causes – unsafe acts and/or unsafe conditions (e.g. guarding removed, ventilation switched off, etc.);
3. Root Causes – failure from which all other failings grow, often removed from the incident or adverse event (no policy, procedure or guidance document; lack of instruction, training or supervision; lack of safety cultural).

During the investigation process, colleagues will be attempting to identify and address the underlying and root causes. Colleagues should remember that root causes can generally be attributed to management, planning or organisational failures. Figure 1 provides an example of the interlinked causes which may be identified following a slip on a patch of oil:

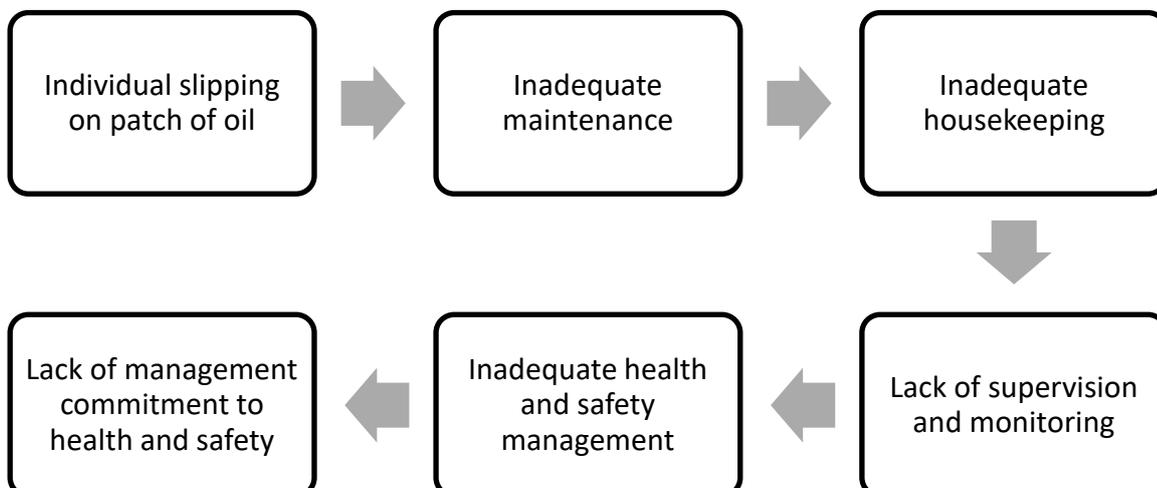


Figure 1

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Following the Investigation

Following each investigation, it's imperative that the identified actions be implemented across the Faculty / Professional Service Department. An investigation is not, in itself, an end, but rather the first step in preventing future adverse events such as incidents and undesired circumstances.

To ensure that this is the case, colleagues must ensure that:

- Corrective action is taken;
- Learning is shared;
- Any necessary improvements are put in place;
- Details of the incident investigation, measures introduced, and any other documentation collected during the incident investigation process, are kept and recorded alongside the incident report form.

Recording the Investigation

The investigation information gathered will be held on the incident online recording system. Further information relating to incident investigation is available at: <https://www.aber.ac.uk/en/hse/proc-prac/incident-reporting/investigation/>.

Further Reading

For further guidance and information, please see the Health and Safety Executive's (HSE) HSG245 Investigating Accidents and Incidents documents, which is available at: <http://www.hse.gov.uk/pubns/hsg245.pdf>.

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Appendix 1 Structure of an Investigation

The Health and Safety Executive (HSE) HSG245 *Investigating accidents and incidents* document suggests the following structure to ensure a systematic approach to incident investigation.

Information gathering

- explores all reasonable lines of enquiry;
- is timely;
- is structured, setting out clearly what is known, what is not known and records the investigative process.

Analysis

- is objective and unbiased;
- identifies the sequence of events and conditions that led up to the adverse event;
- identifies the immediate causes;
- identifies underlying causes, i.e. actions in the past that have allowed or caused undetected unsafe conditions/practices;
- identifies root causes, (i.e. organisational and management health and safety arrangements – supervision, monitoring, training, resources allocated to health and safety etc.).

Risk control measures

- identify the risk control measures which were missing, inadequate or unused;
- compare conditions/practices as they were with that required by current legal requirements, codes of practice and guidance;
- identify additional measures needed to address the immediate, underlying and root causes;
- provide meaningful recommendations which can be implemented. But woolly recommendations such as ‘operators must take care not to touch the cutters during run-down’ show that the investigation has not delved deep enough in search of the root causes.

Action plan and implementation

- provide an action plan with SMART objectives (Specific, Measurable, Agreed, Realistic and Timescaled);
- ensure that the action plan deals effectively not only with the immediate and underlying causes but also the root causes;
- include lessons that may be applied to prevent other adverse events, e.g. assessments of skill and training in competencies may be needed for other areas of the organisation;
- provide feedback to all parties involved to ensure the findings and recommendations are correct, address the issues and are realistic;
- should be fed back into a review of the risk assessment. The Approved Code of Practice attached to the Management of Health and Safety at Work Regulations 1999 regulation 3 (paragraph 26), states that adverse events should be a trigger for reviewing risk assessments);
- communicate the results of the investigation and the action plan to everyone who needs to know;
- include arrangements to ensure the action plan is implemented and progress monitored.

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Appendix 2 – Investigation Summary Sheet

Step 1 Gathering the Information
1. <i>Where and when did the adverse event happen?</i>
2. <i>Who was injured/suffered ill health or was otherwise involved with the adverse event?</i>
3. <i>How did the adverse event happen? Note any equipment involved. I.e. The chain of events leading up to, and immediately after, the adverse event (in chronological order).</i>
4. <i>What activities were being carried out at the time? E.g. Surroundings, equipment/materials used, number and location of other colleagues, etc.</i>
5. <i>Was there anything unusual or different about the working conditions?</i>
6. <i>Were there adequate safe working procedures and were they followed? I.e. Was a safe working method in place and followed, or were the normal practice arrangements inadequate?</i>
7. <i>What injuries or ill health effects, if any, were caused? Confirm whether the injured person was provided with first aid or taken to hospital (and by whom).</i>
8. <i>If there was an injury, how did it occur and what caused it? N.B. Include the harmful object that inflicted the injury, and the way in which the injury was actually sustained.</i>
9. <i>Was the risk known? If so, why wasn't it controlled? If not, why not? I.e. Risk assessment – was the source of danger and potential consequences known, and communicated to essential personnel?</i>
10. <i>Did the organisation and arrangement of the work influence the adverse event? E.g. Standards of supervision and monitoring, lack of skills or knowledge, inappropriate working procedures, etc.</i>
11. <i>Was maintenance and cleaning sufficient? If not, explain why not. I.e. Was the state of repair and condition of workplace, plant and equipment contributory to the adverse event? E.g. badly maintained machine, noisy environment, poorly stored materials, etc.</i>

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12. <i>Were the people involved competent and suitable? E.g. Lack of instruction and training, misunderstandings, poor handling of materials or tools, etc.</i>
13. <i>Did the workplace layout influence the adverse event? I.e. Was the layout contributory to the adverse event?</i>
14. <i>Did the nature or shape of the materials influence the adverse event? E.g. Heavy and awkward materials, materials with sharp edges, splinters, etc.</i>
15. <i>Did difficulties using the plant and equipment influence the adverse event?</i>
16. <i>Was the safety equipment sufficient? E.g. Extra technical safety equipment, power supply isolation equipment, personal protective equipment (PPE).</i>
17. <i>Did other conditions influence the adverse event? E.g. Weather, deliberate acts or unauthorised interference, defective supplies or equipment, etc.</i>
Step 2 Analysing the Information
18. <i>What were the immediate, underlying and root causes? N.B. Consider all possible causes.</i>
Step 3 Identifying Suitable Risk Control Measures
19. <i>What risk control measures are needed / recommended? N.B. Seek to eliminate the risk wherever possible. When this is not possible, seek to isolate or minimise the risk.</i>
20. <i>Do similar risks exist elsewhere? If so, what and where?</i>
21. <i>Have similar adverse events happened before? Give details.</i>
Step 4 The Action Plan and its implementation
22. <i>Which risk control measures should be implemented in the short and long term? N.B. Include SMART objectives, and prioritise accordingly.</i>
23. <i>Which risk assessments and safe working procedures need to be reviewed and updated?</i>

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N.B. All risk assessments and safe working procedures should be reviewed after an adverse event.
24. Have the details of adverse event and the investigation findings been recorded and analysed? Are there any trends or common causes which suggest the need for further investigation? What did the adverse event cost?
25. Any additional or other relevant information to include?