SAFETY HEALTH & WELLBEING

INTRODUCTION

Occasionally things ‘go wrong’. These situations provide us with opportunity to better understand the work we do, and plan for things to ‘go right’ in the future.

PURPOSE

This guideline has been developed to support the implementation of the Work Health & Safety Procedures, particularly the safety management standard for Incident and hazard reporting.

DEFINITIONS

- **ICAM**: the incident cause analysis method
- **root cause**: a fundamental cause of an incident which if corrected may prevent recurrence.
- **incident**: an occurrence that has an adverse impact on people, including events that result in injury, illness, equipment failure, or ‘near-misses’, when there is potential for injury.
- **potential consequence**: an adverse outcome that could reasonably be expected to occur as a result of the incident.
- **contributing factors**: actions, in-actions or conditions that are directly linked to the incident and if removed would prevent or reduce the likelihood or severity of an incident.
- **notifiable incident**: means the death of a person, a serious injury or illness of a person, or a dangerous incident.

DETERMINING LEVEL OF INVESTIGATION

The level of investigation required is based on the potential consequences of an incident. Refer to the matrix below.

<table>
<thead>
<tr>
<th>Potential consequences</th>
<th>Investigation methodology</th>
<th>Investigation by</th>
<th>Sign off by</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not significant</td>
<td>Simple investigation</td>
<td>Person involved Supervisor</td>
<td>Supervisor</td>
</tr>
<tr>
<td>Minor Injuries or illness requiring medical treatment</td>
<td>Basic root cause analysis, e.g. five whys</td>
<td>Person involved Supervisor</td>
<td>Local Safety Officer (if applicable)</td>
</tr>
<tr>
<td>Moderate Injuries or illness requiring hospital treatment</td>
<td>ICAM</td>
<td>Supervisor</td>
<td>Local Safety Officer (if applicable)</td>
</tr>
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<td>Major Injuries or illness resulting in permanent impairment</td>
<td>ICAM</td>
<td>SHW representative Relevant subject matter experts</td>
<td>Relevant Dean/Director</td>
</tr>
<tr>
<td>Severe Fatality</td>
<td></td>
<td>SHW representative Relevant subject matter experts</td>
<td>Head of Area Director, SH&amp;W Relevant Dean/Director</td>
</tr>
</tbody>
</table>

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BASIC ROOT CAUSE ANALYSIS

Root cause analysis is a type of problem solving used to understand why something has happened. The ‘five whys’ technique is a one of the simplest forms of root cause analysis. Asking ‘why’ multiple times helps us to move beyond the obvious and start to think about the underlying factors.

Five is just an arbitrary number, the theory is that if you don’t ask enough ‘whys’, you may end up focusing your attention on trying to prevent the ‘symptoms’ rather than addressing the real ‘causes’ of an incident.

THE ‘FIVE WHYS’ TECHNIQUE

1. Speak to the people involved in the incident. A five whys technique works best when there is active participation by people directly involved in the incident and/or experienced in the activites involved.

2. Define the problem with a clear statement, e.g. student cut finger with scalpel blade. Be careful not to include any refererence to ‘cause’ within the problem statement.

3. Ask why the event occured and write the reasons down on a ‘5-Whys’ worksheet. There are usually multiple causes (or conditions) that contribute to any single event. Start a new column in the 5-Whys worksheet for each cause.

4. For each of the initial causes identified, continue asking why until the question can no longer be sensibly answered. At this point you have either:
   a. identified one of the root causes; or
   b. reached a point beyond which you have no control or require additional information.

5. Identify action(s) to address the identified root causes.

**Problem - Student cut finger with scalpel blade**

<table>
<thead>
<tr>
<th>Why</th>
<th>Why</th>
<th>Why</th>
<th>Why</th>
<th>Why</th>
<th>Root Cause</th>
</tr>
</thead>
</table>

1. *Why* - Student was applying high force when cutting *(symptom)*
2. *Why* - The blade was blunt *(symptom)*
3. *Why* – The blade had been used for several hours without being changed *(symptom)*
4. *Why* – The students were not instructed to replaced blades regularly *(symptom)*
5. *Why* - Supervisor assumed students were competent in scalpel blade use *(root cause)*.

**Corrective Actions**

1. Don’t assume competence
2. Provide instruction, equipment and consumables to facilitater regular blade changes
3. Provide supervision to reinforce initial instruction.
ICAM INVESTIGATION PROCESS

ICAM is a widely used incident and investigation methodology that was originally developed by BHP. It provides a process to move beyond the idea of a single cause and identify a range of immediate causes, contributing factors and underlying causes. The University uses an adapted version of the ICAM process to investigate all incidents that have serious potential consequences. Appendix A provides an outline of the ICAM process.

University ICAM investigations are facilitated by the Safety Health & Wellbeing team in partnership with relevant staff from the organisational unit/s involved in the incident. In the event of a fatality or serious injury, the Office of General Council will also be involved.

IMMEDIATE ACTIONS AFTER A SERIOUS INCIDENT

1. Follow Standard Emergency Response Procedures (as relevant), e.g. follow procedures for a medical emergency if someone is seriously injured.

2. Take any action to make the area safe and then preserve the site for investigation.

3. Notify Safety Health & Wellbeing (SHW) by phone T. 9351 5555 or M. 0434 567 799. If required, SHW will notify SafeWork NSW.

4. Notify the relevant supervisors and Head of School (HOS) or Head of Area (HOA).

5. Record the incident in Riskware as practicable.

CORRECTIVE ACTIONS

The objective of any incident investigation is to enable positive change.

Corrective actions must be based on the hierarchy of controls and, once accepted, recorded in Riskware action plan so that they can be tracked through to completion and periodically reviewed to monitor effectiveness.

REVIEW AND EVALUATION

These guidelines will be reviewed by Safety Health & Wellbeing at least once every two years to identify and implement opportunities for improvement.

DOCUMENT CONTROL

| Acknowledgements | 1. Incident Management Handbook, Lloyd-Jones Meakin Group 2015  
<table>
<thead>
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<th>Version Control</th>
<th>Date released</th>
<th>Author/s</th>
<th>Custodian</th>
<th>Approved by</th>
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<td>18/07/2017</td>
<td>Steve Marker (WHS Adviser)</td>
<td>Manager, Work Health &amp; Safety Services</td>
<td>Director, Safety Health &amp; Wellbeing</td>
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APPENDIX A – INCIDENT CAUSE ANALYSIS METHOD (ICAM) ANALYSIS

ICAM is a widely used incident investigation methodology that was originally developed by BHP, based on the research of British psychologist James Reason. ICAM provides a process to move beyond the idea of a single root cause and identify a range of immediate causes, contributing factors and underlying causes.

THE INVESTIGATION PROCESS

1. First response - make safe, notifications, preserve the scene
2. Form the investigation team
3. Gather information
4. Analyse the available information
5. Develop the investigation report
6. Communicate the key findings

IDENTIFYING CONTRIBUTING FACTORS AND UNDERLYING CAUSES

ICAM involves the collection and analysis of data to identify causes and contributing factors that are then organised into four (4) categories based on the ‘Swiss Cheese’ model of incidents: absent or failed defences, individual and team actions, task and environmental conditions and organisational factors.
ABSENT OR FAILED DEFENCES

Absent or failed defences are risk controls that were either:

- not present at the time of the incident; or
- were present, but didn’t successfully prevent the incident from occurring (or limit the consequences).

INDIVIDUAL AND TEAM ACTIONS

Individual and team actions are the human errors or violations that led to the incident.

Errors are often a consequence, not a cause. Behaviour is often a result of a range of environmental and psychological factors. Errors include slips (e.g. loss of attention), lapses (e.g. memory failure) or mistakes (e.g. knowledge/experience based failures).

Violations are intentional deviations from an established plan. Violations can be broken up into a number of categories including:

- Routine violations – “Everyone does it that way around here”
- Situational violations – “I cannot do it any other way in this situation”
- Optimising violations – “I thought I was doing the organisation a favour by doing it that way”
- Personal optimising violations – “I prefer to do it this way”
- Reckless violations – “Screw the rules – that’s the way I meant to do it.”

TASK AND ENVIRONMENTAL CONDITIONS

There are always specific conditions and circumstances that influence human behaviour and equipment performance in the workplace. These are the circumstances in which errors and violations take place. We really need to consider the physical condition of the work environment, the demands of the tasks being carried out, the capabilities of the individual involved and the other human factors involved.

ORGANISATIONAL FACTORS

There are often underlying organisational factors that influence and produce the conditions that affect systems of work, individual and team behaviour or equipment performance in the workplace. These underlying factors can often lay dormant or undetected for a long time, only becoming apparent when they combine with other contributing factors that lead to a serious incident.
36 What is a "serious injury or illness"

In this Part, serious injury or illness of a person means an injury or illness requiring the person to have:

a) immediate treatment as an in-patient in a hospital, or
b) immediate treatment for:
   (i) the amputation of any part of his or her body, or
   (ii) a serious head injury, or
   (iii) a serious eye injury, or
   (iv) a serious burn, or
   (v) the separation of his or her skin from an underlying tissue (such as degloving or scalping), or
   (vi) a spinal injury, or
   (vii) the loss of a bodily function, or
   (viii) serious lacerations, or
c) medical treatment within 48 hours of exposure to a substance, and includes any other injury or illness prescribed by the regulations but does not include an illness or injury of a prescribed kind.

37 What is a “dangerous incident”

In this part, a dangerous incident means an incident in relation to a workplace that exposes a worker or any other person to a serious risk to a person’s health or safety emanating from an immediate or imminent exposure to:

a) an uncontrolled escape, spillage or leakage of a substance; or
b) an uncontrolled implosion, explosion or fire; or
c) an uncontrolled escape of gas or steam; or
d) an uncontrolled escape of a pressurised substance; or
e) electric shock; or
f) the fall or release from a height of any plant, substance or thing; or
g) the collapse, overturning, failure or malfunction of, or damage to, any plant that is required to be authorised for use in accordance with the regulations; or
h) the collapse or partial collapse of a structure; or
i) the collapse or failure of an excavation or of any shoring supporting an excavation; or
j) the inrush of water, mud or gas in workings, in an underground excavation or tunnel; or
k) the interruption of the main system of ventilation in an underground excavation or tunnel; or
l) any other event prescribed by the regulations;

but does not include an incident of a prescribed kind.
### Define the Problem:

<table>
<thead>
<tr>
<th>Cause 1</th>
<th>Cause 2</th>
<th>WHY?</th>
<th>Cause 3</th>
<th>Cause 4</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>WHY</td>
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<td>1</td>
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<td>WHY</td>
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<td>WHY</td>
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<td>5</td>
<td></td>
<td>WHY</td>
<td></td>
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</tbody>
</table>

**CORRECTIVE ACTION(S):**

<table>
<thead>
<tr>
<th>RESPONSIBLE PERSON</th>
<th>DUE DATE</th>
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</table>

**5-Whys team members:**
APPENDIX E - CONDUCTING INTERVIEWS

One of the primary methods of gathering information for an incident investigation is by interviewing people who were present at the time of the incident or in some way connected to the event.

It is important to interview people as soon as reasonably possible after the incident, acknowledging that this may not be straight way. Those involved in an incident may be under stress and require some time to process the events.

It is generally advisable to have another person present during an interview. Remember, the person being interviewed also has the right to have a support person present if they wish.

It is very important to make it clear to anyone being interviewed that the purpose of the investigation is not to establish blame. The purpose is to understand what happened, learn from the process and potentially prevent a similar event from occurring again in the future.

Interview plan

- Give an indication of how long the interview might take and offer to revisit at another time if needed.
- Explain why they are being interviewed (the purpose of the investigation).
- Start with open ended questions (Tell me WHAT happened/WHEN that happened/WHERE that happened/HOW that happened/WHO was there)
- Use closed questions to confirm facts (was it a black car?)
- Take notes
- End on a positive by expressing appreciation for their time and input.
- Encourage them to contact you at a later date should they think of something else.

Avoid:

- Asking any leading questions (e.g. “Didn’t you think that…”).
- Intimidating the witness (e.g. “Well that was a stupid thing to do”).
- Interrupting the witness.
- Conveying your judgements.