Risk Assessment Evaluation and Control

Lecture Title: PITFALLS IN RISK ASSESSMENT

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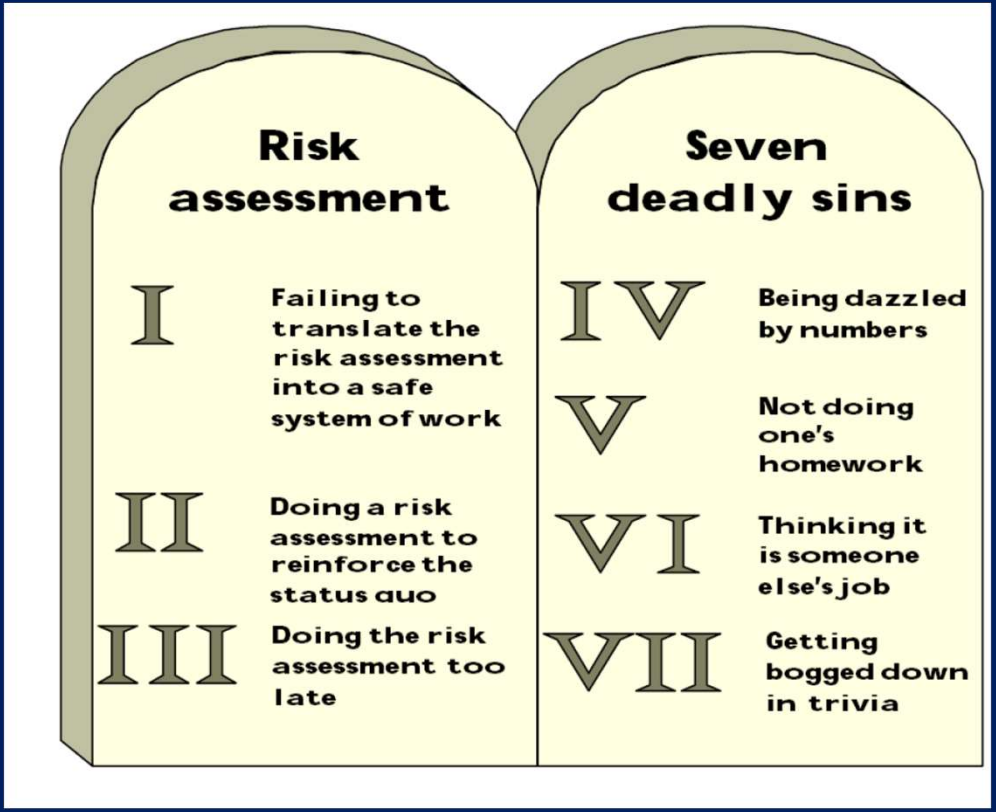
Undergraduate Diploma in
Occupational Health and Safety

Lecture Aim

- Understanding the Pitfalls of a Risk Assessment

Pitfalls in RA

Refer to Blunt (2000) pp. 23-25



The 7 Deadly Sins of Risk Assessment

- SIN 1 – FAILING TO TRANSLATE THE RA INTO A SAFE SYSTEM OF WORK (1 of 2).

  - Should a RA exercise simply be the identification of hazards and the assessment of the resultant risks? (What is RA??)
  - In a RA - easy to identify hazards, but often (from experience) more difficult to take decisions on what needs to be done AND MORE IMPORTANTLY, TO IMPLEMENT RISK CONTROL MEASURES…costs / inability to identify CM / commitment by employer / cooperation from workers / organisational culture…
  - Language used by H&S practitioners may be too technical / scientific (on purpose??) esp. if RA is c/o by third party…

The 7 Deadly Sins of Risk Assessment

- SIN 1 – FAILING TO TRANSLATE THE RA INTO A SAFE SYSTEM OF WORK

(2 of 2).

- Description of control measures often leaves much to be desired…
- Under control measures it is very common to find the phrases such as “workers should be careful”, or “give PPE”…
- Important aspects of good OHS are often overlooked such as training + type, information, instruction, supervision, discipline, proper system of work…
- How to do the job properly is often neglected, more focus on visible aspects…

The 7 Deadly Sins of Risk Assessment

- SIN 2 – REINFORCING THE STATUS QUO (1 of 4)
  - RA often c/o retrospectively – operations already established…
  - System of work may be improper…
  - Not easy to challenge system…!! Esp. if no accidents occurred (or rather none recorded)…

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- SIN 2 – REINFORCING THE STATUS QUO (2 of 4)

Scenario: Forklift Operations in a Warehouse

A warehouse has been using forklifts for years to move heavy pallets. The standard operating procedure (SOP) was developed decades ago and has never been updated. Forklift operators routinely take shortcuts, such as bypassing the mandatory pre-use inspection, because “nothing bad has happened yet.”

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SIN 2 – REINFORCING THE STATUS QUO (3 of 4)

- **Observations:** During a routine audit, the safety officer notices that forklifts are often operated without checking brakes or lights. When asked, operators say:
  - "This is how it's always been done."
  - "I've been driving forklifts for 10 years and nothing has ever gone wrong."

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- SIN 2 – REINFORCING THE STATUS QUO (4 of 4)

System Reinforcement:

- The existing SOP is **never questioned** because the operations have been ongoing for years.
- Management is reluctant to enforce stricter procedures because there are **no recorded accidents**, creating the illusion that the current system is safe.
- Safety concerns are documented in retrospective reports, but **actions are rarely taken**, since the "status quo" seems to work.

Consequence:

- Potential hazards accumulate unnoticed.
- Workers are **trained to follow old habits**, reinforcing unsafe practices.
- An actual accident could occur due to unchallenged unsafe norms.

The 7 Deadly Sins of Risk Assessment

- SIN 3 – DOING THE RA TOO LATE (1 of 5)

- RA – should be c/o before work commences…
- Organisations to build in their systems mechanisms to ensure that RAs are c/o as legally required – high risk operations / permit to work…
- RA assists organisations – best fit, compatibility / selection of equipment / location…
- Expensive to change operations already in place, therefore be proactive…
- Because OHSA requested it !!!

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- SIN 3 – DOING THE RA TOO LATE (2 of 5)

Scenario: Electrical Maintenance on a High-Voltage Panel

A maintenance team is scheduled to perform work on a high-voltage panel in a manufacturing plant. The company has a policy requiring a Risk Assessment (RA) and Permit-to-Work (PTW) before starting high-risk operations.

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- SIN 3 – DOING THE RA TOO LATE (3 of 5)

Scenario: Electrical Maintenance on a High-Voltage Panel

Observation:

- The maintenance supervisor realizes the RA was never completed until the morning of the work.
- The RA is rushed just to satisfy legal requirements rather than to guide safe work practices.
- Key hazards (e.g., proximity to live circuits, need for insulated tools, isolation procedures) are overlooked because the work planning is alre underway.

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- SIN 3 – DOING THE RA TOO LATE (4 of 5)

Scenario: Electrical Maintenance on a High-Voltage Panel

System Failure / SIN 3:

- RA is done **after the work is planned**, not **before**.
- Equipment, tools, and work sequences are already set, making it **expensive and difficult to change** unsafe practices.
- The RA becomes a **paper exercise** to meet OHSA compliance rather than a proactive safety tool.

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- SIN 3 – DOING THE RA TOO LATE (5 of 5)

Scenario: Electrical Maintenance on a High-Voltage Panel

Consequence:

- Unsafe practices could have been avoided if RA had been done **before work commenced**.
- Selection of appropriate equipment, PPE, and safe working locations is compromised.
- The organization misses the chance to **prevent incidents** instead of just documenting them.

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The 7 Deadly Sins of Risk Assessment

- SIN 4 – BEING DAZZLED BY NUMBERS (1 of 4)

  - Numerical Interpretation – Often abused…
  - On which one should base data???
  - Researcher's errors

The 7 Deadly Sins of Risk Assessment

- SIN 4 – BEING DAZZLED BY NUMBERS (2 of 4)

Scenario: Workplace Injury Statistics

A company tracks minor injuries in the warehouse and produces monthly reports. Management notices a decline in reported incidents over the last six months and starts celebrating a “safer workplace.”

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- SIN 4 – BEING DAZZLED BY NUMBERS (3 of 4)

Observation:

- The numbers only reflect reported incidents, not near-misses or unsafe practices.
- A recent survey shows that many employees do not report minor injuries because it is time-consuming or they fear repercussions.
- Management bases all safety decisions on these declining numbers, assuming the workplace is safer.

- **System Failure / SIN 4:**
  - Decision-makers are dazzled by numbers without understanding what they actually represent.
  - Data quality issues (underreporting, inconsistent recording, researcher errors) ignored.
  - Key hazards remain unaddressed because the “statistics look good.”

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- SIN 4 – BEING DAZZLED BY NUMBERS (4 of 4)

- **Consequence:**
  - Unsafe practices continue unchecked.
  - The organization develops **false confidence** in its safety system.
  - Real risk reduction opportunities are missed because **the numbers don't tell the full story**.

The 7 Deadly Sins of Risk Assessment

- SIN 5 – NOT DOING YOUR HOMEWORK (1 of 4)

  - Training / competence
  - One-man job vs group effort…?

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- SIN 5 – NOT DOING YOUR HOMEWORK (2 of 4)

Scenario: Chemical Spill Response

A small maintenance team is responsible for cleaning up chemical spills in a production facility. Management assumes that because one experienced worker has handled spills before, the task can be done without additional preparation or training.

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- SIN 5 – NOT DOING YOUR HOMEWORK (3 of 4)

Scenario: Chemical Spill Response

Observation:

- No **training refresher** is conducted on the proper handling of the new chemical introduced last month.
- Only one worker is designated to manage the cleanup, despite it being a **high-risk operation that normally requires a team**.
- The worker relies on past experience rather than reviewing updated procedu
  consulting Material Safety Data Sheets (MSDS).

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- SIN 5 – NOT DOING YOUR HOMEWORK (4 of 4)

Scenario: Chemical Spill Response

System Failure / SIN 5:

- Lack of preparation (“homework”) leads to incomplete understanding of hazards and safe procedures.
- The organization assumes competence based on past experience, ignoring the need for training updates or team coordination.
- Risk of mistakes increases because the operation is treated as a one-man job instead of a planned group effort.

- Consequence:
  - Worker is exposed to unnecessary chemical hazards.
  - Spill may worsen due to improper handling.
  - Organization loses the chance to proactively prevent incidents.

The 7 Deadly Sins of Risk Assessment

- SIN 6 – THINKING IT IS SOMEONE ELSE'S JOB (1 of 4)

  - Especially when a place of work is shared by different employers

The 7 Deadly Sins of Risk Assessment

- SIN 7 – GETTING BOGGED DOWN IN TRIVIA (1 of 4)

  - Not all ppl are imaginative / creative…
  - Some get stuck in minor details…
  - Some very good at the id. stage but never come up with solutions…too theoretical? …

The 7 Deadly Sins of Risk Assessment

SIN 6 – THINKING IT IS SOMEONE ELSE'S JOB (2 of 4)

Scenario: Shared Construction Site Safety

A construction site is shared by multiple subcontractors: electrical, plumbing, and structural teams. There's a loose agreement that each contractor is responsible for their own safety measures.

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SIN 6 – THINKING IT IS SOMEONE ELSE'S JOB (3 of 4)

Observation:

- A spill of water near a live electrical panel is noticed.
- The electrical team assumes the plumbing subcontractor will handle the spill.
- The plumbing team assumes it's the responsibility of the general contractor to cordon off the area.
- No one takes immediate action, delaying hazard mitigation.

- **System Failure / SIN 6:**
  - Each party assumes someone else is responsible, leading to inaction.
  - Lack of clarity on shared safety responsibilities increases risk.
  - Safety hazards persist because everyone is waiting for "the other person" to act.

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SIN 6 – THINKING IT IS SOMEONE ELSE'S JOB (4 of 4)

- **Consequence:**
  - Potential for electrocution or slips and falls increases.
  - Incident response is delayed, and minor hazards could escalate into major accidents.
  - Shared workplaces are **only as safe as the weakest link**, and assumptions amplify risk.

The 7 Deadly Sins of Risk Assessment

SIN 7 – GETTING BOGGED DOWN IN TRIVIA (1 of 4)

- Not all ppl are imaginative / creative…
- Some get stuck in minor details…
- Some very good at the id. stage but never come up with solutions…too theoretical? …

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The 7 Deadly Sins of Risk Assessment

SIN 7 – GETTING BOGGED DOWN IN TRIVIA (2 of 4)

Scenario: Risk Assessment for Machine Guarding

A factory introduces a new piece of machinery. A safety team is tasked with conducting a Risk Assessment (RA) before it goes into operation.

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SIN 7 – GETTING BOGGED DOWN IN TRIVIA (3 of 4)

- **Observation:**
  - Team members spend **weeks debating the color of safety signs**, exact wording of warning labels, and the font size on manuals.
  - They meticulously list every possible minor hazard, even highly unlikely ones, but **never propose practical solutions** or mitigation measures.
  - Production is delayed because the RA is “in progress,” yet no real safety improvements are implemented.

The 7 Deadly Sins of Risk Assessment

SIN 7 – GETTING BOGGED DOWN IN TRIVIA (4 of 4)

- **System Failure / SIN 7:**
  - The team is stuck in the details, losing sight of the overall goal: identifying and mitigating real risks.
  - Creativity and practical problem-solving are ignored in favor of theoretical perfection.
  - Safety improvements are delayed because the RA never progresses beyond analysis.
- **Consequence:**
  - The machinery may go into operation without effective safeguards, despite extensive analysis.
  - Time and resources are wasted on trivial matters instead of actionable solutions.
  - Workers remain exposed to real hazards while the RA remains “in theory.”

The 7 Deadly Sins of Risk Assessment

SUMMARY:

1. Reinforcing the Status Quo
- Accepting existing systems as safe just because “nothing has happened yet.”

2. Doing the RA Too Late
- Conducting assessments after work is planned—RA becomes a paperwork exercise.

3. Being Dazzled by Numbers
- Blindly trusting statistics without understanding limitations, biases, or errors.

4. Not Doing Your Homework
- Failing to check training, competence, procedures, or team requirements before starting.

5. Thinking It’s Someone Else’s Job
- Assuming hazards will be handled by others, especially in shared workplaces.

6. Getting Bogged Down in Trivia
- Over-focusing on minor details or theoretical points instead of actionable solutions.

7. Skipping Proactive Planning
- Delaying RA or mitigation planning until changes are expensive or risky.

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