

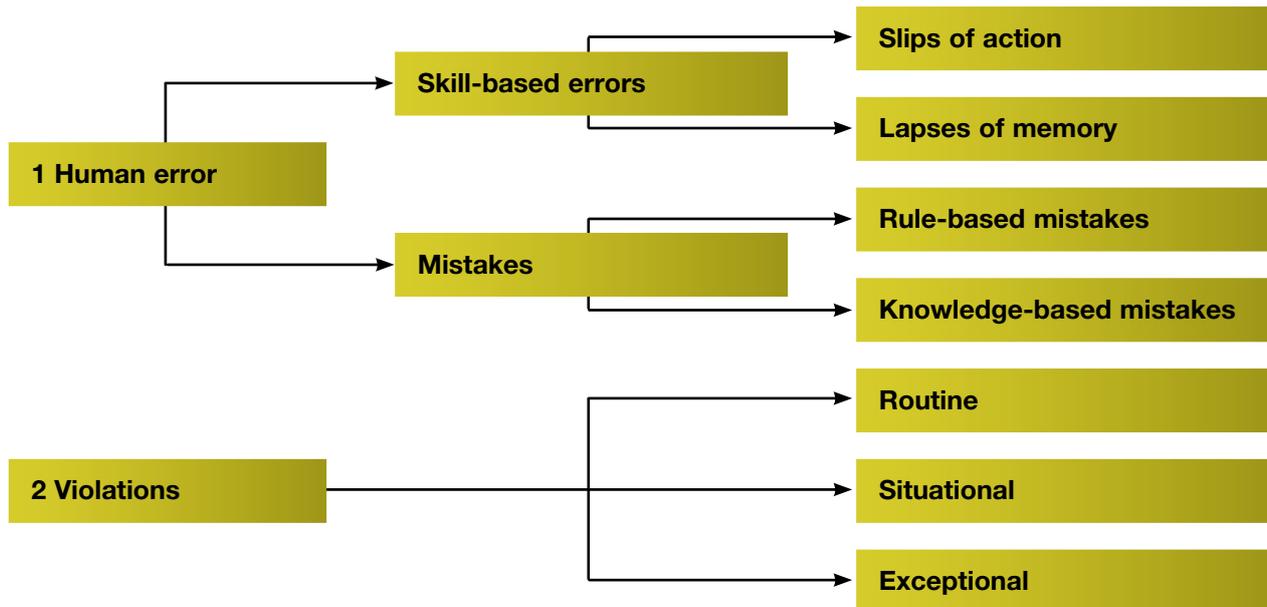
Understanding human failure

Seven steps > Step 2 > Further tools



There are two main types of human failure:

- **Human error** is an *unintentional* action or decision.
- **Violations** are *intentional* failures – *deliberately* doing the wrong thing.



Human error

There are three types of human error: slips and lapses (skill-based errors), and mistakes. These types of human error can happen to even the most experienced and well-trained person.

Slips and lapses

Slips and lapses occur in very familiar tasks which we can carry out without much conscious attention, eg driving a vehicle. These tasks are very vulnerable to slips and lapses when our attention is diverted even for a moment.

Slips

(‘Whoops’) ‘Not doing what you’re meant to do’.

Examples of slips include:

- performing an action too soon in a procedure, or leaving it too late, eg not putting your ear defenders on before starting the drill;
- omitting a step or series of steps from a task, eg forgetting to switch the kettle on while making a cup of tea;
- carrying out an action with too much or too little strength, eg over-torquing a bolt;
- performing an action in the wrong direction, eg a MEWP operator pushing the joystick to the left instead of the right;
- doing the right thing but on the wrong object, eg selecting the wrong size nail for the job; and
- carrying out the wrong check but on the right item, eg checking a dial but for the wrong value.

Lapses

‘Forgetting to do something, or losing your place midway through a task.’

Examples of lapses include:

- forgetting to nail down a joist;
- taking your mask off to talk to a colleague and then forgetting to put it back on;
- failing to secure scaffolding because of an interruption; and
- forgetting to remove a radiator before removing the wallpaper.



Slips and lapses occur when:

- the task is very familiar and requires little thought;
- people confuse two similar tasks;
- tasks are too complicated and long-winded;
- the main part is done but the finer details are missed;
- steps in a procedure don't follow naturally; and
- there are distractions and interruptions.

How to reduce slips and lapses:

- make all workers aware that slips and lapses do happen;
- use checklists to help confirm that all actions have been completed;
- include in your procedures the setting out of equipment, site layout and methods of work to ensure there is a logical sequence;
- make sure checks are in place for complicated tasks; and
- try to ensure distractions and interruptions are minimised, eg mobile phone policy.

Remember, simply adding more training will not eliminate slips and lapses. Effective procedures are required.

Ask yourself: 'How can I make sure my workers understand that they are vulnerable to slips and lapses?'

Mistakes

Mistakes are decision-making failures. The two main types of mistake are rule-based mistakes and knowledge-based mistakes. They arise when we do the wrong thing, believing it to be right.

Examples of mistakes include:

- making a poor judgement when overtaking, leaving insufficient room to complete the manoeuvre in the face of oncoming traffic; and
- an operator misinterpreting the sound of a machine breakdown and failing to switch off immediately.

Why do mistakes occur?

- Doing too many things at the same time.
- Doing too many complex tasks at once.
- Time pressures.

Factors which contribute to people making mistakes

- The work environment – eg too hot, too cold, poor lighting, restricted workspace, noise.
- Extreme task demands – eg high workloads, boring and repetitive jobs, jobs that require a lot of concentration, too many distractions.
- Social issues – eg peer pressure, conflicting attitudes to health and safety, conflicting attitudes of workers on how to complete work, too few workers.
- Individual stressors – eg drugs and alcohol, lack of sleep, family problems, ill health.
- Equipment problems – eg inaccurate or confusing instructions and procedures.
- Organisational issues – eg failing to understand where mistakes can occur and implement controls, such as training and monitoring.

How you can reduce mistakes

- To avoid rule-based mistakes, increase worker situational awareness of high-risk tasks on site and provide procedures for predictable non-routine, high-risk tasks.
- To avoid knowledge-based mistakes, ensure proper supervision for inexperienced workers and provide job aids and diagrams to explain procedures.

Ask yourself: 'How can I reduce the likelihood of mistakes occurring on this site?'



Violations

These are intentional failures – ‘deliberately doing the wrong thing’. The violation of health and safety rules or procedures is one of the biggest causes of accidents and injuries at work.

Workplace rules are broken for many different reasons:

- ‘I felt I had no choice’ – (intentional due to the situation or rules).
- ‘I didn’t care about the consequences’ – (intentional violations).

Typical violations include:

- scaffolders not clipping on their harnesses above 4 m;
- dumper drivers not wearing seat belts;
- MEWP operators not carrying out pre-use checks;
- a site manager allowing untrained drivers to operate plant;
- a tradesman starting work on a new site without reporting to the site manager or receiving a site induction; and
- a worker thinking a rule is unsafe and taking off their safety goggles to improve visibility.

Typical causes of violations include:

- workers thinking rules don’t apply to them;
- being under time pressure;
- not having enough workers to do the work;
- not having the right equipment;
- a lack of understanding of why the rule is in place;
- perceptions that rules are too strict or unnecessary – ie the perceived benefits outweigh the perceived penalties;
- wanting to take the easy option;
- perception that they won’t get caught; and
- peer pressure.

How you can reduce violations

- You can increase the chances of spotting violations by increasing routine monitoring.
- Make sure rules and procedures are relevant and practical. Are procedures hard to read or out of date?.
- Explain to workers the reasons behind any rules and procedures and their relevance.
- Ask the workforce to get involved in changes to rules to increase their acceptance.
- Improve the working environment. Is the environment unpleasant (eg dust, fumes, extreme heat or cold)? Have workers got enough space to work in without discomfort or difficulty completing the task?
- Provide workers with appropriate supervision.
- Improve planning for all jobs to ensure the necessary resources (workers, equipment and time) are allocated.
- Encourage the reporting of any problems (such as job pressures) through open communication.
- Provide training for abnormal and emergency situations.
- Always think about the possibility of violations when carrying out risk assessments.
- Try to reduce time pressures on workers to act quickly in unusual situations.
- Assess the use of personal protective clothes and equipment (PPE). Have workers got the right equipment to do the job? Is the PPE difficult to use or uncomfortable?

Ask yourself: ‘Is there any work activity on your site where rule breaking has become the norm?’

The *Leadership and worker involvement toolkit* is aimed particularly at small and medium sized businesses and is designed to help improve your health and safety and bring additional benefits to your business performance and productivity. See: www.hse.gov.uk/construction/lwit/