

Applying the research

First aid and emergency planning: do they affect injury rates? Law, practice and research

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New Zealand Journal of Health and Safety Practice

<https://ojs.victoria.ac.nz/nzjhsp/index>



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Why do 1st aid and emergency planning matter?

- First aid (March 2026)
 - Legal requirement
 - May save a life or permanent ill health or disability
 - Reduction in injuries?
 - Workers approve of someone being a trained first aider
- Emergency planning (April 2026)
 - Legal requirement
 - Faster response times
 - Faster recovery times
 - Reduction in injuries?



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Law and practical guidance

- The Health and Safety at Work (General...) Regulations make requirements for first aid (R13) and emergency plans (R14).
- Guidance has been published by WorkSafe, but there has been no published research from New Zealand into the effects that first aid and emergency planning might have on workplace injury rates.
- Today does not include mental health first aid

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First aid – the law

- HSW (General) Regulations
 - Regulation 13(1)
 - Adequate first aid equipment for the workplace
 - Each worker has access to the equipment
 - Workers have access to facilities for administration of first aid
 - Regulation 13(2)
 - Adequate number of workers trained to administer first aid at the workplace
 - Workers have access to an adequate number of other persons who have been trained to administer first aid
 - Regulation 13(3)
 - ... regard to all relevant matters including
 - Nature of the work being carried out at the workplace
 - Nature of the hazards at the workplace
 - Size and location of the workplace
 - Number and composition of the workforce at the workplace
 - A risk assessment?

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Some definitions

- First aid is the immediate and basic care given to an injured or sick person before a doctor, other health professional or emergency services take over their treatment.
 - It focuses on preserving life and minimising serious injury. For example, maintaining breathing and circulation, stopping bleeding, and stabilising broken arms or legs
 - WorkSafe (2020, p 3)
- First aid is the first and immediate assistance given to any person with a medical emergency with care provided to preserve life, prevent the condition from worsening, or to promote recovery until medical services arrive.
 - First aid is generally performed by someone with basic medical or first response training.
 - Wikipedia
- An emergency plan is a written procedure telling people in the workplace what to do in an emergency.
 - WorkSafe (2018)

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Dissecting Regulation 13(1)

- Meaning of adequate?
 - Satisfactory or acceptable in quality or quantity (COED)
 - Enough or good enough for a particular purpose (Cambridge online)
- First aid equipment?
 - “essential medical supplies and tools – such as bandages, dressings, antiseptic wipes, gloves, scissors, and CPR masks – designed to provide immediate, temporary care for injuries or illness, before professional medical help arrives. Kits should be tailored for home, work, or vehicle use”
- Workplace (section 20, HSWA)
 - A place where work is being carried out, or is customarily carried out, for a business or undertaking
 - Any place where a worker goes, or is likely to be, while at work
- Access
 - The means or opportunity to approach or enter a place (COED)
- Facilities for administration of first aid
 - A place for a particular purpose
 - Dispense a drug or a remedy (COED)

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Dissecting Regulation 13(2)

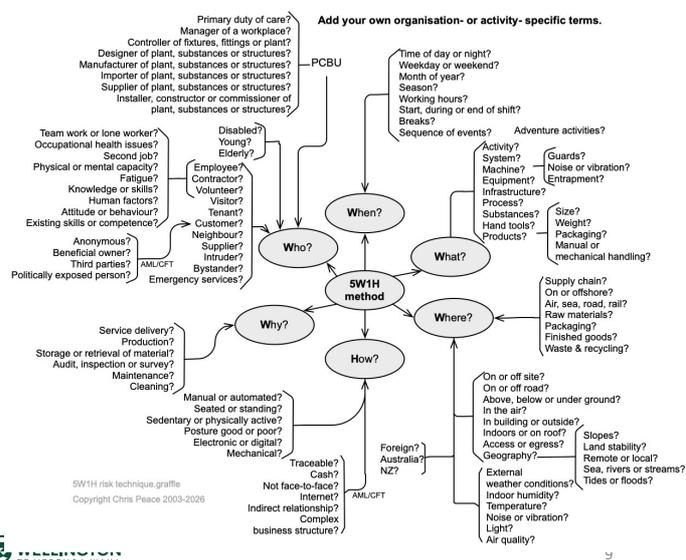
- Adequate number of workers trained to administer first aid at the workplace
 - Review definition of “worker”
 - Operation of workplace
 - Day/night, weekday/weekend, seasonal, unusual business activities
 - Trained – NZQA unit standards and qualifications
- Workers have access to an adequate number of other persons who have been trained to administer first aid

Regulation 13(3): Risk assessment for first aid

- ... have regard to all relevant matters including ...
- Nature of the work being carried out at the workplace
- Nature of the hazards at the workplace
- Size and location of the workplace
- Number and composition of the workforce at the workplace

A quick tool to help assess first aid needs

- The 5W1H technique has 100 questions to help identify factors in a risk assessment



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Research in Canada

- Work and research in Canada
 - Claims in 1967 that “companies often experienced 40% to 50% drops in injury rates after their workers had been trained in first aid”
 - In a study in Orillia, St John trained 5,500 people (25% of population) in first aid
 - Reduced accident rate for Orilla compared to all of Ontario
 - Data from industries
 - Bell Telephone, 4,640 accidents, lower rate for trained first aiders
 - Ontario Northland Railway, 40% lower accident rate for trained first aiders
 - But: did publicity about the project influence the results?
 - Atherley et al (1973)
- Earlier research
 - A drop in accident rate resulting from more knowledge and skill gained through normal job training
 - Does knowledge of injury induce fear and modify behaviour?

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Research at Aston University 1970s

- Measured effect of first aid training using “injury accident records”
 - Did not use observation of behaviours due to time and costs
 - Used “first attendance at factory surgery following an injury incident”
 - McKenna (1978)
- Results
 - Value of four-hour first aid training for injury prevention
 - Better trained trainers got better training outcomes
 - “The secondary effect from first aid training has been quite apparent in reducing both the number and the severity of accidents, with the result that additional large financial savings have been made. First aid training in addition to being an emergency measure, becomes a means of accident prevention as well.”
 - McKenna & Hale (1981)
 - “Evidence from interviews held before and after the first aid courses suggested that this occurred despite the fact that the experimental subjects became more willing to report their minor injuries”
 - “It is concluded that the first aid training motivates trainees to adopt safer behaviour but that knowledge of how to avoid danger is also necessary to produce an improvement in safety”
 - McKenna & Hale (1982)

Research in Australia

- The results of the research suggest:
 - First aid training can have a positive effect on certain OHS behaviour in the Australian small business construction industry
 - Improvements are not limited to individual performance but can also be achieved in global or site-wide OHS behaviour
 - Training larger numbers of employees in first aid could help to prevent occupational injuries
- However:
 - Not observed in all categories
 - The pathway from first aid training to improved OHS behaviour be further investigated
- Recommended repeat in other industrial environments to confirm the effect of first aid training on OHS behaviour
 - Lingard (2001, 2002)

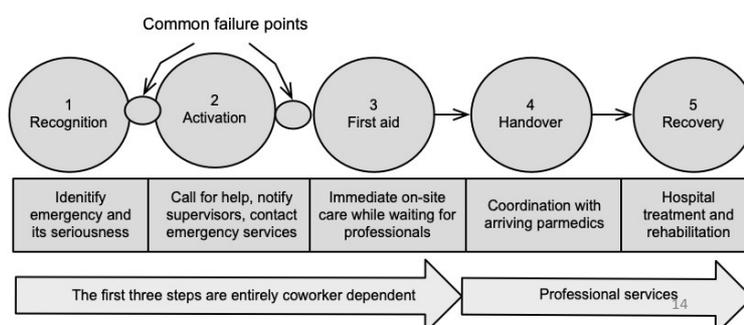
Recent research in the UK

- “A recent literature review by HSE has suggested that workers, who have received first aid training (or basic first aid training), were more likely to adopt safe working practice as well as influencing the behaviour of colleagues who had not attended first aid training”
 - Not able to locate the literature review
 - Was it McKenna et al group?
 - Evans (2005)
- Ad hoc UK research in 2025 found:
 - 29% of workers had experienced a workplace situation where no one present had the skills to provide first aid
 - 22% had never received any first aid training
 - 22% who had received first aid training were last trained more than 5 years ago
 - Skill and knowledge fade
 - Anon (2025)

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Research at Victoria University of Wellington

- In the forestry sector
 - Effective communication is an active mechanism for determining whether first aid knowledge translates into competent responses under pressure
 - Remote forestry locations place professional medical assistance beyond immediate reach, making the interval between injury and definitive care decisive for survival
 - Bhalothia (2026)
- Mining
 - Peer dependency
 - The “golden hour”
 - Multidisciplinary
 - Muthusamy (2026)
- Road & civil construction
 - Needs site-specific plans
 - Integrated into management
 - Matthew (2026)



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Research: two online surveys and an activity

- Requiring first aid imposes a cost on PCBUs
- Is there a commensurate benefit?
- Survey 1 in April
 - Current state of first aid in PCBUs in New Zealand
 - Is your current first aid equipment based on a risk assessment?
 - Is your number and type of trained first aiders based on a risk assessment?
 - When was any risk assessment first carried out?
 - When was any risk assessment last updated?
- Activity
 - Fortnightly reminders to workers about
 - Either: first aid equipment and first aiders
 - Or: emergency plans
- Survey 2 in September
 - Qualitative changes in behaviours?



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Q & A

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What do you want to hear about next?

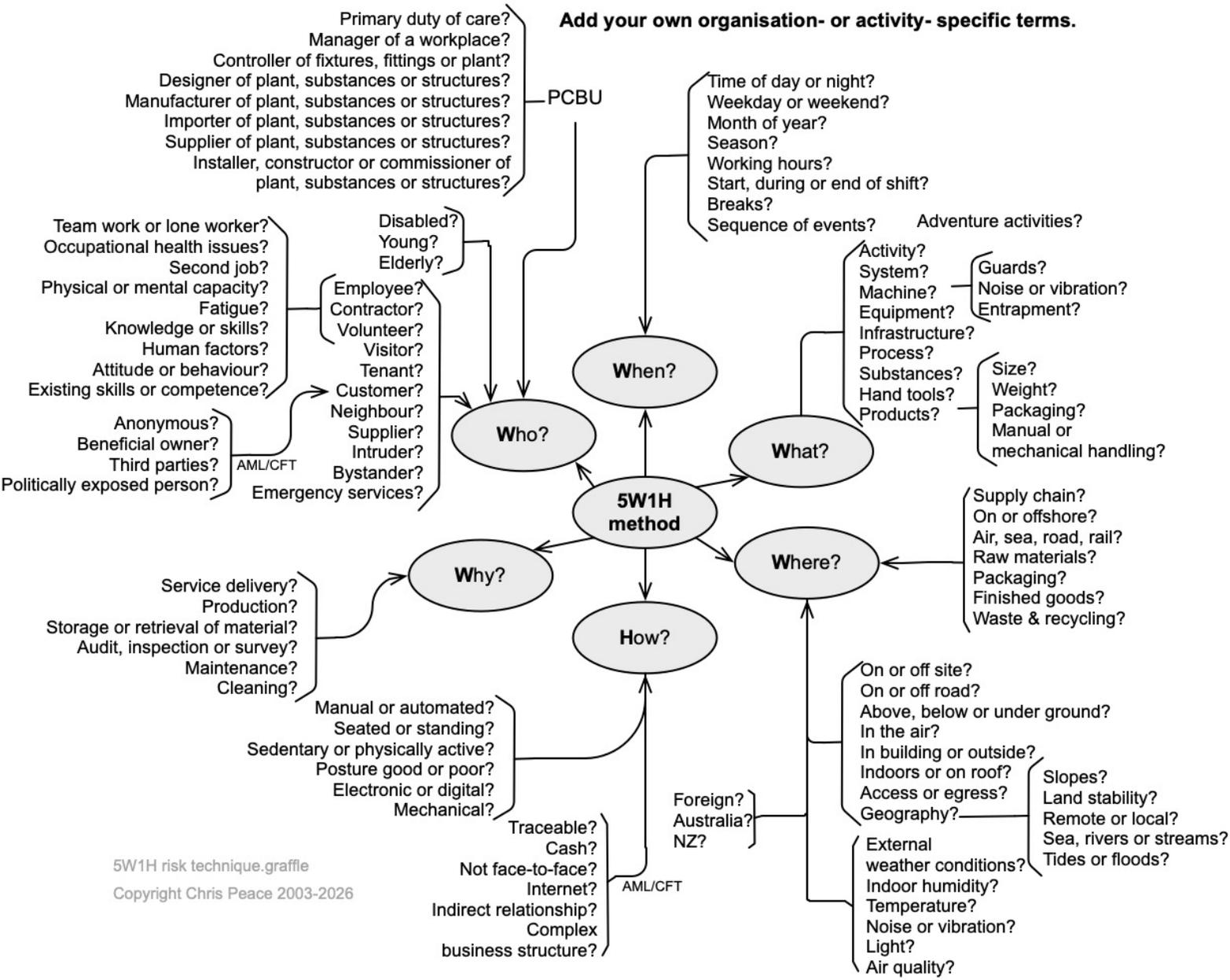
Interested in the Master of Health?

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[health/overview](https://www.wgtn.ac.nz/explore/postgraduate-programmes/master-of-health/overview)



Add your own organisation- or activity- specific terms.



From the chat

A note from Chris

Most of the following is from the chat in the webinar. I've edited a few things but check if important!

12:40:51 From Sarah Thomas to Everyone:

Something else people need to think about is if you want to have a fancy kit for bleeds (CAT tourniquet etc) you have to have the level of training to use it. Workplace first aid does not cover this.

12:43:15 From Nicola Aitken to Everyone:

Also need to think about what happens if the first aider hurts themselves

12:43:36 From Amanda Watson to Everyone:

So many changes in FA techniques since I did my first aid course in 1987. ☹️

12:43:39 From Deb Ford to Everyone:

we first aid refresh every 2 years. that faded knowledge kicks in when we aren't using it every day ! keeps staff confidence up, knowing they can leap into CPR if required !! we are factory workers not health type workers !!

12:43:46 From Linsey Whitchurch-Kopa to Everyone:

Yes Nicola!

12:44:19 From Deb Ford to Everyone:

fair enough !

12:45:12 From Trudy Downes to Everyone:

I found ratio info after some research. happy to share if its wanted

12:46:12 From Trudy Downes to Everyone:

<https://www.methodist.org.nz/assets/Tangata/Caring-For-Our-People/Emergency-Response-Plan/1.-Guidelines-Create-emergency-Response-Team-Feb-2019.pdf>

12:47:50 From Adam Bowers to Everyone:

The Australian Cop for First Aid also has ratios of first aiders to workers

12:48:23 From Amber Terry-Newland to Everyone:

Q is there anything legislation that if you provide a simple first aid kit in a truck do they need to do a course? my view is this is just there for small cuts etc not full blown First aid. Would love your advise

12:48:33 From Adam Bowers to Everyone:

Number of trained first aiders

The following ratios are recommended:

low risk workplaces one first aider for every 50 workers

high risk workplaces, one first aider for every 25 workers

,remote high risk workplaces, one first aider for every 10 workers.

12:48:52 From Adam Bowers to Everyone:

https://www.safeworkaustralia.gov.au/sites/default/files/2021-10/code_of_practice_-_first_aid_in_the_workplace_July%202019.pdf

12:49:30 From Matthieu Moncel to Everyone:

1 for every 50 is a bit small. what if the 1 is sick, on leave or themselves injured

12:49:36 From Linda Birkby to Everyone:

How do people deal with ratios in a workplace that has flexible working arrangements and staff work from home some days?

12:50:47 From Kim Moore to Everyone:

We have trained first aiders in each of our centres. In addition, our frontline staff have CPR/AED training and we have a custom St John's course for our workshop staff specific to their risks. We do 2 yearly refresher training.

12:50:52 From Jess Bourke to Everyone:

Outside forestry (which had some specific numbers in the ACoP) - my thoughts (which were passed down to me by a very wise HS person) are that your workers are community members outside of work and equipping them with skill sets that benefit your business and the communities in which they are involved has a benefits wider than what can be 'costed out' within the business.

12:52:19 From Linsey Whitchurch-Kopa to Everyone:

It's a life skill!

12:53:08 From Adam Bowers to Everyone:

While not a legal requirement, I would say that refresher training would be deemed as a 'reasonably practical' step for managing a legal duty/control

12:53:15 From Matthieu Moncel to Everyone:

epi pens are more 120\$

12:53:31 From Alison Glover to Everyone:

We have just trained 41 seasonal workers from the islands for the viticultural and horticultural industries this month and will be continuing with another 50 this year. It will be interesting to see if our injury rate decreases going forward

12:55:51 From Sam Wren to Everyone:

Digressing but I can highly recommend a service from Wellington Free Ambulance who will come into your office and provide free CPR training for organisations in the Wellington region. They make it really engaging.

12:56:34 From Alison Glover to Everyone:

Will do !

12:57:07 From Matthew Bennett to Everyone:

OPINION: A chainsaw can cause acute traumatic harm within seconds and the window to respond is less than a person getting to the truck and then to the person. I equipped all chainsaw users with tourniquets, haemorrhaging bandages, celox and the training to use. Our view was that it could be the only chance to change the outcome post event.

12:57:46 From Simon Glasgow to Everyone:

Chris are you attending the conference in Wellington on Monday?

12:57:54 From Damian BYRNE to Everyone:

New forestry ACoP is less prescriptive... uses language similar to act now

12:58:27 From Kathy Froy to Everyone:

I highly recommend it!