



Consultation Submission to the
Queensland Work and Electrical Safety
Policy Office of Industrial Relations –
Recreational Diving, Recreational
Technical Diving and Snorkelling
Code of Practice 2023

Dr Lynda Crowley-Cyr, School of Law and Justice UniSQ



USQ School of Law and Justice

The University of Southern Queensland (UniSQ) was established in 1992 and is a regional university with a global perspective, expert in distance and online education. It provides higher education to one of Australia's most diverse student cohorts and has a strong reputation for maximising student potential, academic and personal.

The USQ School of Law and Justice was established in 2007. It is the second-biggest law school in Queensland, with students enrolled in Bachelors of Laws, Bachelor of Laws with Honours, Juris Doctor, Masters of Laws and Doctor of Philosophy programs.

Academics in the School of Law and Justice are located on Toowoomba, Ipswich, and Springfield campuses. A very high proportion have doctoral qualifications and the School has a strong commitment to quality legal research and publication and to retaining a close research-teaching nexus.

Submission by Dr Lynda Crowley-Cyr and Ms Carole Caple

Dr Lynda Crowley-Cyr, PhD (USyd), LLM (JCU), LLB (QUT), is a lawyer and Associate Professor at the School of Law and Justice at the University of Southern Queensland.

Contact details

Email: Lynda.Crowley-Cyr@usq.edu.au

This submission represents solely the individual views of the author and should not be taken to represent the views of any persons, employers, or organisations that she is affiliated with.

Part 1 Background Introduction

The author welcomes the opportunity to comment on the draft amendments to the Recreational Diving, Recreational Technical Diving and Snorkelling Code of Practice (Code) consultation on:

- Key changes to the RDRTDS Code of Practice;
- Updated definitions in 2.8 Marine jellyfish stings; 6.6 Marine stingers; and Appendix 7.

Overview of responses to the draft changes to the Code

The WHSQ Consultation Package presents potential changes to the Recreational Diving, Recreational Technical Diving and Snorkelling Regulation and the Code of Practice based on the recommendations made by Coroner O’Connell in the Bethany Farrell inquest of May 2018, and to align the Code with proposed amendments to the Regulation. Bethany Farrell, a British tourist visiting Australia, died on 17 February 2015 after separating from her group while undertaking an introductory scuba dive off Haman Island. The coroner referred to the Chief Executive of the Office of Industrial Relations their findings that the tour operator, the skipper, its employee and the dive instructor all may have committed an offence under workplace laws. The Queensland Government agreed to all the coroner’s recommendations in 2019-2020.

Essential elements of the proposed changes are to update definitions in the Code, and reduced duplication with some requirements relevant to multiple recreational water activities and consolidation of the following:

- Medical fitness for entry-level certificate and non-certified divers;
- Lookouts, guides and rescuers;
- Risk assessments for diving and snorkelling; and
- Supervision of divers and snorkellers in open water – site supervision.

This submission relates to two parts of the Draft Code, notably 2.8 and 6.6, associated with Marine Jellyfish. For ease of reference to suggested changes by the author, Part 2 provides the relevant text copied from the two provisions in the Draft Code with recommended changes in red and explanatory comment boxes in track changes.

Part 2 Responses to the Proposed Amendments to the Code

1. 2.8 Marine jellyfish stings

This section has application in relevant Queensland waters and at times of year where people diving/snorkelling are at risk from severe marine jellyfish stings, particularly *Chironex Fleckeri* and *Irukandji* (*Carukia barnesi*) and related species.

The dive operator should ensure that people diving/snorkelling are advised of:

- the risks of marine jellyfish
- where to access first aid
- appropriate precautions (e.g., use of **full-body** stinger suits where appropriate).

The dive operator should undertake a risk assessment to determine the risk of marine jellyfish stings and consider whether protective swimwear should be provided. Further guidance on marine stingers is available in section ~~6.5~~ 6.6

2. 6.6 Marine stingers

Australia's marine and estuarine environment is home to some harmful jellyfish collectively known as marine stingers. The sting from marine stingers can cause discomfort, and some of the tropical waters species such as the Irukandji and the box jellyfish can be lethal.

Caution must be exercised when entering Australia's tropical waters (generally north of Bundaberg in Queensland and Geraldton in Western Australia). Whilst marine stingers may be present throughout the entire year in tropical waters, the risk associated with dangerous jellyfish are higher during the marine stinger season that typically runs from November through to May.

Dive operators should supply protective swimwear when a marine stinger risk exists. Protective swimwear (such as **full-body** lycra suits or neoprene wetsuits) offers a high degree of protection against marine stings as well as UV damage from the sun. It is possible to be stung on exposed skin, such as hands, face, and feet, but most stings occur on parts of the body that are typically covered by protective swimwear.

Protective swimwear designed specifically to reduce the incidence of a marine sting include the following properties:

- a mesh size no greater than 200 microns (1/5 of a millimetre)
- synthetic smooth fabrics are preferable as there is less of a chance that tentacles will stick, possibly leading to secondary marine stings
- covers over 75 per cent of the body's skin surface. [Source should be added]

Commented [LCC1]: Maybe add: so called 'box jellyfish'

Commented [LCC2]: [box] refers to *Chironex fleckeri* and [Irukandji], also a species of box jellyfish should be capitalised. See 2.8 of this Code.

Commented [LCC3]: The warming of waters has seen a rise of Irukandji sightings further South and in 2017, sighted at the Sunshine Coast. See: <https://www.couriermail.com.au/news/queensland/sunshine-coast/deadly-irukandji-confirmed-on-the-sunshine-coast/news-story/a3edb6723bd77a19c387af9d5515afb6>.

Perhaps remove the locations and simply state: 'when entering Australia's tropical waters' – I say this because there is mention of WA but not NT.

Commented [LCC4]:

Protective swimwear should also be regularly inspected for holes, loose threading, broken or damaged zippers and other causes of decreased effectiveness, and where required replaced or repaired.

What to expect for a box jellyfish sting

The victim will be in an enormous amount of pain, and quite possibly hysterical and uncontrollable. The tentacles will likely still be on the victim, appearing as tapeworm-like ribbons. The sting marks will look like whip-marks, swollen, red—within a few minutes the marks will go frosty white as the skin dies. Death can result within two to five minutes of a box jellyfish sting. [\[Source should be added\]](#)

What to expect for an Irukandji sting

The initial sting will be minor, feeling like sea lice or a scratchy, pin-stabbing feeling; many victims do not feel the sting at all. Often there is no mark; if present, it may look like a small area of goose-pimples, small red dots, a rash-like line, or a blotchy reddened area. Often the sting area will sweat profusely. After about 20–30 minutes (but onset can vary from 5–40 minutes), the victim may have any or all of the following: [\[Source should be added\]](#)

- severe lower back pain
- nausea
- vomiting
- sweating
- difficulty breathing
- full-body cramps
- limb spasms
- coughing
- extremely high blood pressure.

Treatment

[The following treatment is recommended by the Australian Resuscitation Council Guideline 9.4.5. Operators must review and keep up to date with any amendments to this Guideline.](#)

For Irukandji or box jellyfish stings:

- Remove the patient from the water and restrain if necessary.
- Call for help (dial 000), assess the patient and commence CPR as necessary.
- Liberally douse the stung area with vinegar to neutralise invisible stinging cells—do not wash with fresh water. (Vinegar will not alleviate the pain or help with scarring, but is thought to inactivate any undischarged stinging cells.) Vinegar needs to be in contact with the skin for at least 30 seconds. A vinegar-soaked pad is useful after the initial dousing.
- ~~If vinegar is unavailable, pick off any remnants of the tentacles (this is not harmful to the rescuer) and rinse sting well with seawater (not freshwater). Wash your hands with seawater afterwards.~~
- Seek medical assistance with rapid transport to hospital.

Commented [LCC5]: The source of this treatment advice should be added

Commented [LCC6]: Maybe insert: 'applied to the sting site'

Commented [LCC7]: This is concerning and inconsistent with the treatment process for non-lethal stings – where it says 'pick off with fingers' and 'a harmless prickling may be felt'

Researchers' findings state the stinging cells are still capable of discharging the venom. I cannot find research testing the effects of touching of tentacles with bare fingers to support that it can cause no harm.

In any case, operators should have vinegar ready for sting treatment on the boats so this might not be appropriate in the context of this Code. What I mean is that the part about plucking off tentacles with fingers might be left off. e.g. 'if vinegar is unavailable, rinse sting with seawater (not freshwater)'.
[\[Source should be added\]](#)

For stings other than Irukandji and box jellyfish:

- Keep the patient at rest and under constant observation.
- Do not allow rubbing of the sting area.
- Pick off any remaining tentacles with fingers (a harmless prickling may be felt).
- Rinse the stung area well with seawater (not freshwater) to remove any invisible stinging cells.
- For bluebottle stings
 - Place the patient's stung area in hot water (no hotter than the rescuer can comfortably tolerate).
 - If the pain is unrelieved by the heat, or if hot water is not available, apply cold packs or wrapped ice.
- For other minor jellyfish stings apply cold packs or wrapped ice to manage pain.
- If local pain is unrelieved by these treatments, or generalised pain develops, or the sting area is large (half of a limb or more), or if the patient appears to be suffering an allergic reaction to the sting, seek urgent medical help.

Commented [LCC8]: Again this seems dangerous in light of the fact that the research states that it is very difficult to discern the jellyfish that caused the sting from its tentacles, unless the whole jellyfish was seen e.g. stuck to the protective swimwear.

Conclusion

The author acknowledges the vast potential benefits in the draft changes that articulate a positive obligation on operators to supply sting-protective swimwear to their customers when engaging in water activities in circumstances where marine stinger hazards and risks are present. These changes can save lives by significantly reducing the risk of sting incidents. Lycra suits provide the highest level of reasonably practicable protection against marine stingers for snorkelers¹ and therefore are a risk-mitigating response to marine stinger hazards. They are affordable, practical and reasonably practicable.

For the same reasons that operators/PCBUs are best placed to ensure sting protective swimwear is worn during water activities, they are also best placed to deliver comprehensive, consistent and up-to-date safety information about marine stinger risks to their customers. This is consistent with the Coroner's findings in the Bethany Farrell inquest.

Recommendations

The author recommends:

1. Consistency in use of capitals for species like 'Irukandji'. 'Box' jellyfish is simply a colloquial term for *Chironex fleckeri* and so can have a lower case 'box'.
2. Careful consideration should be given to including treatment information that may appear inconsistent (rescuers can pluck off tentacles with fingers) with scientific knowledge of risks associated with the risk of marine stinger tentacles

¹ L Gershwin and K Dabinett, 'Comparison of Eight Types of Protective Clothing against Irukandji Jellyfish Stings' (2009) 25(1) *Journal of Coastal Research* 117.

that have not been deactivated with vinegar. The reference of the source is critical to avoid potential liability.

3. The inclusion of references to sources of information used in this Draft Code.
 - a. This can assist users to readily find the information they require and use it to stay up to date with changes, meet their needs for clarification of some of the provisions, improve their understanding of their obligations – all of which can assist with compliance.
 - b. It is a legal requirement. Published works are protected by copyright law. Appropriate referencing can avoid the consequences of plagiarism. In some circumstances, plagiarism is an offence in Australia.