BACKGROUND
Indoor trampoline parks are increasingly popular, especially amongst children. Their proliferation across Australia has seen a rise in the number of injuries, including serious spinal injuries.[1] [2]. Deaths have been reported internationally.[3]. More than 20 new centres have opened in Australia since 2013.[4]. The trampolines in trampoline parks differ from domestic trampolines used in backyards across the country, both in design and patterns of use. They are generally large centres with multiple interconnected bouncing surfaces, foam pits and game areas. They are designed to be crowded and dynamic, attracting birthday parties, social groups and families. Thus, the injury mechanisms and type differ.

A recent prospective cohort study in NSW described 40 cases presenting to a paediatric emergency department over a 6-month period. A variety of mechanisms unique to the trampoline park environment were described. While most of the injuries were minor, 37% sustained fractures. One child sustained an unstable cervical spine fracture/dislocation. 12% were admitted and required operation.[3]. The study was limited by its small sample size, and the referral base being a single indoor trampoline centre.

Since that study, there has been one further Australian study using injury surveillance data from 3 states[5] as well as various media reports and the authors have been contacted by concerned clinicians around Australia regarding injuries presenting at their centres including at least one further cervical spine injury.

In partnership with industry groups and workplace health and safety bodies, work has commenced on the development of a new Australian Standard for Indoor Trampoline Parks, based around the current voluntary code of practice. In addition, further research on the biomechanics of injury, in cooperation with Industry members, is in the planning stages.

However, given that paediatric injury from indoor trampoline parks is now increasingly recognised as an emerging public health and safety issue, we see a need for a national approach, particularly at quantifying and characterising the problem. A greater knowledge of the scale and scope of paediatric injuries will lead to more evidence-based and informed injury prevention strategies.

We propose a study in collaboration with the Australian Paediatric Surveillance Unit (APSU).

STUDY OBJECTIVES
1. To estimate the extent of injury requiring hospital admission, sustained at trampoline parks in Australia
2. To examine regional variations in nature and occurrence of severe injury due to indoor trampoline parks
3. To describe the circumstances in which the injury was sustained.
4. To describe the injury patterns
5. To describe the treatments required for injuries sustained.

CASE DEFINITION
Please report any child aged 0-15 years who is admitted to hospital as a result of injury/ies sustained while at an indoor trampoline park/facility

Exclusions: children injured on a domestic trampoline, or an outdoor recreational trampoline facility, children discharged from emergency department and not admitted to hospital
INVESTIGATOR CONTACT DETAILS (each state represented)

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3. Dr Warwick Teague, Director Trauma Service, Royal Children’s Hospital, Melbourne. warwick.teague@rch.org.au
4. Dr Ruth Barker, Queensland Injury Surveillance Unit. ruthb@qisu.org.au
5. Dr Lisa Sharwood, Injury Epidemiologist, Sydney University. lisa.sharwood@sydney.edu.au
6. Dr Helen J Mead, Director of Trauma, Perth Children’s Hospital. helen.mead@health.wa.gov.au
7. Dr Michael Ee, Paediatric Surgeon, Royal Hobart Hospital. Michael.ee@ths.tas.gov.au
8. Dr Nicole Williams, Adelaide Women’s and Children’s Hospital. nicole.williams3@health.sa.gov.au
9. Dr Kush Raj Shrestha, Orthopaedic Surgeon, Royal Darwin Hospital. kushrajsrestha@hotmail.com
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PROJECT REFERENCE GROUP

1. New South Wales
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   e. Dr Rajendra Kumar, John Hunter Children’s Hospital, Newcastle Rajendra.Kumar@hnehealth.nsw.gov.au
   f. Ms Sarah Adams Trauma CNC Sydney Children’s Hospital, Randwick. sarah.adams2@health.nsw.gov.au
   g. Ms Kay Best. Trauma CNC, Children’s Hospital Westmead, Sydney kay.best@health.nsw.gov.au
   h. Ms Kay Lockhart. Playground Advisory Unit, Kidsafe NSW, Westmead, Sydney kay.lockhart@health.nsw.gov.au

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3. Victoria
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4. Queensland
   a. Dr Ruth Barker, Queensland Injury Surveillance Unit. ruthb@qisu.org.au

5. Western Australia
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b. Dr Helen J Mead, Director of Trauma, Perth Children’s Hospital. helen.mead@health.wa.gov.au

6. Tasmania
   a. Dr Michael Ee, Paediatric Surgeon, Royal Hobart Hospital. Michael.ee@ths.tas.gov.au

7. South Australia
   a. Dr Nicole William, Adelaide Women’s and Children’s Hospital. nicole.williams3@health.sa.gov.au

8. Northern Territory
   a. Dr Kush Raj Shrestha, Orthopaedic Surgeon, Royal Darwin Hospital. kushrajshrestha@hotmail.com

In addition to this reference group, the National Trauma Nurses network and ITIM will be engaged to promote the project. The College of Surgeons Trauma Committee and Australian and New Zealand Association of Paediatric Surgeons will be asked to publicise the study to their members. Hospitals across Australia who see and admit children in their Emergency Departments will be identified. At these sites, information about the study will be sent to paediatricians, ED physicians, Surgeons and the ED NUMs. This information will inform them about the study and invite them to sign up for APSU notifications for the duration. The details being collected in the questionnaire will be summarised with a request for a focus on these aspects in history taking and EMR record keeping to facilitate ease of later questionnaire completion.

SELECTED REFERENCES


Examples of Trampoline Park equipment and activities for reference
Multiple Jumpers

Jumping Wall

Dodge Ball

Balance Beam

Multiple Jumpers

Jumping Wall

Basketball

Bubble Ball / Bubble Soccer / Sumo Ball

continued over page
Air Bag/Air Mat

Bolsters between trampolines

Concourse