AJUMPING REVOLUTION

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aring tricks and twists are all part of the fun at trampoline parks. They offer fun and exercise for children, adolescents and adults, but like all other public activity spaces, trampoline parks need to comply with minimum accepted safety standards.

Trampoline parks are opening up for business all around Australia. They are opening at an exponential rate, from no centres two years ago to approximately 62 as at December 2014. This trend has come off the back of an explosion in the number of these facilities throughout North America, in particular the USA where trampoline park numbers have increased from 35 to 280 in three years.

Trampoline parks are seen by adolescents as an exciting adventure activity that is cool. It is already developing into a 'cult' activity like snowboarding and surfing.

Most trampoline parks cater to all ages including seniors, and have proven popular with schools and businesses, as well as for special occasions like birthday parties. They also provide facilities that promote interaction between differing age groups, cultures and genders. They aid in the development of gross motor skills such as jumping, falling, balance, coordination as well as social skills, whilst also encouraging active exercise

participation and fitness. Being an indoor recreational activity it really doesn't matter what the weather is like, so even on a cold and wet winter day in Melbourne one can enjoy zero gravity 'weightlessness' while bouncing and enjoy higher G-forces than one would experience at Luna Park or Dreamworld. Without having to fly to London on QF 1, a patron can experience three times the G-force that they could experience on an A380 jet that is powered by four powerful Rolls Royce Trent 900 engines that can deliver a staggering 1,496 kN thrust.

Trampoline parks are a multi-milion dollar recreation industry where patrons are charged around \$15-20/hour. At the many centres patrons are required to book in advance during busy usage times such as school holidays and weekends. Trampoline parks go beyond the niche consumer market that BMX and skateboard venues have occupied for many years. Trampoline parks cater to a much broader market spectrum and this is a major contributing factor that keeps the cash registers rolling even on good weather days where children would have historically been seen outdoors kicking the football around the paddock.

The trampoline park story, however, is not all peaches and cream. Concerns have been raised by orthopedics, pediatric and

trauma teams around the country regarding the high incident rates of injuries sustained by trampoline park users. The medical industry has observed an alarming increase in emergency department admissions. The injuries are not limited to the occasional bump or bruise. The injuries relating to trampoline park usage are severe and include spine and head injuries together with fractured and dislocated limbs. We have historically seen these types of injuries from the backyard trampoline but never in the numbers that are now being admitted to our emergency departments around the country.

With all these injuries it would be reasonable to assume that there was an Australian Standard setting out the minimum safety requirements for trampoline parks.

You may be surprised to hear that currently there is no Australian Standard governing the design, operation or maintenance of trampoline parks. A project proposal was submitted to Standard Australia to write a safety Standard in August 2013. This project proposal was rejected by Standard Australia primarily because there was (at that point in time) insufficient evidence to justify the deployment of their limited resources.

With no Australian Standard and the prospect that an Australian Standard would at best be many years away, the founding operators within the Australian Trampoline Park industry formed a self-regulating Association and called it the Australian Trampoline Parks Association (ATPA) with the purpose of setting minimum safety standards within the industry. The ATPA is now a member of the Australia Amusement Leisure and Recreation Association or AALARA.

The ATPA being a member of AALARA is good news for all stakeholders whether they are operators, staff or patrons. Among many other things, AALARA declares that all persons and legal entities that operate businesses and work in providing amusement, leisure and recreation facilities and services must uphold and actively utilise best practice standards established by the industry for the industry in the day-to-day operation of their businesses so as to fully meet their responsibilities to their staff, guests and clients.

The ATPA has taken a responsible attitude by writing and publishing an industry Code of Practice for the design, manufacture, installation, operation,

maintenance, inspection and structural or major modification of trampoline parks. A copy can be downloaded from the ATPA website: www.atpa.org.au. This industry Code of Practice came into effect in June 2014. It reflects the technical requirements contained within the North American Standard F2970 which was published in June 2013 by the ASTM International Committee F24.60 together with the intent of the Australian Standard AS 3533 Amusement Rides and Devices which was written by the ME-051 Australian Standards Committee.

Over five million Australians suffer sports related injuries each year. This comes at a reported annual cost of an estimated two billion dollars. However, with risk, there is also reward. With sports participation the associated health benefits to individuals and society are beyond questioning.

The ATPA website currently cites injury rates at less than 2 in every 10,000 participant visits. Unfortunately, there is no evidence or reference to substantiate this claim by the ATPA. If this statistic is correct then trampoline parks are safer than many other activities that we openly encourage our children to participate in. Activities such as football, soccer, netball and cycling would all be considerably more dangerous.

Obesity levels are rising, but more astoundingly have increased by 200 per cent for males in the 5-12 year age group and by 150 per cent for girls in the 13-17 year age group.

However, given the social, health and wellbeing benefits provided by trampoline parks there are still accidents occurring and resulting injuries being sustained. Injuries not only affect one's ability to remain active but may also impact upon other family members and if old enough the user's ability to remain in the workforce and earn an income.

In 2011-12, 10.8 million adults were overweight, and of these 4.7 million were obese. Obesity is now seen as an epidemic in Australia and associated costs are said to be around sixty billion dollars per year. This gives reason for providing safe environments where physical activities take place, so participants can minimise their risk of injury but also enjoy the associated health and social benefits of regular exercise.

So despite the warning cries from the medical community that trampoline parks are dangerous, they are rapidly being seen as an alternative exercise/sporting choice by parents who are advised by trampoline park operators that they will be exposing their children to higher rates of injury if they allow them to participate in major Australian sports such as soccer, rugby union, rugby league, Aussie rules football and netball.

It must also be mentioned that external factors such as the age and experience of the trampoline user, and the age and experience of the person supervising the trampoline

user, should at some stage be taken into account when considering trampoline park injury rates and the type of injuries sustained. A nine-year-old will attenuate a bounce differently from an experienced trampolinist, or an elite gymnast. As the skill level increases, trampoline participants will attempt more complex and potentially more dangerous manoeuvres such as flips and walking up vertical walls and doing seemingly gravity-defying manoeuvres.

WHO POLICES TRAMPOLINE PARKS?

Are they amusement rides and devices and policed by the various WorkCover and WorkSafe Authorities in each State and Territory? Or are they policed by the Office of Fair Trading in each State and Territory? Or is it the Insurance Industry? Or are they unregulated?

The Work Health and Safety Act requires persons conducting a business or undertaking (PCBUs) to, so far as is reasonably practicable, ensure the health and safety of employees, contractors and members of the public. The Act requires the PCBUs to notify the Regulator in their State or Territory of any serious injuries and dangerous incidents that occur while conducting their business. The PCBUs are also required to exercise 'due diligence to ensure compliance with the Act.

In many jurisdictions, operators attempt to hide behind their respective State-based legislation such as the NSW Civil Liabilities Act. These operators force patrons to sign waivers in which they effectively assign the patron's right for compensation before they are allowed to enter and use the facilities within their premises. Equally problematic is the practice of requiring parents running

birthday parties to sign waivers on behalf of absent parents. This is a worrying trend as these operators may have inadequately trained staff, or insufficient staff-to-patron supervision ratios that will allow them to safely operate their trampoline park facility. Worse they may use the Civil Liabilities Act legislation to build facilities that do not comply with the minimum safety requirement contained within ATPA Code of Practice. They are effectively saying, no matter what, you can't sue us. It doesn't matter if they don't have enough staff, their staff isn't properly trained, or their equipment is old or derelict. This sends the wrong message to operators who are doing the right thing and complying with the Code of Practice

Design issues such as exposed springs, insecure padding and insufficient dismount foam-pit depth increase the likelihood of injuries. Maintenance issues such as torn netting or poorly maintained dismount foampits will increase the likelihood and severity of injuries.

The rise in popularity of trampoline parks means that they are becoming easily accessible to all ages of the population. Also their reported relatively low injury rates makes this an increasingly popular action sport for children who may not enjoy traditional team sports that have much higher injury rates.

David Eager is an Associate Professor at UTS. He is on the Board of Kidsafe and has represented Engineers Australia on the Australian Standards Committee ME-051 Amusement Rides and Devices for more than 15 years, and Chaired the Australian Standards Committee CS-100 Trampoline Safety for over a decade. He is also on the ASTM International Committee F24.60.

