

The Transportation of Children and Youth with Additional Needs (TOCAN)

by Helen Lindner

VicRoads, 60 Denmark Street, Kew, Victoria, 3101

helen.lindner@roads.vic.gov.au



TOCAN members today include The Royal Children's Hospital, VicRoads, Britax, the Royal Automobile Club of Victoria, the Australian Child Restraint Resource Initiative, Murdoch Children's Research Institute, Amaze (formerly Autism Victoria), and the Association for Children with a Disability.

The Transportation of Children and Youth with Additional Needs (TOCAN) partnership, as reflected in Australia's National Road Safety Strategy 2011-2020, recognises that road safety progress today is dependent on coordinating strong road safety partnerships effectively across all sectors – government, business, industry and community. The TOCAN partnership is creating foundations that will have a lasting impact on the road safety outcomes for children with additional needs in our communities.

Background

Motor vehicle crashes remain one of the leading causes of death and injury among infants and children in Australia. All children need to be able to travel safely and comfortably in a motor vehicle to enable them to be transported to and from kindergarten, school, leisure activities and medical appointments.

Death and serious injury of children has been associated with the use of suboptimal restraints, that is, using a restraint that is not the most size-appropriate or when the restraint is not being used as it was designed to be used.

Children with a disability, due to a medical condition or challenging behaviour, often require special consideration when being transported in motor vehicles. Children with a permanent disability require long term solutions that need to be reassessed as the child grows, while children with a temporary disability require short term solutions.

Physical conditions and disorders range from head and trunk control problems (e.g. cerebral palsy, muscular dystrophy), to connective tissue disorders and to spinal deformities which present challenges for safe and comfortable seating [1]. Children with behavioural disorders such as autism present challenges in keeping restraints fastened and maintaining the safety of all passengers.

In Australia in 2009, 7% of Australian children (or 288,300) aged 0-14 years were estimated to have a disability. Of this 7%, over half had profound or severe core activity limitations. The prevalence of severe disability was highest among children aged 5-9 years (5.8%) [2].

Although parents and carers of typically developing children have access to evidence based support and advice, and easy access to an extensive range of Australian Standard child restraints, this is not the case for parents/carers and allied health professionals caring for and working with children with additional needs. The Victorian Road Safety Road Rules (2009) provide definitions for *approved* restraints – the definitions only include child restraint systems that comply with the Australian/New Zealand Standard 1754 *Child restraint systems for use in motor vehicles* (AS/NZS 1754). However, there are child restraints used by children with additional needs, known as special purpose child restraints, which do not comply with AS/NZS 1754.

Establishment of the Transportation of Children and Youth with Additional Needs (TOCAN) partnership

The Royal Children's Hospital (RCH) in Melbourne has played a leading role in providing advice, and developing and distributing resource materials relating to child restraints for children with additional needs. However, parents and carers regularly request advice from health practitioners and other organisations which often leads to confusion.

In 2009, Victoria commenced a marketing campaign supporting the introduction of National Child Restraint Road Rules. This awareness raising resulted in an increase in enquiries relating to the transportation of children with additional needs. To respond to the need for coordinated, informed and timely support for families, the Royal

Children's Hospital (Melbourne) together with other agencies established the Transportation of Children and Youth with Additional Needs (TOCAN) partnership in October 2009. TOCAN members recognised the potential to increase community awareness and support through this combined approach. This partnership provides a regular forum for learning, discussing and solving issues relating to the transportation of children with additional needs.

The National Road Safety Strategy (2011-2020) has the vision that no person should be killed or seriously injured on Australia's roads, and Victoria's Road Safety Strategy (2012-2022) vision is to achieve zero deaths and zero serious injuries on our roads. TOCAN is challenged to explore the compatibility of these visions with the transportation of children with additional needs. It has been noted that the basic assumption in 'Vision Zero' is that the transport system should be designed to suit the least tolerant person using the system, however research [3] has found that children with disabilities face an increased risk of injuries and fatalities in the event of an impact in comparison with other children. [4] TOCAN is responding to such challenges and within just three years have provided the leadership for research, action and advocacy with national and international significance contributing to improved knowledge, policy, education and resources supporting the safe travel of children with additional needs.

Some examples of TOCAN's achievements:

Review of AS/NZS 4370: restraint of children with disabilities in motor vehicles

The Australian/New Zealand Standard 4370: *Restraint of children with disabilities in motor vehicles* (AS/NZS 4370) sets out guidelines and procedures for prescribers (e.g. occupational therapists, physiotherapists, medical practitioners) responsible for assessing a child's needs and recommending the way in which a child with a disability or medical condition, should be transported in a motor vehicle. TOCAN members instigated and led the review of this standard. AS/NZS 4370:2013 was published by Standards Australia on May 15, 2013.

Research

The Murdoch Children's Research Institute (MCRI) undertook a research project to understand the knowledge of and challenges faced by paediatric occupational therapists when making recommendations regarding the restraint of children with additional needs in motor vehicles in Victoria. The MCRI survey was completed by 107 paediatric occupational therapists (prescribers). The research identified that:

- 61% of prescribers did not have access to AS/NZS 4370

- 30.5% of prescribers were unaware that AS/NZS 4370 existed, and prescribers reported that they did not feel confident in knowing what child restraints were available that met AS/NZS 1754
- 25% of families did not purchase the child restraints recommended by therapists and continued to transport their child in a way that is considered to be unsafe
- on average it took 1-3 months for families to be able to self-fund the purchase.

A follow up project is currently being implemented with parents and carers of children with additional needs, and aims to understand the needs and challenges of finding appropriate vehicle restraints. It is anticipated that information from this project will be used to inform development of parent and carer resources to support knowledge and decision making around safe car travel for children with additional needs.

Review of child restraints for children with a disability (2011)

VicRoads, supported by the Department of Human Services (DHS), undertook a review to address concerns about the compatibility of restraints for children with a disability with motor vehicles in Australia, and compliance with Australian Standards. The review identified nine special purpose child restraints available for hire or purchase in Victoria. Not one of the special purpose child restraints comply with the Australian Standard for child restraints (AS/NZS 1754). As an interim guide, desktop review criteria was applied to the nine child restraints to assess the compatibility of each child restraint with motor vehicles in Australia; and to assess whether each child restraint is likely to meet the intent of AS/NZS 1754. The Department of Human Services (Victoria) temporarily suspended funding towards child restraints for children with a disability whilst this review was being undertaken. DHS reinstated funding for special purpose child restraints following this review.

Dynamic testing of child restraints for children with a disability (2012/13)

VicRoads and the Transport for New South Wales undertook crash testing of special purpose child restraints. This review aimed to measure how well the desktop review criteria used in the VicRoads (2011) *Child restraints for children with a disability* reflects actual performance in dynamic child restraint tests. The result of this work was presented at the 23rd International Technical Conference on the Enhanced Safety of Vehicles in Korea in May 2013. This work will be of national and international interest.

Other TOCAN activities

The Royal Children’s Hospital has hosted two workshops aimed at providing support and guidance for health practitioners relating to the transportation of children with additional needs. The workshops have been well attended by health practitioners, as well as government and community representatives from across Australia.

TOCAN members have also presented papers at conferences in Australia and internationally, and published articles in industry journals and magazines. TOCAN was also the recipient of the Kidsafe 2011 National Kidsafe Day Award, and a 2012 Transport Accident Commission community road safety grant to develop an online resource for allied health professionals, parents and carers and government agencies supporting the safe transportation of children with additional needs.

TOCAN is looking forward to developing a strategic plan in 2013 to inform future interventions and to guide engagement with other jurisdictions and organisations that can contribute to building community support for the transportation of children with additional needs. Later this year TOCAN will launch a website for parents, carers, allied health professionals and the community. For more information about TOCAN contact safetycentre@rch.org.au or Tel: 03 9345 5085.

See the website below for more information and a Question and Answer interview with Helen Lindner from TOCAN: http://www.3mreflective.com.au/TSS/NEWS_14MAY13_-_Q%26A_WITH_2012_3M-ACRS_Award_Winner.html

References

1. Australian/New Zealand Standard 4370:2013 Restraint of children with disabilities, or medical conditions, in motor vehicles, Standards Australia, 2013.
2. The Australian Institute of Health and Welfare (AIHW). A Picture of Australia’s Children 2012. <http://www.aihw.gov.au/WorkArea/DownloadAsset.aspx?id=10737423340> (accessed April 2013).
3. Falkmer, T., and Gregersen, N. (2002). Perceived risk among parents concerning the travel situation for children with disabilities, *Accident Analysis and Prevention* 34, 553-562.
4. Baker, A., Galvin, J., Vale, L. and Lindner, H. (2012). Restraint of children with additional needs in motor vehicles: Knowledge and challenges of paediatric occupational therapists in Victoria, Australia. *Australian Occupational Therapy Journal*, 59(1), 17-22.



The banner for the 26th ARRB Conference 2014 features a white background on the left and a yellow background on the right. The left side contains the conference logo, which includes a stylized '26' with a road sign icon, and the text 'ARRB Conference' and 'RESEARCH DRIVING EFFICIENCY'. The right side has the text '26th ARRB Conference 2014' in large white letters, with 'OCTOBER 19-22, 2014 | ANZ Stadium, Sydney Olympic Park, Australia' below it. A central section with a white background contains the text 'Call for abstracts' in a large, bold, blue font, followed by 'ARRB Group is inviting prospective authors to submit abstracts for the 26th ARRB Conference, *Research driving efficiency.*' Below this is 'Abstract submission is now open!' with a play button icon, and 'For more information, and to register, visit:' followed by contact details: 'W: www.26arrbconference.com.au', 'E: confadmin@arrb.com.au', and 'P: 03 9881 1502'. At the bottom, there are two blue circular icons with white dots, followed by the website and email addresses: 'www.26arrbconference.com.au' and 'sponsorconf@arrb.com.au'. On the right side of the banner, there is a photograph of a busy multi-lane highway with many cars. The ARRB Group logo is in the bottom right corner.

26th ARRB Conference
RESEARCH DRIVING EFFICIENCY

26th ARRB Conference 2014
OCTOBER 19-22, 2014 | ANZ Stadium, Sydney Olympic Park, Australia

Call for abstracts

ARRB Group is inviting prospective authors to submit abstracts for the 26th ARRB Conference, *Research driving efficiency.*

Abstract submission is now open!

For more information, and to register, visit:

W: www.26arrbconference.com.au
E: confadmin@arrb.com.au
P: 03 9881 1502

• www.26arrbconference.com.au • sponsorconf@arrb.com.au

arrb
GROUP