

Transportation of children with disabilities who display behaviours of concern

Clinical reasoning guide for
occupational therapists



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By Julia Martin and Rachel Paule



The image used on the cover of this publication is 'Expression of my Community', a painting by Carolyn Norman, one of the winners of the VALID art competition, sponsored by the Senior Practitioner and presented at the VALID annual Having a Say Conference 2013.

This guide is specific to children with disabilities **who display behaviours of concern**.^{1,2} The principles also apply to adult populations. This guide is not an assessment in itself and should be used in conjunction with necessary assessments and a comprehensive team approach. This guide has been developed for the Victorian context, but the principles can be used in other jurisdictions. Children who display behaviours of concern who **also have physical disabilities** require a comprehensive assessment for vehicle restraints alongside this guide.

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1 A behaviour of concern refers to behaviour that causes physical harm to the person with a disability or another person, or destroying property resulting in the risk of harm to the person or any other person (*Disability Act 2006 (Vic)*, s. 140).

2 Referred to throughout as 'the child'

Context

This guide was developed as part of a participatory community placement by Masters of Occupational Therapy Practice students from Monash University. In their research, they found that occupational therapists are most frequently involved in recommending restraints for transportation.³

The development of this guide was made possible by the guidance and encouragement of Brent Hayward from the Office of Professional Practice (OPP), advice and support of Kirsty Pope from Monash University and the expertise generously given by occupational therapists in the community.

Overarching principles

Transportation is an everyday occurrence for children. It enables social and economic engagement in the community, fosters independence and autonomy of choice.

This is supported by: the Convention on the Rights of the Child; Convention on the Rights of Persons with Disabilities; Universal Declaration of Human Rights 1948, *Charter of Human Rights and Responsibilities Act 2006 (Vic)*, *Disability Act 2006 (Vic)*, *National Disability Insurance Scheme Act 2013*.

³ Baker A, Galvin J, Vale L and Linder 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*, vol. 59, no. 1, pp. 17–22.

Child and transportation management cycle for occupational therapists

This figure outlines the process of working with the child with transport needs. Occupational therapists can refer to the cycle as they work through this guide.

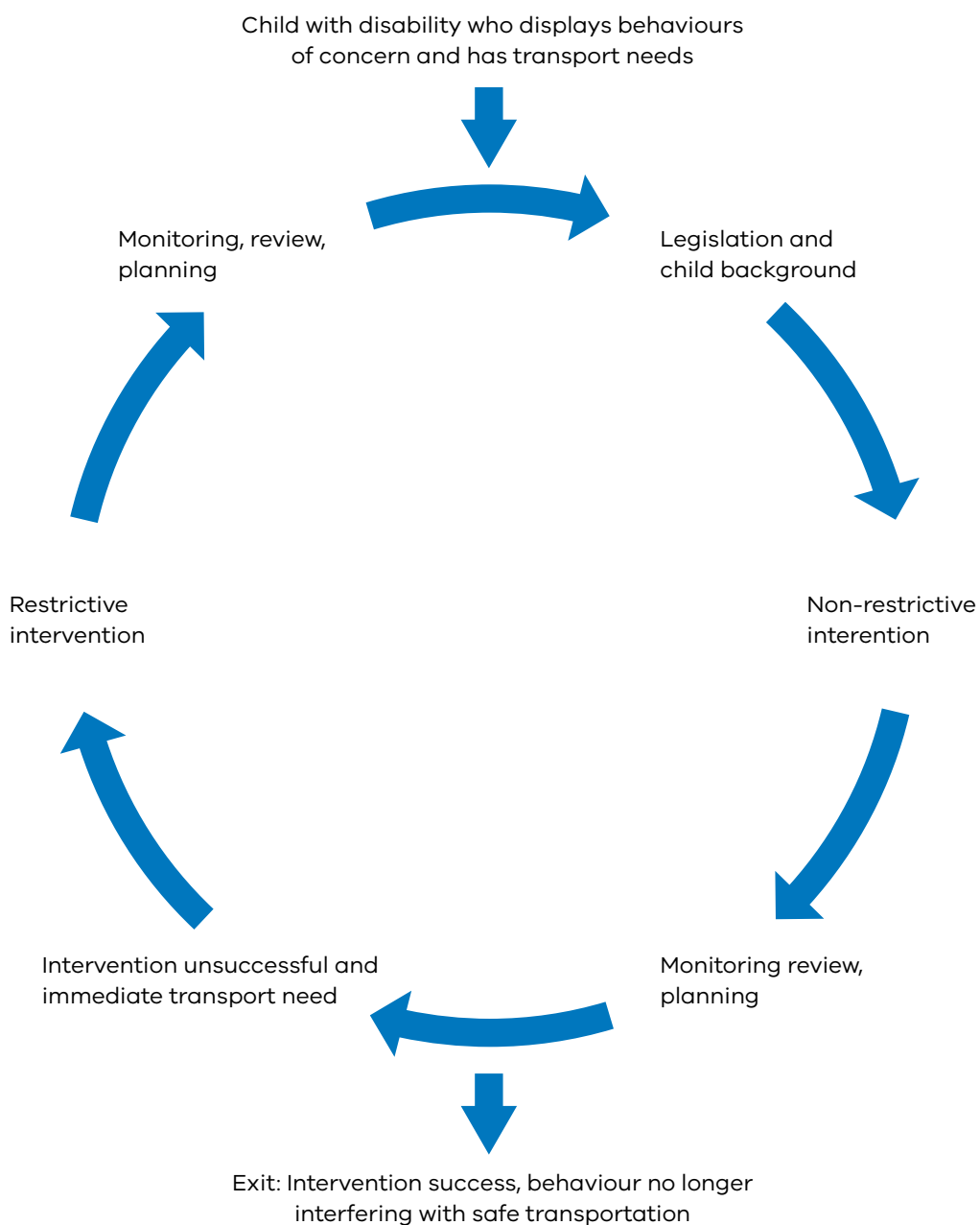


Figure 1: Child and transportation management cycle for occupational therapists

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1. Legislation and regulations for the child in relation to transportation

1.1 How do Victorian Road Rules apply to the child?

Everyone needs to wear a seat belt, child restraint or use a booster seat when travelling in a motor vehicle (Road Rule 266⁴).

'Some children may be exempt from the child restraint Road Rules. This includes children with a medical condition or physical disability. To qualify for an exemption, certain conditions need to be met such as getting a medical certificate. Even if a child is exempt, they still need to be safe when travelling in a vehicle' (VicRoads 2014, para 1⁵; Road Rule 267⁶).

1.2 Which Australian Standards apply to vehicle restraints for the child?

Australian Standards are documents that set out specifications and guidelines for products, services and systems to be safe, reliable and consistent in their function.⁷

Australian Standards are not legal documents, unless mandated by government.

In Victoria, the Australian/New Zealand Standard for child vehicle restraints (AS/NZS 1754:2013) is mandated, and all child restraints must comply with this standard, unless exempt.

If a vehicle restraint does not meet the Standard due to exemptions (section 1.1), it is non-compliant. A medical exemption letter is required for a non-compliant restraint (section 1.1).

Guidelines for the prescription of a non-compliant or compliant restraint for children with disabilities or medical conditions can be found in AS/NZS 4370:2013. This guide partners with AS/NZS 4370:2013 but elaborates on the behaviour of the child.

AS/NZ 8005:2013 *Accessories for child restraints in motor vehicles* is a framework used to assess the safety of accessories and add-on devices used with child vehicle restraints.

4 Road Safety Road Rules 2009 (Vic), retrieved from <[http://www.legislation.vic.gov.au/Domino/Web_Notes/LDMS/LTObject_Store/LTObjSt5.nsf/dde300b846eed9c7ca257616000a3571/a1ea37d8e6e0e200ca257761003ffffb/\\$FILE/09-94sr003.pdf](http://www.legislation.vic.gov.au/Domino/Web_Notes/LDMS/LTObject_Store/LTObjSt5.nsf/dde300b846eed9c7ca257616000a3571/a1ea37d8e6e0e200ca257761003ffffb/$FILE/09-94sr003.pdf)>

5 VicRoads 2014, 'Children with additional needs', retrieved from <<https://www.vicroads.vic.gov.au/safety-and-road-rules/vehicle-safety/child-restraints/children-with-additional-needs>>

6 Road Safety Road Rules 2009 (Vic), retrieved from <[http://www.legislation.vic.gov.au/Domino/Web_Notes/LDMS/LTObject_Store/LTObjSt5.nsf/dde300b846eed9c7ca257616000a3571/a1ea37d8e6e0e200ca257761003ffffb/\\$FILE/09-94sr003.pdf](http://www.legislation.vic.gov.au/Domino/Web_Notes/LDMS/LTObject_Store/LTObjSt5.nsf/dde300b846eed9c7ca257616000a3571/a1ea37d8e6e0e200ca257761003ffffb/$FILE/09-94sr003.pdf)>

7 Australian Standards 2016, 'Frequently asked questions', retrieved from http://www.standards.org.au/pages/faq.aspx#_Toc257193845

1.3 How is the *Disability Act 2006 (Vic)* relevant?

The *Disability Act 2006 (Vic)*⁸ supports the rights and needs of persons with a disability and outlines a framework for service quality in Victoria. The relevance of the Act for transportation relates to mechanical restraint (s. 3):

‘The use, for the primary purpose of the behavioural control of a person with a disability, of devices to prevent, restrict or subdue a person’s movement but does not include the use of devices —

(a) For therapeutic purposes; or (b) to enable the **safe transportation**⁹ of the person.’

A requirement of the Act is to use the least restrictive option. The same principle should apply to transportation. The use of any restraint must be considered with full knowledge of the potential consequences, to prevent physical harm to self or others and to benefit the person.⁷

1.4 What other policies are relevant?

Overarching principles (p. 1) should be acknowledged. Also refer to local policies, procedures and protocols (Including school, bus services and disability service).

8 *Disability Act 2006 (Vic)*, retrieved from <[http://www.legislation.vic.gov.au/Domino/Web_Notes/LDMS/PubStatbook.nsf/f932b66241ecf1b7ca256e92000e23be/0B82C05270E27961CA25717000216104/\\$FILE/06-023a.pdf](http://www.legislation.vic.gov.au/Domino/Web_Notes/LDMS/PubStatbook.nsf/f932b66241ecf1b7ca256e92000e23be/0B82C05270E27961CA25717000216104/$FILE/06-023a.pdf)>

9 Drivers and passengers in moving vehicles are to wear either a seatbelt or an approved vehicle restraint while the vehicle is in motion. See section 1.1.

2. The child with transport needs

It is important to consider all the personal factors to understand the situation and to be able to assess and develop appropriate interventions.

2.1 How does the child's development impact on transport?

The development of the child will impact assessment and interventions. This includes: height, weight and age as well as

- communication skills
- stage of cognitive development
- fine and gross motor skills.

2.2 What is the behaviour of concern occurring during transportation?

It is important to be specific when identifying the behaviour of concern.

- What are the observed behaviours interfering with travel?
- How often does the behaviour occur?
- Why is the behaviour an issue right now?
- Are there identifiable triggers to the behaviour?

2.3 How does the child usually travel?

Understanding how the child usually travels provides a baseline of their transport routine.

- How many vehicles (bus, taxi, car) does the child travel in?
- What modes of transport does the child use?
- Who is involved in transporting the child?
- Who is in the vehicle?
- What are the regular seating arrangements in the vehicle(s)?

2.4 Who is in the child's team?

A multidisciplinary approach is required for a comprehensive assessment and consistency of intervention for the child with transport needs. Consider who is currently involved and who may need to become involved, including:

- bus aide/driver
- medical practitioners
- nurse
- occupational therapist
- parent/guardian
- physiotherapist
- psychologist
- support staff
- social worker
- speech pathologist
- teacher
- car restraint fitter
- vehicle restraint manufacturer.

2.5 What has changed to make this behaviour an issue now?

Consider what has changed to make this behaviour in transport an issue now. Discuss the following with relevant persons (section 2.4):

- mode of transport
- physical vehicle environment
- route of transport
- vehicle passengers
- frequency of transport
- average trip length
- routine of getting in/out of vehicle
- changes at home/school/other places of routine
- toileting issues
- illness
- medication
- pain
- motion sickness
- hunger/thirst
- fatigue.

2.6 What assessments have been completed for the behaviour of concern occurring during transportation?

Assessment is an important step in understanding the child, behaviour and environment. Observation and environmental assessment of the vehicle can be used alongside behavioural assessments.

Behavioural assessments can be direct or indirect:

Direct

- Antecedent, Behaviour, Consequence (ABC) Chart¹⁰
- Setting- Trigger-Action-Response (STAR) Chart

Indirect

- Motivation Assessment Scale (MAS)¹¹
- Functional Analysis Screening Tool (FAST)¹²
- Functional Assessment Interview (FAI)¹³

10 Freely available on the internet.

11 Durand M and Crimmins DB 1992, *The motivational assessment: Scale administration guide*, Monaco & Associates, Topeka KS.

12 Iwata BA and DeLeon IG 1996, *Functional analysis screening tool (FAST)*, Florida Centre of Self Injury, University of Florida, Gainesville.

13 Horner RH and Carr EG 1997, 'Behavioral support for students with severe disabilities functional assessment and comprehensive intervention', *The Journal of Special Education*, vol. 31, no. 1, pp. 84–104.

3. Interventions to manage transportation

Section 3.1 outlines examples of **non-restrictive interventions**, which do not restrict or subdue the child's movement. Non-restrictive interventions should always be considered before restrictive interventions, as they do not infringe on a child's human rights.

3.1 What are the non-restrictive interventions for transportation?¹⁴

Always aim to enable choice and control.

- What has worked/not worked in the past?
- How has the routine of transport been addressed? What preparation has been done for travel readiness and potentially long periods of travel? How will this be communicated to the child? Examples include social stories^{15,16} and visual schedules.¹⁷
- Communication:^{18,19} How will the child communicate while travelling and how will the driver respond?
- Supervision: Can someone sit with the child?¹⁷ Is this sustainable?
- How can the child be engaged while travelling?^{17,20}
Consider audiobooks, music, iPad, books, colouring, toys, car games and cues for child in the progress of travel.
- Are environmental factors negatively affecting the child?²¹ These can include noise (headphones, earmuffs), light (sunglasses, sunshades), weather (temperature control of vehicle).
- Does the child have access to food and drink?^{17,20}
- Is a toileting strategy required?^{17,20}
- Is it possible to reduce trip length, take an alternative route, reduce frequency or change mode of transport?^{17,22}

14 Examples stemming from occupational therapy principles include Cotterill D 2012, 'Challenging behaviour and restraint: occupational therapists need to be transparent', *British Journal of Occupational Therapy*, vol. 75, no. 6, p. 255; Case-Smith J and Arbesman M 2008, 'Evidence-based review of interventions for autism used in or of relevance to occupational therapy', *American Journal of Occupational Therapy*, vol. 62, no. 4, pp. 401–426.

15 Kokina A and Kern L 2010. 'Social story™ interventions for students with autism spectrum disorders: a meta-analysis', *Journal of Autism and Developmental Disorders*, vol. 40, no. 7, pp. 812–826.

16 Kalyva E and Agalioti I 2009, 'Can social stories enhance the interpersonal conflict resolution skills of children with LD?', *Research in Developmental Disabilities*, vol. 30, pp. 192–202.

17 Odom SL, Collet-Klingenberg L, Rogers SJ and Hatton DD 2010, 'Evidence-based practices in interventions for children and youth with autism spectrum disorders', *Preventing school failure: Alternative education for children and youth*, vol. 54, no. 4, pp. 275–282.

18 Western Autistic School 2009, *Assessment of travel issues*, Western Autistic School, Melbourne.

19 Matson JL, Boisjoli J and Mahan S 2009, 'The relation of communication and challenging behaviors in infants and toddlers with autism spectrum disorders', *Journal of Developmental and Physical Disabilities* vol. 21, no. 4, pp. 153–261.

20 Cotterill D 2012, Challenging behaviour and restraint: occupational therapists need to be transparent. *British Journal of Occupational Therapy*, 75(6), 255.

21 McGill P, Teer K, Rye L and Hughes D 2005, 'Staff reports of setting events associated with challenging behavior', *Behavior modification*, vol. 29, no. 4, pp. 599–615.

22 Smith RG 2011, 'Developing antecedent interventions', in WW Fischer, CC Piazza and HS Roane (eds.), *Handbook of applied behaviour analysis*, Guilford Press, New York, pp. 297–316.

- Is a behavioural intervention²³ appropriate? These may include reinforcement, discrete trial training, video modelling and token economies.
- Use a buckle guard (if appropriate, section 5.2).

3.2 What are the restrictive interventions (mechanical restraints) for transportation?

Examples of **restrictive interventions** (mechanical restraints) that restrict or subdue a person's movements (excluding devices for safe transportation) include:

- buckle guard (if appropriate, section 5.2)
- H-harness; compliant with AS/NZ 1754:2013, however not recommended due to risk of misuse which can result in serious injury^{24,25} (requires careful use and installation)
- special purpose restraints (for example E-Z-On vest, hemco harness). Not compliant with Australian Standards and therefore requires prescription and a medical exemption
- a device that limits the movement of a person's arms, legs or head.

3.3 What should be considered if using a restrictive intervention for transportation?

If using a restrictive intervention, consider the following to ensure that the device is being used correctly:

- Refer to Australian Standards AS/NZS 4370:2013 and AS/NZS 1754:2013. (Accessing Australian Standards, section 5.1).
- Is it the least restrictive option (to enable transportation)? Have the non-restrictive interventions been exhausted?
- Is the restraint an appropriate size and fit for the child? Since 2011 compliant vehicle restraints have included shoulder height labels. Non-compliant vehicle restraints from overseas list weight limits.
- Has the vehicle been to a fitting station to install/check instalment of restraint? (May need vehicle restraint manufacturer, section 5.1).
- Has a medical exemption letter been provided (from a medical practitioner)? This is required for any non-compliant vehicle restraints including compliant devices that have been modified and are therefore non-compliant (section 5.1).
- Has an advice to carers letter been provided? (section 5.1)
- Is the device for a government-funded disability service (not a school)? If yes, a behaviour support plan (BSP) is required

23 Odom SL, Collet-Klingenberg L, Rogers SJ and Hatton DD 2010, 'Evidence-based practices in interventions for children and youth with autism spectrum disorders', *Preventing school failure: Alternative education for children and youth*, vol. 54, no. 4, pp. 275–282.

24 VicRoads 2015, 'Child safety harnesses', retrieved from <<https://www.vicroads.vic.gov.au/safety-and-road-rules/vehicle-safety/child-restraints/child-safety-harnesses>>.

25 Neuroscience Research Australia and Kidsafe Australia 2013, *Keeping children as safe as possible while travelling in motor vehicles: A guide for parents, carers and road safety practitioners*, retrieved from <<http://www.kidsafe.com.au/Detailed%20Consumer%20Guide%20Final.pdf>>.

- Who needs to know how to use the device (parents, bus aid, respite) and how will they be instructed on device use? (demonstration, advice to carers letter).
- How long is the device to be used for? (section 4.1)
- What other non-restrictive interventions are in place alongside the device?

4. Monitoring, reviewing, planning

A plan to monitor both the behaviour and the effectiveness of the intervention must be developed alongside the intervention plan.²⁶

4.1 What is the ongoing plan to manage transportation of the child?

Develop a plan for review of the intervention (non-restrictive/restrictive):

- The timeframe for review will vary. Restrictive interventions should be reviewed at a minimum of 12 months.²⁷
- How will the effectiveness of the intervention be measured? (Is the intervention reducing the behaviour?)
- Is the intervention sustainable?

If mechanical restraint is being used:

- Is the device being used as intended?
- Has the size and comfort of the restraint been reviewed? (Has the child grown?)
- Has the integrity of the device been checked?
- How will the mechanical restraint be reduced? (Is the child ready to trial travelling without the restraint? Are non-restrictive interventions being used alongside? Fading/shaping/chaining.²⁸

26 Williams DE and Vollmer TR 2015, 'Essential components of written behavior treatment plans', *Research in Developmental Disabilities*, vol. 36, pp. 323–27.

27 This is based on the *Disability Act 2006* (Vic) yearly review requirements for behaviour support plans.

28 Helfrich C 2014, 'Principles of learning and behaviour change', in BA Boyt Schell, G Gillen and MJ Scaffa (eds), *Willard & Spackman's occupational therapy*, 12th ed., Lippincott Williams & Wilkins, Philadelphia, pp. 588–604.

5. Resources

5.1 My question about transportation of the child is not answered here, where can I go for help?

Supervision

Speak with your direct supervisor. If you do not have a supervisor, contact Occupational Therapy Australia; Mentorlink²⁹ or enquire about paid supervision options.

Australian Standards

AS/NZS 1754:2013 *Child restraint systems for use in motor vehicles*

AS/NZS 4370:2013 *Restraint of children with disabilities, or medical conditions, in motor vehicles*

AS/NZ 8005:2013 *Accessories for child restraints in motor vehicles*

Australian Standards may be available through your organisation or state library (the Standards are accessible at the State Library of Victoria and the National Library of Australia.) Parts of AS/NZS 4370:2013 are available through TOCAN.

VicRoads road rules

Rule 266⁴ Wearing of seatbelt by passengers less than 16 years old

Rule 267⁴ Exemptions from wearing seatbelts

Medical exemption letter

To be completed by a medical practitioner, example available from TOCAN.³⁰

Advice to carer letter

To be kept in the vehicle with a non-compliant device, example and necessary inclusions available from TOCAN.³⁰

Mechanical restraint

The Senior Practitioner³¹ monitors restrictive interventions used in government funded disability services.

Behaviour support plan

Behaviour support planning toolkit³²

29 Occupational Therapy Australia 2016, 'Mentorlink', retrieved from <<http://www.otaus.com.au/singular-pages/content-pages/mentorlink>>.

30 TOCAN 2016, 'Transportation of children with additional needs', retrieved from <http://www.rch.org.au/tocan/>

31 *Disability Act 2006*, section 24(1)(h)

32 Department of Health and Human Services 2015, 'Senior practitioner: Behaviour support planning toolkit', retrieved from <<http://www.dhs.vic.gov.au/about-the-department/our-organisation/organisational-structure/our-groups/office-of-professional-practice/practice-resources-opp/practice-resources-disability/behaviour-support-planning-practice-guide-senior-practitioner>>.

Guides for child vehicle restraints

VicRoads³³ Child restraints

Neuroscience Research Australia and Kidsafe Australia 2013, *Keeping children as safe as possible while travelling in motor vehicles: A guide for parents, carers and road safety practitioners*.³⁴

Commercially available and Australian Standard approved child vehicle restraints

Child Car Seats³⁵

Vehicle restraint manufacturers

You may need to consult with the manufacturer of the restraint in regards to variation of installation, fitting or modification to a child vehicle restraint.

Physical disabilities and transport, prescription guidance

TOCAN³⁰ (Transportation of children with additional needs)

TransSPOT³⁶

(NSW based) have transport safety guidelines for transporting persons with a disability.

Students with disabilities

Students with Disabilities Transport Program³⁷

Legislation

Disability Act 2006 (Vic)

Road Safety Road Rules 2009 (Vic)

Charter of Human Rights and Responsibilities Act 2006 (Vic)

Convention on the Rights of Persons with Disabilities

Convention on the Rights of the Child 2006

Universal Declaration of Human Rights 1948

33 VicRoads 2015, 'Child restraints', retrieved from <<https://www.vicroads.vic.gov.au/safety-and-road-rules/vehicle-safety/child-restraints>>

34 Neuroscience Research Australia and Kidsafe Australia 2013, *Keeping children as safe as possible while travelling in motor vehicles: A guide for parents, carers and road safety practitioners*, <retrieved from <http://www.kidsafe.com.au/Detailed%20Consumer%20Guide%20Final.pdf>>.

35 Child Car Seats undated, 'Child car seats', retrieved from <https://www.childcarseats.com.au/>

36 Spot on DD 2016, 'Transport safety guidelines for people with a disability', retrieved from <http://spotondd.org.au/?page_id=17>

37 Department of Education and Training (Vic) 2016, 'Students with disabilities transport program', retrieved from <<http://www.education.vic.gov.au/school/principals/management/Pages/sdtransport.aspx#link43>>

5.2 When is a buckle guard restrictive or non-restrictive?

There is confusion surrounding the use and reporting of buckle guards.³⁸ The purpose of this diagram is to clarify when the use of a buckle guard is considered restrictive or non-restrictive in the context of the *Disability Act 2006*.

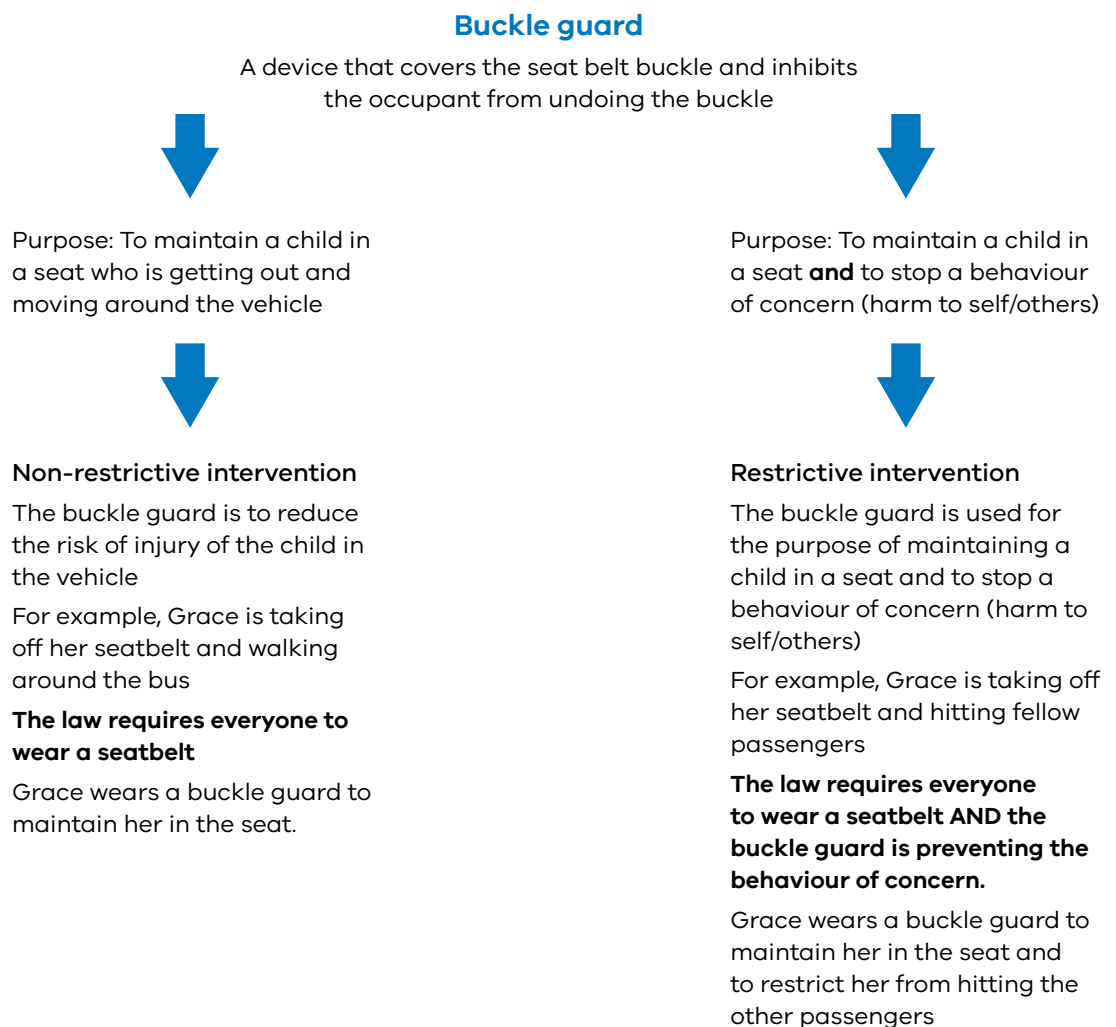


Figure 2: Buckle guard diagram

³⁸ Webber LS, McVilly KR and Chan C 2011, 'Restrictive interventions for people with a disability exhibiting challenging behaviour: Analysis of a population database', *Journal of applied research in intellectual disability*, vol. 24, no. 6, pp. 495–507.

