



Australian  
Competition &  
Consumer  
Commission

# Review of the mandatory safety standard for bunk beds

## Draft Regulation Impact Statement

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## Glossary

Term	Definition
<b>ASTM standard</b>	ASTM standard for bunk beds (ASTM F1427-13)
<b>Bunk beds</b>	<p>The mandatory safety standard currently defines bunk beds as a set of components that are assembled into single beds or double/single combination beds, which will be stacked one over the other.</p> <p>Alternatively, any single bed, other than a hospital bed, where the upper surface of the mattress base is at least 800 mm above the floor surface.</p> <p>The updated Australian voluntary standard changes the definition to also include elevated beds where the upper surface of the mattress is 700mm above the floor surface</p>
<b>Updated voluntary Australian standard</b>	The current edition of the Australian/New Zealand voluntary standard (AS/NZS 4220:2010)
<b>European standard</b>	European standard for bunk beds (BS EN 747-2012)
<b>ISO standard</b>	ISO standards for bunk beds (ISO 9098:1994)
<b>Mandatory safety standard</b>	The Australian mandatory safety standard for bunk beds (Consumer Protection Notice No. 1 of 2003 - Consumer Product Safety Standard: Bunk Beds)

# 1. Introduction

The Australian Competition and Consumer Commission (ACCC) has prepared this draft Regulation Impact Statement (RIS) as part of its review of the mandatory safety standard for bunk beds and elevated beds (collectively, 'bunk beds').<sup>1</sup>

The Australian Government requires every regulatory policy proposal to be accompanied by a RIS. The RIS process assesses the costs and benefits of policy options to ensure that any regulation adopted is of the greatest benefit to the community.

This draft RIS invites stakeholders to comment on a number of issues and options. Questions are included throughout the document and a compiled list is at section 7.

## 2. Background

### 2.1. Bunk beds in Australia

The use of bunk beds is common in Australia. Although not recommended for use by young children, a 2012 survey commissioned by the ACCC found that one in three Australian households with young children have a bunk bed. Of these, 49 per cent had used the upper bunk or elevated bed for sleeping children aged five or younger and 76 per cent had used a bunk bed for sleeping children aged eight and under.

The bunk bed market consists of Australian manufacturers and importers. The average price for bunk beds varies from \$200 to \$1,500. Families who purchase bunk beds tend to have less room, multiple children, or see bunk beds as a cost effective purchase. In addition to the retail market, bunk beds are also sold second hand, particularly online via trading and auction sites. Data collected by the ACCC in 2012 shows 18 per cent of households purchased an elevated bed second hand and 24 per cent of households purchased a bunk bed second hand.

### 2.2. Injuries and deaths involving bunk beds

Injury data obtained from Australia and overseas shows that falls remain the most common and significant mechanism of injury caused by bunk beds. Data obtained from the Victorian and Queensland Injury Surveillance Units indicate that injuries involving bunk beds most commonly occur to children under the age of six. See Appendix A for more detail and injury data.

There have been three deaths in Australia associated with the design of bunk beds. All of these deaths occurred in 2001 and 2002 prior to the introduction of the mandatory standard. Two children aged two died due to bunk beds not having guardrails on all sides, which resulted in the children becoming trapped between the wall and bed.<sup>2</sup> In the third incident, a ten year old died after falling from the top bunk and hitting her head. There was a coronial inquest into her death, which is discussed further in Appendix B.

### 2.3. The mandatory safety standard

In Australia, a mandatory safety standard applies to bunk beds, which are defined as:

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<sup>1</sup> Consumer Protection Notice No. 1 of 2003 - Consumer Product Safety Standard: Bunk Beds

<sup>2</sup> The ACCC has reviewed death data from the National Coronial Information System (NCIS) ([www.ncis.org.au](http://www.ncis.org.au))

- a set of components that are assembled or are ready for assembly into single beds or double/single combination beds which will be stacked one over the other; or
- any single bed, other than a hospital bed, where the upper surface of the mattress base is at least 800 mm above the floor surface.

The standard sets out minimum requirements for construction, design and labelling, specifically:

- effective guardrails to be provided on all sides of the upper bunk or elevated bed
- no hazardous/entrapment gaps or protrusions present in the bunk's design or construction
- markings in relation to supplier identification
- markings in relation to maximum mattress height.

The mandatory safety standard first came into effect in 2002 and was last updated in 2003.

## 2.4. The voluntary Australian standard

The mandatory safety standard references sections of the 1994 edition of the voluntary Australian standard for bunk beds (AS/NZS 4220:1994), which was last updated in 2010.

The mandatory safety standard only specifies those sections of the voluntary standard considered reasonably necessary to prevent injury. The voluntary standard is much more detailed in its requirements. Bunk beds that comply with the updated voluntary Australian standard are also likely to comply with the mandatory safety standard.

## 2.5. International standards

There are a number of different international standards for bunk beds. In accordance with the Australian Government objective to reduce duplicative regulation,<sup>3</sup> this review considers the adoption of the following voluntary international standards:

- ISO 9098:1994 (the ISO standard)
- ASTM F1427-13 (the ASTM standard)
- BS EN 747-2012 (the European standard)

These are discussed in more detail later in this draft RIS.

## 2.6. Compliance with the mandatory safety standard

A summary of the ACCC's surveillance, recalls and enforcement work in relation to bunk beds is set out below. This data indicates that the industry is generally compliant, suggesting that the mandatory safety standard is working reasonably well.

### 2.6.1. Market surveillance

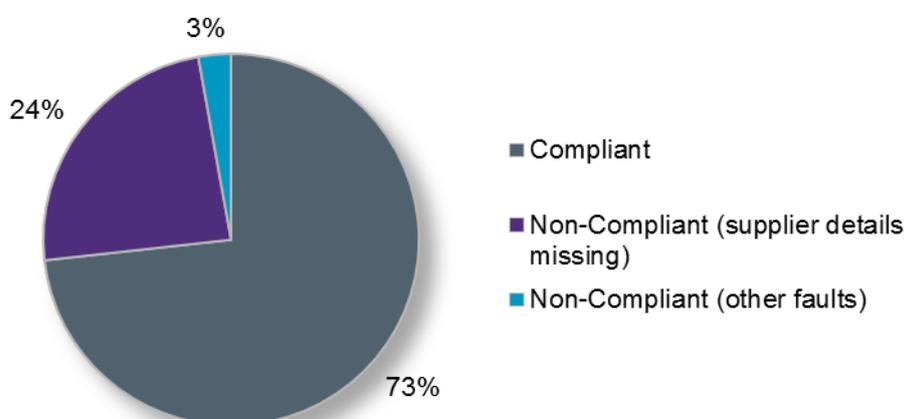
In 2013, the ACCC surveyed 71 bunk beds across 33 stores and found that 19 did not comply with the mandatory safety standard. Of these, 17 were missing supplier details and

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<sup>3</sup> Department of Prime Minister and Cabinet, *Industry Innovation and Competitiveness Agenda*, Department of Prime Minister and Cabinet, 2014, Canberra  
[https://www.dpmc.gov.au/sites/default/files/publications/industry\\_innovation\\_competitiveness\\_agenda.pdf](https://www.dpmc.gov.au/sites/default/files/publications/industry_innovation_competitiveness_agenda.pdf)

only two involved more serious non-compliance by not meeting the safety design requirements of the standard.

### Results of 2013 ACCC Bunk Beds Surveillance



### 2.6.2. Recalls

There have been 40 recalls of bunk beds from 22 separate suppliers (out of an estimated 75 suppliers in Australia) since 1998.<sup>4</sup> The table below shows that there have only been four recalls in the last three years.

<u>Year</u>	<u>Number of recalls</u>
2009	5
2010	2
2011	9
2012	5
2013	2
2014	1
<b>2015 (as of 30 June 2015)</b>	1

The reasons for recall actions include incomplete guardrails, potential protrusions and snag points, hazardous gaps and openings that have been too large, inadequate rail height, and a lack of mattress height markings and importers' identification.

### 2.6.3. Enforcement action

The ACCC has investigated the supply of several bunk beds as the result of surveillance and complaints since the introduction of the mandatory safety standard. These investigations have focused on a range of non-compliance issues including gaps in guardrails, protrusions

<sup>4</sup> For full details of recalls conducted since 1998 see [Product Safety Recalls Australia](#)

on corner posts, mattress supports not being secured or prone to collapse, entrapment hazards and roll out hazards. A table of enforcement action taken by the ACCC is set out in Appendix C.

### 3. The problem and the need for government action

The ACCC is reviewing the mandatory safety standard because:

- the bunk bed market and products have changed since the mandatory safety standard was introduced in 2002, and there are a number of emerging safety hazards
- the mandatory safety standard does not address these hazards since it is based on the 1994 version of the voluntary Australian standard (AS/NZS 4220:1994), which has been reviewed and updated several times, most recently in 2010
- the ACCC is considering whether trusted international standards could be used as the basis for safety requirements in Australia.

#### 3.1. Changes in the market

There have been a number of changes in the bunk bed market since the mandatory safety standard was introduced in 2002.

- Bunk bed designs now often include elements of play, study or storage. These are attractive to young children and encourage playing on or around bunk beds.
- Bunk beds now provide different methods of access, including access stairs that incorporate drawers underneath the steps.
- Elevated beds are now common.
- There has been an increase in the supply of elevated beds with a mattress height between 700mm and 800mm, meaning they do not fall within the scope of the mandatory safety standard.

#### 3.2. Emerging safety hazards

Market surveillance by the ACCC and information supplied by stakeholders have identified the following emerging safety hazards that are not addressed by the current mandatory safety standard:

- fall hazards, involving
  - elevated beds where the upper surface of the mattress is less than 800mm above the floor surface
  - mattress base supports
  - provision of access device
  - guardrail height
  - guardrail stability
  - number of access openings
- hazardous gaps and entrapment hazards

- age warnings.

The following table sets out whether/how each issue is dealt with under the mandatory safety standard, the updated voluntary Australian Standard and the relevant voluntary international standards. Each issue is discussed in more detail at 3.2.1 to 3.2.3 below.

Emerging safety hazard	Current mandatory safety standard	Updated voluntary Australian Standard	ISO standard	ASTM standard	European standard
Elevated beds where the upper surface of the mattress is less than 800mm above the floor surface	X	✓ 700mm (upper surface of mattress from the floor)	X	✓ 30 inches or 762mm (underside of foundations from the floor)	✓ 600mm (upper surface of mattress from the floor)
Mattress base supports	X	✓	✓	✓	✓
Provision of access device	X	✓	✓	✓	✓
Guardrail height	Must be ≥ 260mm above mattress base	Must be ≥ 360mm above mattress base	Must be ≥ 260mm above mattress base	Must be ≥ 130mm above the mattress surface	Must be ≥ 260mm above mattress base
Guardrail stability	X	✓	✓	✓	✓
Number of access openings	No maximum	Maximum of four	One only	One only	One only
Hazardous gaps and entrapment hazards	Several relevant provisions	One key provision	One key provision	Several relevant provisions	One key provision
Age warning	X	Children under nine	Children under six	Children under six	Children under six

### 3.2.1. Fall hazards

Australian injury data show that falls are the most common and significant mechanism of injury caused by bunk beds:

- In Victoria from 2006 to 2011, 87 per cent of bunk bed related emergency department presentations were caused by falls.
- In Queensland from 2004 to 2011, 76 per cent of bunk bed related emergency department presentations were caused by falls.

Further information on injuries is set out in Appendix A.

#### 3.2.1.1. *Elevated beds where the upper surface of the mattress is less than 800mm above the floor surface*

The mandatory safety standard applies to bunk beds where the upper surface of the mattress base is at least 800mm above the floor surface. This is consistent with the definition of bunk beds in the ISO standard.

However, there is an increased number of elevated beds in the market where the upper surface of the mattress base is 700mm high above the floor surface. Market surveillance by the ACCC and information supplied by stakeholders indicate that these beds generate similar fall hazards as bunk beds where the mattress base is at least 800mm above the floor surface.

In 2010, the voluntary Australian standard was updated to apply to bunk beds (a set of components that is or can be assembled as beds, one stacked over the other) or elevated beds (any elevated bed, other than a hospital bed, in which the upper surface of any mattress base is 700mm or higher above the floor surface).

The European standard has recently been updated to apply to bunk beds with an upper surface of the top bed base of 600mm or more and to high beds with a height to the upper surface of the bed base of 600mm.

The ASTM standard defines a bunk bed as any structure that includes at least one sleeping surface in which the underside of any of its foundations is over 30 inches (762 mm) from the floor (which would be no lower than 800mm from the upper surface of the mattress).

The mandatory safety standard does not address the fall hazard generated by elevated beds where the upper surface of the mattress base is 700mm above the floor surface.

#### **3.2.1.2. *Mattress base supports***

Poorly secured mattress supports (such as slats) that may be loose or may move to a point where they may collapse represent another form of fall hazard.

The updated voluntary Australian standard and the ISO, ASTM and European standards all contain requirements for testing mattress base supports, although the testing methods differ. The updated voluntary Australian standard explicitly states that the purpose of the requirement is to ensure that mattress supports cannot be slid or lifted out of place.

The only requirement for mattress base supports in the mandatory safety standard is a maximum allowable width between mattress base members of 100mm. However, this is intended to protect against entrapment or fall through, and does not go to the strength or integrity of mattress supports like the requirements in the updated voluntary Australian standard or the international standards mentioned above.

#### **3.2.1.3. *Provision of access device***

Access devices to bunk beds (such as ladders) allow children to safely exit and enter the upper bunk/elevated bed. Although most bunk beds are supplied with some kind of access device, those without one create a fall hazard. Children are still able to use the upper bunk but entering and exiting the bed can be unsafe, especially at night when a child is not fully alert. The lack of an access device may also encourage children to jump from the upper bunk.

The updated voluntary Australian standard and the ISO, ASTM and European standards all require the provision of an access device.

The mandatory safety standard does not require bunk beds to have a dedicated access device.

#### **3.2.1.4. *Guardrail height***

Standards require minimum heights for guardrails to manage the risk of falls from the upper bunk.

The mandatory safety standard states that the height of the side or end rails must be  $\geq$  260mm above the upper surface of the mattress base and that bunk beds must include a marking indicating maximum mattress height. This is consistent with the ISO and European standards.

However, the effective height of the guardrail can be compromised by the configuration of the guardrail and the thickness of the mattress used with the bunk bed. The approach taken in the mandatory safety standard relies on consumers seeing the marking indicating maximum mattress height and purchasing an appropriate mattress.

The updated voluntary Australian standard addresses this issue by stating that the height of the side or end rails must be  $\geq$  360mm above the upper surface of the mattress base.

The ASTM standard requires a manufacturer to specify the thickness of the mattress to be used with the bunk bed and the guardrail (long sides) must be 130mm above this height along its entire length. The ASTM standard does not require a mattress height marking but a permanent label to be affixed inside the bunk advising of the maximum mattress thickness.

### **3.2.1.5. *Guardrail stability***

Unstable guardrails are another source of fall hazard.

The updated voluntary Australian standard includes requirements for both static load and impact load tests for guardrails. Detachable guardrails are allowed under this standard provided they cannot be removed by a  $\leq$  500N force. The ISO, ASTM and European standards all include requirements to test the stability and durability of guardrails to ensure they remain in place under actual use conditions.

The mandatory safety standard does not include requirements for testing guardrail stability. Like the updated voluntary Australian standard, it allows for detachable guardrails but has a less stringent requirement that they must not be able to be removed by a  $\leq$ 100N force.

### **3.2.1.6. *Number of access openings***

Some bunk beds surveyed by the ACCC have as many as six access openings in the upper bunk guardrails (two on each side and one at each end). This number of openings may affect the structural integrity of the guard rails and create a fall hazard.

The ISO, ASTM and European standards allow for a single access opening on the upper bunk. Only the updated voluntary Australian standard allows for the provision of more than one access opening (a total of four are permitted).

The mandatory safety standard does not require access openings on the upper bunk and also does not set a maximum number of access openings.

## **3.2.2. Hazardous gaps and entrapment hazards**

Gaps in bunk beds are subject to standards because “hazardous” gaps of a particular size can trap necks, limbs or bodies. In the United States between 1990 and 1995, 26 children died after their body slipped through the gap in the upper guardrail and their head became trapped.<sup>5</sup> The incidence of injuries of this type appears to have decreased over time as jurisdictions have introduced standards including requirements which specifically address this hazard.

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<sup>5</sup> ACCC, *Regulation Impact Statement Trade Practices Act 1974 Consumer Product Safety Standard for Bunk Beds*, ACCC, Canberra, 2001, <https://www.productsafety.gov.au/content/index.phtml/itemId/974893>

However, feedback from stakeholders indicates that the requirements of the mandatory safety standard in relation to hazardous gaps are unclear. The requirements are set out in three separate provisions dealing with safety barriers (clause 6.4.2(f)), large gaps (clause 6.4.3) and the entrapment hazard in general (clause 7.1).

Stakeholders suggest that this lack of clarity leads to uncertainty when testing bunk beds for compliance with the mandatory safety standard. For example, depending on the height and design of the guardrails on a bunk bed and the thickness of the mattress actually used, the gaps that may be present in the guardrail and the effective height of the guardrail itself may vary considerably.

In 2010, the updated voluntary Australian standard was amended to make the requirements for hazardous gaps much clearer. The standard now states that gaps on guardrails must not exceed 95mm (clause 5.7.2(d)) and sets out testing requirements.

Similarly, the ISO and European standards detail specifications for acceptable gaps and associated testing requirements. The European Standard also has a specific test for head entrapment that applies to opening at least 600mm from the floor. The ASTM standard is less detailed on this issue than the other two international standards.

Simplifying the requirements of the mandatory safety standard regarding hazardous gaps may make it easier for bunk bed suppliers to comply.

### **3.2.3. Age warning**

Injury data from Australia and overseas demonstrate that bunk bed injuries most commonly occur in children under the age of six (see Appendix A). The Queensland Coroner and the Queensland Injury Surveillance Unit recommend that children under the age of 14 should be discouraged from using the upper bunk/elevated bed (see Appendix B).

There are different requirements in the various standards in relation to warnings on products about the appropriate age at which a child uses a bunk bed.

The updated voluntary Australian standard requires bunk beds to have a warning stating that bunk beds are not recommended for children under the age of nine. This standard also requires the inclusion of the following information in the information leaflet:

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**The risk of injury or death from a fall from an elevated bed compared to a non-elevated bed is:**

**10x greater for 7-8 years old**

**7x greater for 9-10 years old**

**3x greater for 11-12 years old**

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The ISO, ASTM and European standards all require bunk beds to be supplied with a warning stating that they are not suitable for children under six years of age.

The mandatory safety standard does not require any warning about safe use ages.

The ACCC notes that AS/NZS 4220:1994 (which is referenced in the mandatory safety standard) required bunk beds to have a warning that children less than 12 years should not use the upper bunk. However, this section was not made mandatory.

### **Emerging safety hazards – questions**

1. Do you consider that the issues identified in 3.2.1 to 3.2.3 represent emerging safety hazards in relation to bunk beds?
2. Are there any other safety hazards that need to be addressed by the mandatory safety standard?

### **3.3. Adopting trusted international standards**

As noted earlier, this review considers adopting the following voluntary international standards in relation to the supply of bunk beds in Australia:

- ISO 9098:1994 (the ISO standard)
- ASTM F1427-13 (the ASTM standard)
- BS EN 747-2012 (the European standard)

The ACCC notes that there is also a Japanese standard (JIS 1104:2004) and a mandatory standard developed by the Consumer Product Safety Commission (CPSC) in the US (16 CFR Parts 1213 and 1513).<sup>6</sup> However, the Japanese standard does not require guardrails on all sides of the bed. The CPSC standard does not require a test for mattress base supports, has no requirements for access devices or access openings and no test for guardrail stability. As these standards do not address some of the key emerging safety hazards identified in the Australian market, they have not been assessed further.

The ACCC uses the following criteria when assessing whether international standards are appropriate for use in product safety standards in Australia:<sup>7</sup>

- Addressing safety concerns: Is there evidence that the international standard provides an acceptable level of consumer safety?
- Comparable jurisdiction to Australia: Is the international standard published or developed by a legitimate standards body or government agency from an economy or nation with comparable economic and regulatory processes to Australia?
- Applicability to the Australian context: Is the international standard applicable and sufficient in the Australian context?

The ACCC has assessed the ISO, ASTM and European standards against these criteria below.

#### **3.3.1. The ISO standard**

##### ***Addressing safety concerns***

The ISO standard specifies safety requirements for domestic bunk beds intended to minimise risk to children, and sets out test methods.

The requirements of the ISO standard address several of the emerging safety hazards outlined above. However, like the mandatory safety standard, the ISO standard does not

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<sup>6</sup> The CPSC estimates that at least 90 per cent of bunk beds in the United States conform to the voluntary standard – Consumer Product Safety Commission, Briefing Package: Petition CP 10-2 & HP 10-1, Petition for Change to the Bunk Bed Standard, and Petition CP 03-1 & HP 03-1, Petition Requesting Standard for Bunk Bed Corner posts, 13 May 2015, <https://www.cpsc.gov/Global/Newsroom/FOIA/CommissionBriefingPackages/2015/Petition-for-Change-to-Bunk-Bed-Standard-and-Petition-Requesting-Standard-for-Bunk-Bed-Cornerposts.pdf>, p. 9.

<sup>7</sup> ACCC, International standards for the safety of consumer products - criteria for acceptance, ACCC policy principles, 22 July 2015, <https://www.productsafety.gov.au/content/index.phtml/itemId/1014180>

apply to elevated beds under 800mm and only requires guardrails to be 260mm (compared to the 360mm specified by the updated voluntary Australian standard).

The ACCC considers that the ISO standard provides an acceptable level of safety for consumers.

### ***Comparable jurisdiction to Australia***

International Organisation for Standardisation (ISO) is an independent, non-governmental membership organisation and the world's largest developer of voluntary international standards.

### ***Applicability to Australia***

There is no specific Australian context that precludes the ISO standard.

### ***Assessment***

The ACCC considers that the ISO standard is suitable to be included in a policy option allowing compliance with trusted international standards.

## **3.3.2. The ASTM standard**

### ***Addressing safety concerns***

The ASTM standard establishes minimum requirements for the design and performance of bunk beds, and requirements for labelling and instructional material.

The ASTM standard differs from all the other standards in that it:

- defines a bunk bed as any structure that includes at least one sleeping surface in which the underside of any of its foundations is over 30 inches (762 mm) from the floor
- specifies that guardrails must be  $\geq 130\text{mm}$  above the mattress surface, compared to  $\geq 260\text{ mm}$  above the mattress base in the case of the European and ISO standards and the mandatory safety standard, and  $\geq 360\text{mm}$  above the mattress base in the case of the new voluntary Australian standard
- does not specifically deal with entrapment hazards like other standards. Instead, the construction requirements for each part of the bunk bed have requirements regarding gaps.

While these requirements differ from other standards, they are still intended to deal with several of the potential safety hazards identified above. On this basis, the ACCC considers that the ASTM standard provides an acceptable level of safety for consumers.

### ***Comparable jurisdiction to Australia***

ASTM International, formerly known as the American Society for Testing and Materials (ASTM), is located in the United States. The standards they produce are international.

### ***Applicability to Australia***

There is no specific Australian context that precludes the ASTM standard.

## ***Assessment***

The ACCC considers that the ASTM standard is suitable to be included in a policy option allowing compliance with trusted international standards.

### **3.3.3. The European standard**

#### ***Addressing safety concerns***

The European standard specifies requirements for the safety, strength and durability of bunk beds and high beds for domestic and non-domestic use. The dimensional requirements are intended to minimise the risk of accidents, particularly to children.

The requirements of the European standard address many of the emerging safety hazards outlined above. However, like the mandatory safety standard, the European standard only requires guardrails to be 260mm (compared to the 360mm specified by the updated voluntary Australian standard).

The ACCC considers that the European standard provides an acceptable level of safety for consumers.

#### ***Comparable jurisdiction to Australia***

The European standard was developed by the European Committee for Standardization (CEN, French: Comité Européen de Normalisation). CEN is a not for profit standards organisation which develops standards for use in Europe.

#### ***Applicability to Australia***

There is no specific Australian context that precludes the European standard.

## ***Assessment***

The ACCC considers that the European standard is suitable to be included in a policy option allowing compliance with trusted international standards.

### **International standards – question**

3. Do you agree with the ACCC's assessment of international standards relating to bunk beds?

## **4. Policy options**

The ACCC is considering four policy options for dealing with the current mandatory safety standard:

- Option 1 Keep the current mandatory safety standard (status quo).
- Option 2 Revoke the mandatory safety standard.
- Option 3 Amend the mandatory safety standard by adopting sections of the updated voluntary Australian standard.
- Option 4 Amend the mandatory safety standard by allowing compliance with either the updated voluntary Australian standard or trusted international standards.

## 4.1. Option 1 – Keep the current mandatory safety standard (status quo)

### Description

The mandatory safety standard would be retained and would continue to include certain sections of the 1994 version of the voluntary Australian standard.

### Benefits

There would be no increase in costs to business.

Consumers would be offered the same level of protection they have now.

The mandatory safety standard has been in operation for a number of years and remains reasonably effective in controlling the issues which it was designed to address. The available data indicate that injuries have decreased in the period since the introduction of the mandatory safety standard, the number of safety recalls has decreased and there have been no deaths associated with design features.

### Impact

Keeping the current mandatory safety standard would mean that the emerging safety hazards identified earlier in this draft RIS are not addressed:

- fall hazards, involving
  - elevated beds where the upper surface of the mattress is less than 800mm above the floor surface mattress base supports
  - provision of access device
  - guardrail height
  - guardrail stability
  - number of access openings
- hazardous gaps and entrapment hazards
- age warnings.

Businesses who import bunk beds are required to retest them against the Australian standard although they may already be safe.

### Net benefit

The net benefits of the other policy options have been assessed against the status quo of keeping the mandatory safety standard.

## 4.2. Option 2 – Revoke the mandatory safety standard

### Description

If the mandatory safety standard were revoked, suppliers would be required to comply with the general provisions of the Australia Consumer Law. The Australian Consumer Law provides consumers with consumer guarantees, one of which requires goods to be of acceptable quality. Additionally, there are general product safety provisions that apply to all

general consumer goods. The product liability scheme and consumer guarantees provide suppliers with an incentive to ensure that their goods are safe.

Most consumer goods in Australia are not regulated by mandatory safety standards and are governed by the general principles in the Australian Consumer Law. The ACCC would still be able to take action regarding safety issues if needed, for example, through compulsory recalls.

### **Benefits**

Deregulation would allow businesses to import products to Australia from overseas without needing to meet a specific standard. Importers to Australia would be able to sell bunk beds which meet trusted international standards and the general product safety provisions of the Australian Consumer Law would apply. As discussed earlier, the ACCC considers that the ISO, ASTM and European standards provide an acceptable level of safety for consumers.

In the annual regulatory costs table outlined below it is assumed that 70 per cent of businesses would continue to test their products.

### **Impact**

Deregulation does present some risks.

The general provisions in the Australian Consumer Law may not provide sufficient incentives and revoking the mandatory safety standard may lead to unsafe bunk beds being imported and sold in Australia.

Businesses would be able to supply bunk beds that comply with certain international standards even where the requirements of those standards do not offer an acceptable level of safety for Australian consumers.

There is a risk that without regulation, business standards may decrease over time. Some businesses may choose to supply bunk beds which do not meet any safety standard. The costs of manufacture are likely to be lower for companies supplying non-compliant products and this may create pressure on other businesses to lower costs. This could result in bunk beds being sold without adequate guardrails or entrapment hazards, resulting in an overall lower level of safety. Historically this has resulted in both injury and death in Australia and overseas.

While current consumer expectations may be sufficient to ensure the market does not entirely revert to the situation that existed prior to the introduction of the mandatory safety standard, it is likely that injuries would increase. The ACCC has compared injury data from before and after the introduction of the mandatory standard and estimates the increased cost of injury to be around \$8 million.<sup>8</sup>

There is also a risk that consumers would be unable to identify potential hazards. While the lack of guardrails may seem obviously dangerous, hazardous gaps are less obvious. This may result in a loss of consumer confidence in the product.

### **Net benefit**

The ACCC estimates that Option 2 is likely to result in a saving to businesses (in average annual regulatory costs) of around \$200,000.

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<sup>8</sup> The cost per injury was calculated using the Office of Best Practice Regulation Guidance Note on the Value of Statistical Life: [https://www.dpmc.gov.au/sites/default/files/publications/Value\\_of\\_Statistical\\_Life\\_guidance\\_note.pdf](https://www.dpmc.gov.au/sites/default/files/publications/Value_of_Statistical_Life_guidance_note.pdf). See Appendix D for more detail.

This result has been calculated on the assumption that, in the absence of regulation, only 70 per cent of businesses would choose to undertake testing of their products. It has further been assumed that those businesses would choose to test their products for compliance with an international standard since the cost of such tests are, on average, around \$900 cheaper than equivalent tests for compliance with the updated voluntary Australian standard.

As noted above, the ACCC estimates an increased cost of injury of approximately \$8 million.

Further detail on the costs and assumptions underpinning these estimates is set out in Appendix E.

<b>Average annual regulatory costs (from business as usual)</b>				
Change in costs (\$ million)	Business	Community organisations	Individuals	Total change in costs
Total, by sector	-\$0.2	\$0	\$0	-\$0.2
<b>Cost offset (\$ million)</b>				
Agency	Business	Community organisations	Individuals	Total, by source
Agency	\$0	\$0	\$0	\$0
Are all new costs offset?				
<input type="checkbox"/> Yes, costs are offset <input type="checkbox"/> No, costs are not offset <input checked="" type="checkbox"/> Deregulatory—no offsets required				
Total (Change in costs – Cost offset) (\$ million) = -\$0.2				

### 4.3. Option 3 – Amend the mandatory safety standard by adopting sections of the updated voluntary Australian standard

#### Description

The mandatory safety standard would be retained but would be updated to include certain sections of the updated voluntary Australian standard.

#### Benefits

The updated voluntary Australian standard was developed specifically in the Australian context and would address the emerging safety hazards outlined earlier in this draft RIS.

It ensures that consumers are offered a very high level of protection.

The voluntary standard and mandatory safety standard would be realigned, making compliance for business easier.

#### Impact

Adopting sections of the new voluntary standard means that importers to Australia will need to ensure their product complies solely with an Australian standard as international

standards will not be recognised. This is the situation in Australia currently and the ACCC assesses compliance with the currently mandatory safety standard as moderate.

The costs of testing are higher than the costs of testing to the mandatory safety standard, although these may decrease over time if the volume of the product tested increases.

### Net benefit

The ACCC estimates that Option 3 is likely to result in an aggregated cost to industry (in average annual regulatory costs) of around \$200,000, which reflects the increased cost of testing for compliance with the updated voluntary Australian standard.

Further detail on the costs and assumptions underpinning these estimates is set out in Appendix E.

<b>Average annual regulatory costs (from business as usual)</b>				
Change in costs (\$ million)	Business	Community organisations	Individuals	Total change in costs
Total, by sector	\$ .2	\$ 0	\$ 0	\$ .2
Cost offset (\$ million)	Business	Community organisations	Individuals	Total, by source
Agency	\$ 0	\$ 0	\$ 0	\$ 0
Are all new costs offset?				
<input type="checkbox"/> Yes, costs are offset <input checked="" type="checkbox"/> No, costs are not offset <input type="checkbox"/> Deregulatory—no offsets required				
Total (Change in costs – Cost offset) (\$ million) = \$.2				

#### 4.4. Option 4 – Amend the mandatory safety standard by allowing compliance with either the updated voluntary Australian standard or trusted international standards.

### Description

The mandatory safety standard would be retained and amended so that businesses would be allowed to comply with the updated voluntary Australian standard or the ISO, ASTM or European standards.

### Benefits

Under this option, suppliers would be able to test their products for compliance with trusted international standards. In general, this testing is less expensive than testing for compliance with Australian standards. This cost saving may be passed on in the form of cheaper bunk beds that still provide an acceptable level of safety for consumers.

Additionally, as the bunk bed market is largely made up of importers, allowing suppliers the ability to source and sell bunk beds that comply with trusted international standards will offer consumers a greater level of choice.

### Impact

The requirements of the different standards are not exactly the same. This may result in some bunk beds meeting fewer safety requirements than others.

### Net benefit

The ACCC estimates that Option 4 is likely to result in a saving to businesses (in average annual regulatory costs) of around \$100,000. The assumption is that all suppliers will test to a standard. The estimated saving is based on the average difference in cost between testing to the mandatory safety standard and to an international standard.

Further detail on the costs and assumptions underpinning these estimates is set out in Appendix E.

Average annual regulatory costs (from business as usual)				
Change in costs (\$ million)	Business	Community organisations	Individuals	Total change in costs
Total, by sector	-\$ .1)	\$ 0	\$ 0	-\$ .1)
Cost offset (\$ million)	Business	Community organisations	Individuals	Total, by source
Agency	\$ 0	\$ 0	\$ 0	\$ 0
Are all new costs offset?				
<input type="checkbox"/> Yes, costs are offset <input type="checkbox"/> No, costs are not offset <input checked="" type="checkbox"/> Deregulatory—no offsets required				
Total (Change in costs – Cost offset) (\$ million) = -(\$ .1)				

### Policy options – questions

4. Which policy option do you support?
5. Are there any other policy options that the ACCC should consider?
6. Do you agree with the ACCC estimates of costs set out in Appendix E? Are there additional costs for your business that have not been included?

## 5. Implementation and evaluation

The ACCC will consider implementation and evaluation of the preferred option after the completion of the consultation.

## 6. Consultation

The ACCC invites stakeholders and interested parties to make submissions on this draft RIS.

The ACCC will publish the consultation online on the ACCC consultation hub, the Product Safety Australia website, [business.gov.au](http://business.gov.au) and will also send details of the consultation directly to consumer groups, industry associations and bunk bed retailers and manufacturers.

The ACCC previously consulted on changes to the mandatory safety standard in 2014. The ACCC is consulting again because government policy now requires regulators to consider adopting trusted international standards. In 2014 the consultation was on updating the mandatory safety standard for bunk beds to reference sections of the 2010 voluntary Australian standard. Most responses received were supportive of updating the standard. One supplier noted that retesting bunk beds would be a high cost to manufacturers. These concerns could be addressed by having transition arrangements in place.

If you responded to the 2014 consultation your feedback has been noted and will be taken into account. You are also invited to give feedback on this consultation if you have additional comments that the ACCC should consider.

Consultation is open from 29 February 2016 to 11 April 2016. The ACCC prefers submissions to be provided via the [ACCC consultation hub](#).

Alternatively, stakeholder and interested parties can email submissions to [productsafety.regulation@acc.gov.au](mailto:productsafety.regulation@acc.gov.au)

Submissions can also be made via post to:

Director  
Standards, Policy and Liaison  
Product Safety Branch  
Australian Competition and Consumer Commission  
GPO Box 3131  
CANBERRA ACT 2601

## 7. Consultation questions

### **Emerging safety hazards**

1. Do you agree that the issues identified in 3.2.1 to 3.2.3 represent emerging safety hazards in relation to bunk beds?
2. Are there any other safety hazards that need to be addressed by the mandatory safety standard?

### **International standards**

3. Do you agree with the ACCC's assessment of international standards relating to bunk beds?

### **Policy options**

4. Which policy option do you support?
5. Are there any other policy options that the ACCC should consider?
6. Do you agree with the ACCC estimates of costs set out in Appendix E? Are there additional costs for your business that have not been included?

## **General**

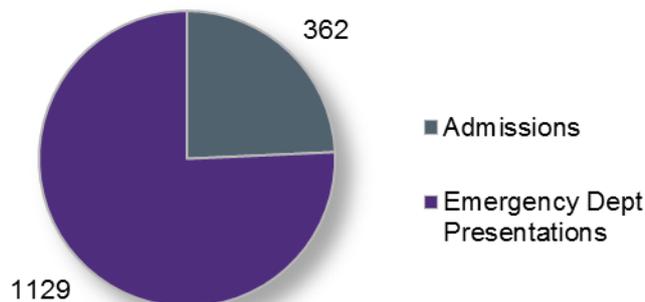
7. Do you have any other comments?

## Appendix A - Injury data

### Victoria

Injury data obtained from the Victorian Injury Surveillance Unit (VISU) shows that in the period from July 2006 to June 2011, there were 1491 bunk bed related presentations to Victorian hospitals. Of that, 392 were admissions to hospitals and 1129 were emergency department presentations.

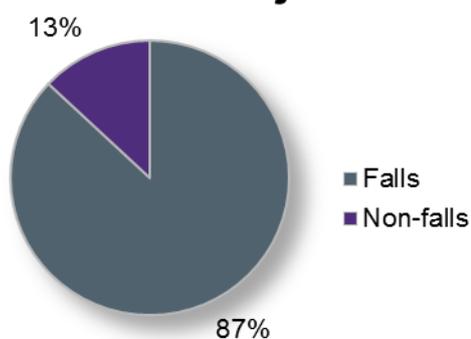
### Bunk Bed Injuries Victoria 2006-2011



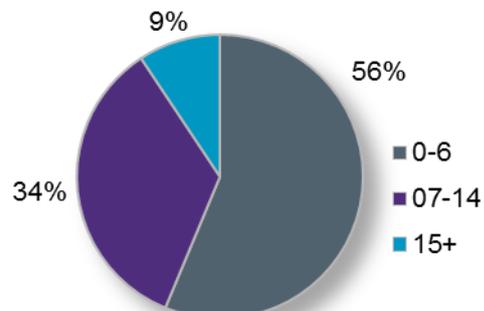
The data of emergency department presentation was analysed further to look at the cause of injuries and the age of patients. Of the presentations to emergency departments:

- 87% of injuries were caused by falls
- 56% of patients were aged zero to six
- 34% of patients were aged seven to 14
- 9% of patients were aged 15 or older

### Mechanism of bunk bed injuries



### Age range of bunk bed injuries



Only 106 (8%) of the cases with injury narrative mentioned if the child was playing or sleeping. Of those cases 61% were playing and 39% were sleeping or resting when they were injured. Younger children were more likely to be playing at the time of the injury: 76% of 0-4 year olds were playing at the time of the injury compared with 55% and 56% of 5-9 year olds and 10-14 year olds respectively.<sup>9</sup>

## Queensland

The 2013 report *Consumer product related injuries in Queensland children*<sup>10</sup> includes a section on bunk bed injuries. Key findings data is summarised below, further information is available in the report.

Between 2004 and 2011, there were 1564 bunk bed related presentations to emergency departments. The median age of injury for emergency department presentations was five years old. The most common type of injury was superficial contusions (30.9%), followed by fracture (25.8%) and open wound (23.6%).

Data from emergency departments from 2004-2011 indicate that the cause of injuries was:

- falls (76%)
- hit by ceiling fan (14%)
- striking against bunk bed (5%)
- jumping from bunk bed (3%)
- pushed from bunk bed (1%)
- crushed by a person jumping from bunk bed (1%)
- other (1%)

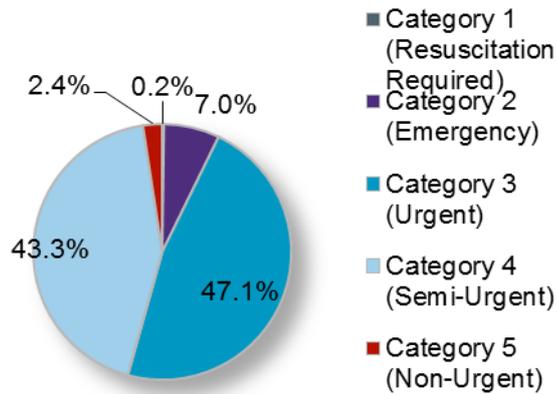
Of the presentations, nearly 15% of patients were admitted to hospital, which is 1.3 times higher than the average hospital admission rate. In triage, nearly half of patients presenting with bunk bed injuries were categorised as

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<sup>9</sup> Victorian Injury Surveillance Unit, *Hazard*, edition 75, 2013, Victoria, <http://www.monash.edu.au/miri/research/research-areas/home-sport-and-leisure-safety/visu/hazard/haz75.pdf>

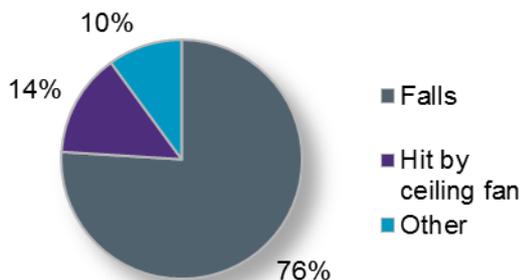
<sup>10</sup> McKenzie, et al. *Consumer product related injuries in Queensland children*, The Centre for Accident Research and Road Safety—Queensland, 2013, Queensland, [http://eprints.qut.edu.au/58389/5/Product\\_safety\\_snapshot\\_report.pdf](http://eprints.qut.edu.au/58389/5/Product_safety_snapshot_report.pdf)

## Bunk bed injuries triage categories



urgent.

## Cause of bunk bed injuries



### United States

There have been studies on injuries in the United States that support ongoing regulation of bunk beds. Prior to the introduction of the mandatory safety standard for bunk beds in the United States in 1999, 57 children under the age of 15 had died when they were trapped between the upper bunk of a bunk bed and the wall or when they were trapped in openings in the bed's structure.<sup>11</sup> Over 96% of those who died in entrapment incidents were aged 3 or younger.

Research completed in the United States<sup>12</sup> found that from 2001 to 2004 an estimated 27,504 children aged zero to nine were treated in emergency departments annually for bunk bed related injuries. Of that

<sup>11</sup> Requirements for Bunk Beds, 16 CFR 2.1513 (1999)

<sup>12</sup> Karin A Mack, Julie Gilchrist, Michael F Ballesteros, "Bunk bed-related injuries sustained by young children treated in emergency departments in the United States, 2001–2004, National Electronic Injury Surveillance System – All Injury Program", *Injury Prevention*, vol. 13, 2007, pp. 137-140.

- 23,080 (83.9%) were treated for fall related injuries
- an estimated 14,600 were children under six years (53%)
- 3.2% were hospitalised
- the injuries sustained were largely fractures, lacerations, contusions and abrasions, and internal injuries, with 25.2% injured in a fall from the top bunk
- the most commonly injured body region was the head and neck.

Further detailed US research published in 2008<sup>13</sup> reviewed injury data from 1990 to 2005 and found that:

- the mean age for patients was 6.8 years;
- the numbers of injuries sustained were highest for the 3-5 year old age group; almost half the children injured (49.6%) were younger than 6 years old;
- falls were the most common mechanism of injury (72.5%);
- the head, neck and facial areas were the most frequently injured body parts (53.3%).

This study also indicates that it would have underestimated the total number of bunk bed related injuries, as only injuries to patients treated in emergency departments were included in these results, rather than presentations to GPs, or incidents not requiring further action.

The authors noted that although injuries directly related to fundamental design faults with the product are likely to have reduced due to regulation, further regulatory focus on construction issues and ongoing attention to safe use by consumers is required to ensure that the incidence of injury is minimised.

As falls from bunks remain the most significant mechanism of injury and are largely behavioural in nature, there are limits on the response that can be made in a regulatory sense based on product design. Nonetheless, enhancing the structural integrity of bunks, capturing elevated beds as bunks and providing safe use guidance can contribute to a safer outcome.

## Appendix B – 2008 Queensland Coronial Inquest

In 2008, a coronial inquest was held following the death of a ten year old that occurred in 2002. The child fell out of the top bunk, which did not have guardrails, and hit her head on the floor. In addition to the coronial inquest, the Queensland Ombudsman and Queensland Injury Surveillance Unit (QISU) also considered the matter. This death occurred prior to the introduction of the mandatory safety standard for bunk beds.

During the inquest, the coroner made a number of recommendations<sup>14</sup>, including some directed to the Queensland Office of Fair Trading pertaining to the bunk bed standard. These include:

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<sup>13</sup> D'Souza, et al, "Bunk Bed-Related Injuries Among Children and Adolescents Treated in Emergency Departments in the United States, 1990-2005", *Pediatrics*, Vol. 121 No. 6, 2008, pp. 1696-1702.

<sup>14</sup> Queensland Coroner, *Inquest into the death of Elise Susannah Neville*, 2008, [http://www.courts.qld.gov.au/\\_data/assets/pdf\\_file/0003/105276/cif-neville-20080912.pdf](http://www.courts.qld.gov.au/_data/assets/pdf_file/0003/105276/cif-neville-20080912.pdf)

- the warning label on bunk beds be reviewed with consideration that if there is a label for bunk beds it should not be age specific or at the very least increase the age categories for the warning up to age of 14
- consideration should be given to government funded programs to remove bunks that may not meet the standard from private residences
- bunk beds used in governmental establishments should be made to comply with the Standard and that it should eventually be applied to the commercial environment.
- The OFT conduct an awareness campaign directed towards the domestic market regarding the dangers of non-compliant beds.

The Queensland Ombudsman also investigated and made a number of recommendations to the Queensland Office of Fair Trading<sup>15</sup>, including the development of a RIS examining the costs and benefits of a regulation requiring all commercial suppliers of accommodation utilising bunk beds to ensure that the bunk beds comply with the mandatory safety standard.

In 2008, after the coronial inquest was held, QISU released an injury bulletin on bunk beds.<sup>16</sup> QISU agreed with the recommendations of the coroner and made some additional comments:

- that the current mandatory safety standard be brought in line with the Australian standard (at that time the 2003 edition of the AS/NZS 4220)
- accommodation providers be informed of the inherent risk associated with bunk bed use
- that a voluntary process be developed to remove unsafe bunk beds from private homes and rental/accommodation settings
- that community safety programmes be developed and evaluated to promote awareness of bunk bed hazards
- they also recommended that bunk beds should not promote a play area in the top bunk (such as a fort).

As a result, the Queensland Office of Fair Trading brought in new regulation<sup>17</sup>, which came into effect on 21 October 2013. The regulation requires those who offer short-term accommodation (period of 60 days or less) ensure their bunk beds meet mandatory safety standards, regardless of when the bunk bed was purchased. These regulations only apply in Queensland.

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<sup>15</sup> Queensland Ombudsman, *The Neville Report*, Queensland Ombudsman, Brisbane, 2006, <http://www.ombudsman.qld.gov.au/Mediaandreports/InvestigativeReports/TheNevilleReportandNevilleReportUpdate/tabid/421/Default.aspx>

<sup>16</sup> Barker, et al, *Injuries Related to Bunk Bed use in Queensland*, Queensland Injury Surveillance Unit, No 108, September 2008, [http://www.qisu.org.au/ModCoreFilesUploaded/Bulletin\\_10387.pdf](http://www.qisu.org.au/ModCoreFilesUploaded/Bulletin_10387.pdf)

<sup>17</sup> *Fair Trading (Safety Standards) Regulation 2011 (Qld)*

## Appendix C - ACCC enforcement action

<b>Business</b>	<b>Issues</b>	<b>Date</b>	<b>Media release</b>
<b>ANE Furniture Ltd</b>	Entrapment and snagging hazards, fall through hazards	July 2010	<a href="#">ANE Furniture Pty Ltd</a>
<b>Linksea Pty Ltd</b>	Entrapment hazards and potential roll out hazard with inadequate guard rail protection	February 2010	<a href="#">Bunk bed importer improves quality control after safety standard breach</a>
<b>Sleep City Holdings</b>	Entrapment and fall through hazards, lack of maximum mattress height warning and supplier identification	November 2008	<a href="#">Bed retailers recall unsafe bunks after court enforceable undertaking</a>
<b>Fantastic Furniture Pty Ltd</b>	Fall out and entrapment hazards, lack of maximum mattress height warning and supplier identification	November 2008	<a href="#">Bed retailers recall unsafe bunks after court enforceable undertaking</a>
<b>Living Momentum Pty Ltd</b>	Corner post protrusions, entrapment gaps, lack of maximum mattress height warning and supplier identification	July 2008	<a href="#">Living Momentum Pty Ltd</a>
<b>Australian Discount Retail Pty Ltd</b>	Size of access opening, lack of maximum mattress height warning, corner post protrusions	March 2008	<a href="#">Non-compliant bunks and toys removed from market</a>
<b>Eternal Design Pty Ltd</b>	Entrapment and fall through hazards	January 2007	<a href="#">Unsafe 'bus' bunk beds recalled after court enforceable undertaking</a>
<b>Furniture Galore Pty Ltd</b>	Entrapment and fall out hazards	January 2007	<a href="#">Unsafe 'bus' bunk beds recalled after court enforceable undertaking</a>

## Appendix D - Estimated cost of increased injuries

The increased injury costs are based on the *Best Practice Regulation Guidance Note: Value of Statistical Life* produced by the Office of Best Practice Regulation (OBPR).

Data was gathered from injuries that were reported to the South Brisbane hospital in 1995, servicing a population of roughly 600,000. The incidence of injury was 0.0183%. This was compared to data gathered in Queensland from 2013 and Victoria in 2011 where the incidence of injury was 0.0054% and 0.0043% respectively. The types of injuries in the 2013 and 2011 data were given a monetary value based on the Australian Institute of Health and Welfare *Burden of Disease*<sup>18</sup> as per OBPR guidance.

An assumption was made that two thirds of the previous injuries would not happen, as it was assumed that two thirds of suppliers would choose to comply with a safety standard that would prevent injuries.

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<sup>18</sup> Mathers, et al, *The Burden of Disease and Injury in Australia*, Australian Institute of Health and Welfare: Canberra, 1999.

## Appendix E - Estimated costs for business

	Mandatory safety standard	Updated voluntary Australian standard	ISO standard	European standard	ASTM standard
Total manufacturers and importers <sup>a</sup>	75	75	75	75	75
Average styles per supplier <sup>b</sup>	4	4	4	4	4
Tests per style	1	1	1	1	1
Labour hours per test <sup>c</sup>	6	6	6	6	6
Labour hourly rate <sup>d</sup>	\$59.85	\$59.85	\$59.85	\$59.85	\$59.85
Total admin costs per test <sup>e</sup>	\$359	\$359	\$359	\$359	\$359
Total admin cost per business <sup>f</sup>	<b>\$1,436</b>	<b>\$1,436</b>	<b>\$1,436</b>	<b>\$1,436</b>	<b>\$1,436</b>
Total admin cost industry <sup>g</sup>	<b>\$107,730</b>	<b>\$107,730</b>	<b>\$107,730</b>	<b>\$107,730</b>	<b>\$107,730</b>
Cost per test <sup>h</sup>	\$1,358	\$1,970	\$1,040	\$1,277	\$910
Total test costs per business <sup>i</sup>	\$5,431	\$7,881	\$4,160	\$5,106	\$3,640
Total test costs per industry <sup>j</sup>	\$407,300	\$591,060	\$312,000	\$382,980	\$273,000
Total cost per industry <sup>k</sup>	<b>\$515,030</b>	<b>\$ 698,790</b>	<b>\$419,730</b>	<b>\$490,710</b>	<b>\$380,730</b>
Difference to mandatory standard <sup>l</sup>		\$183,760	-\$95,300	-\$24,320	-\$134,300

### Assumptions

<sup>a</sup> The total number of manufacturers and importers has been estimated by taking the number of bunk beds manufacturers certified with Furntech (55) and assuming there are another 20 bunk bed suppliers without certification.

<sup>b</sup> Average styles per supplier is based on the average number of styles supplied by each bunk bed business certified with Furntech.

<sup>c</sup> Labour costs per test is based on information provided by bunk bed suppliers.

<sup>d</sup> Labour hourly rate is as per OBPR guidance note.

<sup>e</sup> Admin costs have been calculated as (hours of labour per test \* hourly labour rate)

<sup>f</sup> Admin costs per businesses have been calculated as (admin costs \* number of tests)

<sup>g</sup> Total admin cost for the industry has been calculated as (admin cost per business \* estimated number of manufacturers and importers)

<sup>h</sup> Cost per test is based on information supplied by testing houses

<sup>i</sup> Total test costs per business have been calculated as (cost of test \* number of tests required)

<sup>j</sup> Total test costs to industry have been calculated as (total cost to business \* estimated number of manufacturers and importers)

<sup>k</sup> Total costs to industry are calculated as (total admin cost to industry + total testing cost to industry)

<sup>l</sup> Difference to mandatory standard is the difference in the total cost to the industry between testing for compliance with the mandatory safety standard and testing for compliance with one of the other standards.