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Scientific and Evidence Based Rulemaking The Toddler Bed Rule

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Consumer Product Safety Improvement Act



Toddler Bed Mandatory Rule Making

- The Consumer Product Safety Improvement Act of 2008 (“CPSIA”, [Pub. L. 110-314](#)) was enacted on August 14, 2008.
- Section 104(b) of the CPSIA requires the Commission to promulgate consumer product safety standards for durable infant or toddler products. The law requires that these standards are to be “substantially the same as” applicable voluntary standards or more stringent than the voluntary standards if the Commission concludes that more stringent requirements would further reduce the risk of injury associated with the product.
- The term “durable infant or toddler product” is defined in section 104(f) of the CPSIA as a durable product intended for use, or that may be reasonably expected to be used, by children under the age of 5 years. **Toddler beds** are one of the products specifically identified in section 104(f)(2) of the CPSIA as a durable infant or toddler product.
- The US Federal Register of April 28, 2010, the Commission published a notice of proposed rulemaking that proposed to incorporate by reference ASTM F 1821-09, *Standard Consumer Safety Specification for Toddler Beds*

The Product



Toddler Beds

- The ASTM voluntary standard (F1821) defines a toddler bed as any bed sized to accommodate a full-size crib mattress having minimum dimensions of 515/8inches in length and 271/4inches in width and that is intended to provide free access and egress to a child not less than 15 months of age and weighing no more than 50 pounds. The standard includes cribs that can be converted into a toddler bed using a full-size crib mattress.
- CPSC staff estimates annual convertible crib sales to number about 776,000 and annual sales of toddler beds to total about 819,000. Thus, a total of approximately 1.6 million units (convertible cribs and toddler beds) sold per year might be affected by the toddler bed standard.



Mining the Data



- For the period 2005 to 2009, CPSC staff aware of 4 fatalities and 81 nonfatal incidents (with and without injuries) related to toddler beds. The data were drawn from two databases: (1) Actual injuries and fatalities of which the Commission is aware; and (2) estimates derived from reports of emergency room treatment in a statistical sample of hospitals that makes up the National Electronic Injury Surveillance System (“NEISS”)
- While preparing the final rule, CPSC staff conducted a new search of CPSC's epidemiological databases and found that 41 toddler bed-related incidents were reported between June 23, 2009 and December 12, 2010.



CPSC Provided Data to ASTM Committee



Bedding Incidents Summarized.xls [Compatibility Mode] - Microsoft Excel

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A70 Cases where children were put in adult beds also fall within the inappropriate bedding cause codes.

2 **Bedding Incident Summary - by Incident Date (Cause and Bedding Type) and by Cause of Death Overall by Bedding Type**

3 Updated 10/8/09 (BeddingIncidentsSummarized 2002 - 2009)

4

5 **Causes**

Year	Deaths	Smothering IB	Smothering	Suffocation	Suffocation IB	Asphyxia	Asphyxia IB	Asphyxiation RI	Rebreathing	IB	Pulmonary Edema IB	Anoxia IB	Unknown	Anoxia
2002	35	1	1	6	3	12	6	1	1	3			1	
2003	27		1	5	2	10	5			1			3	
2004	44			5	4	18	10			1			5	1
2005	43			6	2	22	9			1			3	
2006	67	1	2	7	6	35	9			2	1		4	
2007	57			6	1	29	13			1			7	
2008	42	1		8	6	15	6			2	1		3	
2009 (thru June)	6				1		1			2			2	
Totals	321	3	4	43	25	141	59	1	1	13	1	1	28	1

17 1 incident listed took place in a bouncer seat, another took place in a stroller and did not reference bedding, a third took place with a recalled play yard and did not specify bedding in the incident and so are not included in this summary.

18

19 **Bedding Type**

Year	Deaths	Blanket	Soft Bedding	Adult Bed	Clothing	Pillow	Blanket and Pillow	Blanket and Clothing	Mattress Pad	Not Specified	Sleep Positioner	Comforter or Quilt	Soft mattress	Bumper pad	Couch Cushion	Sheet	Wedging
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Ready

Summary InfantBeddingFatalities Causes Totals Asphyxia Asphyxia with inappropriate be Cause of death unknown Death related to IB Suffocation Suffocati

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Committee Reviewed and Analyzed



Bedding Incidents Summarized.xls [Compatibility Mode] - Microsoft Excel

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Infant Bedding Fatality Incidents 1/1/2002 to 6/23/2009*
Children 0 - 2 Years of Age

*Based on reports received by CPSC no later than 6/23/2009
 *This spreadsheet was prepared by CPSC staff, has not been reviewed or approved by, and may not necessarily reflect the views of the Commission.

#	Document#	Date	Age/Sex	City and State	Narrative	Cause	Bedding type
					Acute cerebral anoxia with inappropriate bedding Count		1
					Anoxia Count		1
					Asphyxia Count		144
					Asphyxia with inappropriate bedding Count		59
					Asphyxiation rare incident Count		1
					Cause of death not specified Count		28
					Death related to inappropriate bedding Count		13
					Pulmonary Edema with inappropriate bedding Count		1
					Rebreathing Count		1
					Smothering Count		3
					Smothering with Inappropriate bedding Count		4
					Suffocation Count		43
314	7	0217600666	1/10/2002	3 MO M Chicago, IL	Quilt fell on baby in crib. Suffocation. Autopsy-yes.	Suffocation with inappropriate bedding	Comforter or Quilt
315	11	0213021455	2/2/2002	3 MO M Conyers, GA	Suffocated - probable upper airway obstruction, prone position into excessive bedding - autopsy no	Suffocation with inappropriate bedding	Soft bedding
316	24	0217610841	7/13/2002	1 MO M Chicago, IL	Face down soft bedding. Suffocation. Autopsy-yes.	Suffocation with inappropriate bedding	Soft bedding
317	54	0339079638	9/9/2003	1 MO M Liberty Twp, OH	Improper bedding - suffocation; improper bedding - autopsy yes.	Suffocation with inappropriate bedding	Not specified
318	55	0327032984	9/21/2003	3 MO M West Saint Paul, MN	Subject was found face down in his crib on a fluffy comforter at home. Probable asphyxia. Suffocation in bedding. Autopsy - yes.	Suffocation with inappropriate bedding	Comforter or Quilt
319	80	X0483801A	4/15/2004	1 MO F Cincinnati, OH	A female infant, age 1 month, died in a playpen. She suffocated due to blankets, pillows, etc. in the playpen. Cause of death: mechanical suffocation.	Suffocation with inappropriate bedding	Blankets and pillow
320	84	0426031332	5/8/2004	8 MO M Muskegon, MI	Face down (prone) on soft bedding. Probable suffocation. Prone sleeping position on soft bedding. Autopsy-yes.	Suffocation with inappropriate bedding	Soft bedding
321	87	0449006683	6/24/2004	8 MO M Roy, UT	Suffocated by plastic pillow cover - suffocation - autopsy yes.	Suffocation with inappropriate bedding	Pillow
322	91	0456002341	8/15/2004	4 MO M Casper, WY	Infant placed on back, was entrapped in blanket/pillow; rolled over on face and suffocated - suffocation, bed clothing entrapment; accident - autopsy no	Suffocation with inappropriate bedding	Blanket and Pillow
323	108	0548050298	1/9/2005	1 MO F Conroe, TX	Suffocation - suffocation onto pillows and bedding - autopsy yes.	Suffocation with inappropriate bedding	Pillow and Blankets
324	116	0526039519	4/26/2005	6 MO F Warren, MI	Inappropriate bedding - suffocation; impaired breathing from inappropriate bedding - autopsy yes.	Suffocation with inappropriate bedding	Not specified
325	153	060109HNE0357 N0610500A	1/7/2006	3 MO F Bronx, NY	A three month old female suffocated while sleeping in a bassinet. The incident is believed to have occurred due to the victim rolling over from her side to her stomach and being face first in two large blankets.	Suffocation with inappropriate bedding	Comforter or Quilt
326	159	0648037415	1/24/2006	5 MO F Magnolia, TX	Suffocation into bedding (heavy comforter) - autopsy yes.	Suffocation with inappropriate bedding	Comforter or Quilt
327	189	0637044643	7/14/2006	1 MO F Charlotte, NC	Anoxic brain injury; suffocation; improper bedding/sleep surface for infant - autopsy yes.	Suffocation with inappropriate bedding	Not specified
328	198	X0760495A 0648098409	8/31/2006	4 MO F Austin, TX	A female infant, age 4 months, died when she was found unresponsive in a crib. The crib is cluttered with a number of small blankets & pillows. There is a pacifier in the crib. Cause of death: suffocation.	Suffocation with inappropriate bedding	Blankets & pillows
329	215	0612152749	11/29/2006	3 MO M Ocala, FL	Found prone on loosely folded, thick comforter with pacifier in mouth - suffocation; airway obstruction by pacifier & soft loose bedding - autopsy no	Suffocation with inappropriate bedding	Comforter or Quilt
330	219	0717006658	1/6/2007	2 MO F Blue Island, IL	Found face down on soft comforter. Suffocation. Autopsy-yes.	Suffocation with inappropriate bedding	Soft comforter

Causes Totals Asphyxia Asphyxia with inappropriate be Cause of death unknown Death related to IB Suffocation Suffocation IB Year's Totals 2002 2003

Average: 19046.72549 Count: 202 Sum: 971383 100%

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The following hazards were identified:



- Broken, loose, or detached components of the bed, such as the guardrail, hardware, or other accessories (14 incidents, 3 of which involved injuries);
- Entrapment, mostly of a limb (10 incidents, 8 of which resulted in injuries ranging from fractures and sprains to bruises);
- Product integrity issues, mostly the integrity of the mattress support (4 incidents, 1 of which also reported a finger injury to the child);
- Inadequate mattress fit issues (3 incidents, no injuries);
- Miscellaneous issues, such as a sharp surface, lead paint, bed height/clearance, guardrail inadequacy, and bed accessory involvement (9 reports, 4 of which reported associated injuries).

The most frequent characteristics:

- Hazard: falls out of the toddler bed to a lower level (78%);
- Injured body part: head and face (59%) and limbs (25%);
- Injury type: head injury (31%) and fractures (22%); and
- Disposition: treated and released (97%).

Requirements in the ASTM F 1821-09 Standard for toddler beds included:



- Toddler beds must comply with the CPSC's regulations at [16 CFR part 1303](#) (ban of lead in paint); 1500.48 (sharp points); 1500.49 (sharp edges); 1500.50 through 1500.53 (use and abuse tests); and part 1501 (small parts that present choking, aspiration, or ingestion hazards), both before and after the product is tested according to the standard.
- Toddler beds must not present scissoring, shearing, or pinching hazards.
- Openings must meet specified dimensions to prevent finger entrapment.
- Openings that will permit passage of a specified block with a wedge on one end are prohibited to protect against torso entrapment.
- The distance that corner posts may extend above the upper edge of an end or side panel is limited.
- Protective components must not be removable with a specified force after torque and tension tests.
- There are requirements for marking and labeling each bed and its retail carton and for warning statements on the bed. There are requirements for the permanency of labels and warnings.
- The mattress must be supported and contained so that it does not move horizontally to cause an opening that will allow the passage of the wedge block when tested.
- There are tests for the physical integrity of the mattress support system and its attachments and the side rails.
- There are wedge block tests for openings in the guardrails and end structures to test whether they could cause entrapment.
- There is a probe test to protect against entrapment in partially bounded openings in the bed.
- Instructions must be provided with the bed.
- Warning statements are required on the bed to address entrapment and strangulation hazards.

CPSC Assessment of F1821



From CPSC Briefing Package...

“While most requirements of ASTM F 1821-09 are sufficient to reduce the risk of injury posed by toddler beds, we have determined that modifying or adding several provisions to the standard will make the requirements more stringent and further reduce the risk of injury.”

The Data Called for More to be Done



Revisions proposed:

– Guardrails

- Modified to strengthen the guardrail provisions to require that the upper edge of the guardrail be at least 5 inches above the manufacturer's recommended sleeping surface and if the manufacturer does not specify a mattress thickness, the guardrail height must be based on a mattress thickness of 6 inches.

– Spindle/Slat Static Load

- Added requirements for force testing the spindles/slats on guardrails, side rails, and end rails with 80lb load.

– Warning Label

- Revised warning labels to be separated into two warnings, one to address entrapment, and one to address strangulation.

– Incorporation by Reference of ASTM Crib Standard (F1169)

- Modification to incorporate by reference the labeling requirements in section 8 of ASTM's full-size crib standard (ASTM F 1169-10, *Standard Consumer Safety Specification for Full-Size Baby Cribs*) because CPSC's toddler bed standard requires toddler beds that convert from cribs to comply with the labeling requirements in the ASTM crib standard.

**ASTM & CPSC working
together in a
*public – private partnership***

The Results



- F1821-09 incorporated as mandatory standard for product category with CPSC suggested revisions
- CPSC provides data to Committee at least annually to assure that standard is effective and new hazards can be identified
- Ambulatory reference in law key to keeping current
 - 2011 version of standard adopted
 - 2015 update currently pending acceptance.



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