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Injuries From Furniture Tip-overs Among Children and Adolescents in the United States, 1990-2007

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Objective. To describe the epidemiology of pediatric injuries associated with furniture tip-overs in the United States. *Methods*. Data from the National Electronic Injury Surveillance System were analyzed for patients ≤17 years treated in emergency departments for a furniture tip-over-related injury from 1990 through 2007. *Results*. An estimated 264 200 furniture tip-over-related injuries occurred during the study period, yielding an average of 14 700 injuries annually, or 20.7 per 100 000 population per year. There was a significant increase in the number and rate of these injuries during the 18-year period. Three-quarters of injuries were to children ≤6 years. Televisions were the item most commonly involved (47.4%). Head/neck injuries were the most common (42.2%) injury type among children 0 to 9 years of age. *Conclusions*. The number and rate of injuries to children associated with furniture tip-overs are increasing. Pediatricians and caregivers should be aware of this important source of pediatric injury and the strategies for prevention.

Keywords: injury; trauma; accident; child; adolescent; television; furniture; tip-over

ASTM International - American Society for Testing and Materials International

CI - Confidence Interval

CPSC - United States Consumer Product Safety Commission

ED - Emergency Department

IPR - Injury Proportion Ratio

NEISS - National Electronic Injury Surveillance System

Despite warnings by the US Consumer Product Safety Commission (CPSC), the number of injuries involving televisions and other furniture tipping over onto children has increased in the United States since the early 1990s.[1] Most of these injuries are to children ≤6 years, and the majority occur in the home.[2] Falling televisions have been recognized for years as a hazard, and recently other types of furniture have been included in CPSC injury-related publications.[1-8] In a recent notice, the CPSC warned parents to check the stability of furniture and secure it if necessary, to place televisions low to the ground and near the back of their stands, and to reduce a child's desire to climb furniture by not placing attractive items high on the furniture.[8] Despite existing voluntary furniture safety standards to prevent tip-overs, furniture that fails to meet these standards can still be found in the marketplace.[9]

In recent years, televisions have become larger. With this increase in size has come an increase in weight, that is often disproportionately located toward the front of a conventional television.[1,6,7] Televisions may be placed on furniture that was not designed to hold such weight, such as dressers and shelving units. As a result, televisions are even more prone to tipping over and falling when pulled or knocked by a

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child, and can bring their supporting furniture down as well.

A few studies have investigated the outcomes of televisions tipping-over onto children, but little research has evaluated furniture tip-overs in general.[1-7] The goal of this study is to describe the epidemiology of furniture tip-over-related injuries among children ≤17 years treated in hospital emergency departments (EDs) in the United States using data collected by the National Electronic Injury Surveillance System (NEISS) of the CPSC from 1990 through 2007, and compare the types of injuries and mechanisms of injury across age groups.

Methods

Data analyzed in this study were obtained from the NEISS, which collects data about individuals treated in EDs for injuries associated with consumer products and selected activities. The NEISS is a probability sample of 98 hospitals from among the 6100 hospitals with a 24-hour ED with at least 6 beds in the United States and its territories.[10] Because NEISS is a nationally representative probability sample, weights provided by the CPSC were applied to the reported cases to make injury estimates for the entire country. The NEISS data set includes information about the product or activity associated with the injury, patient age, gender, body region injured, diagnosis, and disposition from the ED. Each record also includes a brief narrative description about the injury. This information is extracted daily from medical records in participating EDs by professional NEISS coders.

NEISS data were requested from the CPSC regarding furniture-related injuries (see appendix for the NEISS consumer product codes included in this study). The narrative text was examined for each of these cases to determine if the case met the following inclusion criteria. A case was included in our analysis if an item of furniture fell *onto* a child ≤17 years old during the years 1990 through 2007. A case was excluded if an item, other than a television or drawer from a dresser, fell off of the furniture and injured the child without the furniture itself injuring the child as well, such as a lamp falling off of a shelf. Drawers are included, because they are part of the furniture. Falling mirrors were not included in the study. Cases including the following phrases in their narratives were excluded from our analyses unless the narrative specified that the action caused the furniture to tip over onto the child: dropped, moving, ran into, fell off and/or onto, hit on, and pushed into.

The type of furniture was grouped into 12 categories: (1) television, (2) dresser, (3) drawer, (4) bookshelf and shelf/shelves, (5) cabinet, (6) desk, (7) rack or display case at a store, (8) television stand or entertainment center, (9) armoire, hutch, chest, and bureau, (10) other, (11) unknown, and (12) multiple (eg, television and entertainment center). The mechanism of injury was grouped into 6 categories: (1) fell/tipped-over; (2) pulled onto self; (3) climbing furniture, which caused it to fall; (4) pushed onto child by another person (usually another child); (5) collision or striking of furniture, which caused it to fall over; and (6) unknown or child found under item. The body regions injured were grouped into 5 categories: (1) head/neck; (2) upper extremity, including shoulder; (3) torso, including pubic region; (4) lower extremity, including hip; and (5) unknown. The "other" injury diagnosis category includes internal organ injury, hematoma, amputation, crushing, dislocation, foreign body, dental injury, puncture, hemorrhage, avulsion, and concussion, as coded in the NEISS data set. The "admitted" disposition category includes patients treated and transferred to another hospital, transferred for hospitalization, and admitted for hospitalization within the same facility.

Data were analyzed using SPSS 15.0 (SPSS Inc., Chicago, IL), EpiInfo 6.0, SAS Version 9.1 (SAS Institute, Inc., Cary, NC), and SUDAAN Release 9.0 (Research Triangle Institute, Research Triangle Park, NC). Ninety-five percent confidence intervals (CIs) were calculated for national estimates. Annual injury rates were calculated using annual population estimates from the US Census Bureau, and a linear regression was performed to evaluate the secular trend in injury rates during the study period.[11] Statistical evaluation included χ^2 analysis with Yates's correction and computation of relative risk (RR) with a corresponding 95% CI. Relationships were considered statistically significant at the $\alpha = .05$ level. Frequency estimates are rounded to the

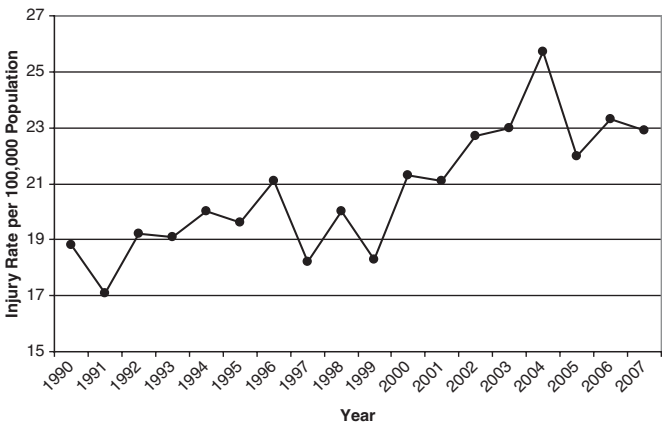

Figure 1. Estimated rate of furniture tip-over-related injuries treated in hospital emergency departments per 100 000 population, United States 1990-2007.

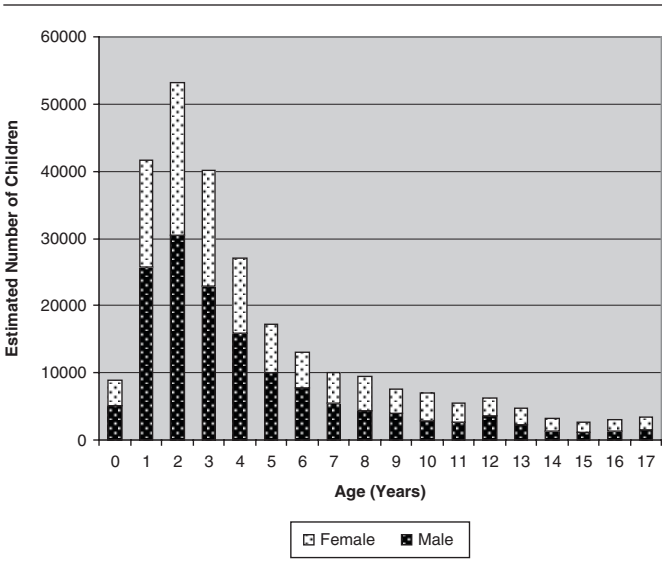

Figure 2. Estimated number of children treated in hospital emergency departments for furniture tip-over-related injuries by age and gender, United States 1990-2007.

nearest 100 in the text of this article. Estimates based on 20 or fewer actual cases are considered unstable by the CPSC because of small sample size.

Results

Study results were based on 8506 actual patients ≤17 years identified as being treated in an ED for an injury associated with a furniture tip-over from 1990 through 2007. Using weights to calculate national projections, an estimated 264 200 children and adolescents were treated during the 18-year study period, averaging 14 700 per year. There was a 41.1% increase in the number of injuries from 12 012 in 1990 to 16 950 in 2007. The average injury rate was 20.7 furniture tip-over-related injuries per 100 000 population per year, which significantly increased ($P < .01$) from 1990 to 2007 (Figure 1). Males accounted for 56.1% of all injuries. The majority of injuries (76.2 %) were among children ≤6 years, with the number of injuries peaking at age 2 years (Figure 2). A total of 79.3% of the injury cases had data regarding the locale or place where the injury occurred; among these cases, 90.4% of the injuries were sustained in the home, whereas 5.3% occurred at school and 3.5% occurred on other public property, such as a retail store. In all, 96% of those injured were treated and released, with 2.8% requiring admission to the hospital or transfer to another hospital for further care. There were an estimated 300 fatalities during the 18-year study period, but this number is potentially unstable because of small sample size.

Injury Mechanism

The most common (70.2%) mechanism of injury among all age groups was a fall/tip-over of furniture with no stated impetus for the fall (Table 1). Pulling the furniture onto oneself (18.2%) was the second most frequent mechanism among children of all age groups and was especially common among children ≤4 years, accounting for 24.4% of the injuries in that age group. With the exception of fall/tip-over and collisions, the other injury mechanisms decreased as age increased. Collisions increased slightly as age increased, with 2.8% of 15- to 17-year-olds colliding with furniture causing it to fall onto them.

Body Region Injured

Head/neck (49.4%) and lower extremity (31.4%) injuries accounted for the most injuries across all age groups. There was a consistent decrease in the proportion of head/neck injuries with increasing age group, peaking at 54.8% among children ≤4 years

Table 1. Characteristics of Furniture Tip-over-Related Injuries According to Age Group

	0-4 Years				5-9 Years				10-14 Years				15-17 Years				0-17 Years			
Variable	n	N	Percentage	95% CI	n	N	Percentage	95% CI	n	N	Percentage	95% CI	n	N	Percentage	95% CI	n	N	Percentage	95% CI
Mechanism of injury																				
Fell/tipped	3635	105 441	61.7	88 387-122 496	1512	46 076	80.2	38 351-53 802	755	25 240	94.1	20 006-30 473	244	8605	94.8	6557-10 652	6146	185 361	70.2	155 700-215 024
Pulled	1224	41 768	24.4	34 809-48 727	157	5365	9.3	3975-6755	27	1021	3.8	529-1513	7	208[a]	2.3[a]	[a]	1415	48 362	18.3	40 519-56 205
Climbing	590	19 202	11.2	15 302-23 101	119	4262	7.4	3156-5368	4	121[a]	0.5[a]	[a]	0	0	0.0		713	23 584	8.9	19 084-28 084
Pushed	62	1796	1.1	1175-2417	21	581	1.0	212-949	0	0	0.0		0	0	0.0		83	2377	0.9	1606-3149
Collision	46	1462	0.9	778-2146	28	1012	1.8	515-1510	11	299[a]	1.1[a]	[a]	8	257[a]	2.8[a]	[a]	93	3031	1.1	2147-3915
Unknown	44	1233	0.7	[b]	7	134	0.2	[b]	4	129[a]	0.5[a]	[b]	1	6[a]	0.1[a]	[b]	56	1504	0.6	[b]
Body part injured																				
Head/neck	3069	93 716	54.8	80 138-107 295	918	27 964	48.7	23 222-32 706	211	7240	27.0	5018-9462	47	1492	16.4	913-2070	4245	130 413	49.4	111 432-149 394
Upper extremity	515	15 157	8.9	12 510-17 804	290	9629	16.8	7580-11 678	206	6914	25.8	4986-8842	74	2913	32.1	2014-3812	1085	34 613	13.1	29 038-40 188
Torso	338	9837	5.8	7726-11 949	101	2937	5.1	2065-3809	38	1192	4.4	718-1666	15	639[a]	7[a]	[a]	492	14 605	5.5	11 788-17 421
Lower extremity	1627	50 818	29.7	42 415-59 221	529	16 777	29.2	13 637-19 918	344	11 386	42.5	8856-13 915	124	4033	44.4	2992-5075	2624	83 014	31.4	69 826-96 203
Unknown	53	1373	0.8	[b]	4	124[a]	0.2[a]	[b]	3	78[a]	0.3[a]	[b]	0	0	0.0	[b]	60	1575	0.6	[b]
Injury diagnosis																				
Contusion/abrasion	2158	74 194	43.4	62 633-85 754	739	25 387	44.2	21 368-29 406	368	13 461	50.2	10 571-16 351	125	4850	53.4	3431-6268	3390	11 7891	44.6	100 013-135 769
Laceration	1090	36 676	21.5	31 372-41 981	416	13 557	23.6	11 059-16 056	124	4090	15.3	2698-5483	36	1336	14.7	728-1945	1666	55 660	21.1	47 742-63 578
Fracture	700	18 275	10.7	15 042-21 508	226	6096	10.6	4806-7385	109	3330	12.4	2400-4261	35	1042	11.5	493-1591	1070	28 743	10.9	24 056-33 429
Strain/sprain	108	3541	2.1	2455-4627	47	1725	3.0	991-2460	56	2097	7.8	1286-2907	12[a]	401[a]	4.4	[a]	223	7764	2.9	5824-9704
Other	1545	37 704	22.1	29 737-45 671	416	10 567	18.4	7865-13 270	144	3827	14.3	2519-5135	52	1440	15.9	868-2013	2157	53 539	20.3	42 523-64 554
Unknown	19	513[a]	0.3[a]	[b]	7	98[a]	0.2[a]	[b]	1	5[a]	0[a]	[b]	1	7[a]	0[a]	[b]	28	623	0.2	[b]
Item of furniture																				
Television	2977	86 420	50.6	72 333-100 507	919	27 029	47.1	22 084-31 973	269	9008	33.6	6528-11 487	74	2664	29.4	1685-3644	4239	125 121	47.4	104 852-145 390
Dresser	859	29 176	17.1	23 943-34 408	144	4057	7.1	3071-5043	58	2290	8.5	1479-3101	33	960	10.6	455-1465	1094	36 482	13.8	30 366-42 598
Bookshelf	564	18 336	10.7	15 136-21 535	247	8890	15.5	7027-10 754	109	3701	13.8	2596-4806	44	1980	21.8	1249-2711	608	32 907	12.5	27 674-38 141
Multiple[c]	332	9782	5.7	7863-1700	79	2706	4.7	1646-3766	8	127[a]	0.5[a]	[a]	3	36[a]	0.4[a]	[a]	422	12 652	4.8	10 135-15 170
Other	776	26 360	15.4	21 810-30 908	411	14 526	25.3	11 595-17 458	336	11 296	42.1	8731-13 860	97	3364	37.1	2403-4325	1976	55 546	21.0	46 682-64 409
Unknown	34	830	0.5	[b]	9	223[a]	0.4[a]	[a]	12	386[a]	1.4[a]	[a]	3	72[a]	0.8[a]	[a]	58	1511	0.6	[b]

[a] Estimates might be unstable due to <20 actual cases in the National Electronic Injury Surveillance System.
[b] Confidence intervals not calculated for unknowns.
[c] Multiple includes 2 or more items falling simultaneously, both resulting in injury (eg, an entertainment center and a television).

and decreasing to 16.4% among children 15 to 17 years (Table 1). Upper and lower extremity injuries increased with age, from 8.9% to 32.1% and 29.7% to 44.4%, respectively, for children ≤4 years compared with older teens 15 to 17 years of age. Head/neck injuries were sustained by 42.2% of children ≤9 years, who were 2.2 times more likely ($P < .01$; injury proportion ratio [IPR], 2.20; 95% CI, 1.87-2.59) to sustain these injuries than children 10 to 17 years of age. Injuries to the lower extremities were the most common (43.0%) type of injury among children ages 10 to 17 years, who were 1.4 times more likely ($P < .01$; IPR, 1.45; 95% CI, 1.26-1.66) to sustain an injury to the lower extremities than children ≤9 years of age.

Injury Diagnosis

Contusions/abrasions were the most common type of injury for all age groups combined (44.6%; Table 1). Lacerations and "other" injuries were the next most common types of injury, accounting for 21.0% and 20.5%, respectively, and both of these types of injuries decreased with increasing age. Contusions occurred primarily to the lower extremities (40.1%) and the head/neck (36.9%). The lower extremities sustained fractures nearly 3 times more often than other body regions combined ($P < .01$; IPR, 2.88; 95% CI, 2.48-3.34). The majority (78.8%) of lacerations were to the head/neck, and the head/neck was almost 4 times more likely to sustain a laceration than other body regions combined ($P < .01$; IPR, 3.84; 95% CI, 3.29-4.48).

Furniture Type

Televisions were the most common item of furniture associated with injury among children ≤9 years, whereas other items, such as desks, cabinets, and bookshelves, were the most common source of injury among children 10 to 17 years (Table 1). About half (50.6%) of injuries to children ≤4 years resulted from a television falling on them. In comparison, only 29.4% of older teens 15 to 17 years were injured by televisions. The proportion of shelf tip-over-related injuries more than doubled from the youngest (6.5%) to the oldest age group (16.7%). Only drawer-related and desk-related injuries occurred more commonly to the lower extremities than to the head/neck; these 2 types of furniture combined accounted for 16.6% of lower extremity injuries and 3.4% of head/neck injuries.

Hospitalizations

Of the estimated 7400 patients who required hospitalization, 50.6% were injured by televisions, and 55.5% had head or neck injuries. Fractures were 7.5 times more likely ($P < .01$; IPR, 7.48; 95% CI, 5.30-10.57) to require admission to the hospital or a hospital transfer than other types of injury and accounted for 47.7% of all admitted injuries.

Discussion

An estimated 264 200 children received emergency treatment for furniture tip-over-related injuries during the 18-year study period, yielding an average of 14 700 injuries annually. There was a more than 40% increase in the number of these injuries during the study period, and the injury rate also significantly increased during these years. This trend demonstrates the inadequacy of current prevention strategies and underscores the need for increased efforts to prevent these injuries.

Approximately 75% of injuries occurred among children ≤6 years. The reason for this may be that children ≤6 years spend much of their time in the home, where about 90% of these injuries occur. Young children are also less able to anticipate danger and avoid a falling piece of furniture. The head/neck was the most commonly injured body region among children ≤9 years, whereas lower extremity injuries were most common among children 10 to 17 years of age. These age-specific patterns are likely to be due to more mature injury avoidance responses among older children as well as physical stature. If a television or dresser were to fall on a preteen or adolescent, it would probably only hit the lower half of the body, whereas it may strike a smaller child ≤9 years on the head.

This study is more comprehensive than previous studies because it investigates furniture tip-overs for various types of furniture rather than only televisions.[1,3-7] Previous studies also have been small and have often

focused on only 1 hospital ED, only head injuries, or used unweighted NEISS data without making national estimates.[1,4,5] A recent report by the CPSC examined ED injury cases (for 2006 only) and deaths (for 2000-2006) involving instability or tip-over of appliances, furniture, and televisions for persons of all ages.[2] Our findings agree with Sikron et al,[7] who found that most television tip-over-related injuries occur to children 1 to 3 years of age and are to the head. Although it did not specify case inclusion criteria, the CPSC stated that in 2005 more than 3000 children ≤5 years were injured by falling televisions.[12] Our study showed that during an 18-year period, there were more than 86 000 injuries related to televisions tipping-over onto children ≤4 years, yielding an average of more than 4600 annually, which is approximately 50% more than the CPSC estimate. This is likely due to our broader inclusion criteria, which included more injury mechanisms than just fell/tipped over.

In 2004, American Society for Testing and Materials (ASTM) International published the revised F2057-04 voluntary standards to minimize the risk of furniture falling on children. These standards stipulate that a chest, armoire, or dresser should not tip with any doors open or all drawers open two-thirds of the way, or when one drawer or door is opened and 50 lb of weight are applied to the front, simulating a climbing child.[13] The CPSC has recalled multiple items of furniture that are prone to tipping for various reasons, including not withstanding the weight of a child on the front and tipping over.[9,14,15] Despite the voluntary standards and CPSC enforcement efforts, furniture can still be found in the marketplace that does not meet standards and is prone to tip-overs.[9]

In our study, pulling and climbing on furniture accounted for more than 25% of the injuries. Parents can minimize risks to children by strapping televisions to a stable stand and/or wall, and attaching large furniture, such as dressers or bookshelves, to the wall using safety straps, L-brackets, or other appropriate attachment devices.[8] Safety straps are available that do not require drilling holes in furniture, and can secure items up to 100 lb.[16] Nearly all (99.5%) climbing-related injuries were to children ≤9 years. These children are often not tall enough to reach items placed on top of furniture, and therefore will climb to get what they want. Parents can help prevent furniture climbing–related injuries by removing desired items, such as toys or remote controls, from high places, such as the top of the television or a shelf. Approximately 2400 children ≤9 years sustained injuries as a result of furniture being pushed onto them. These injuries could also be prevented by attaching furniture to the wall. The advent of flat screen televisions could lead to fewer tip-over-related injuries, because they are not as front-heavy as traditional televisions and may be less prone to tipping.

There were an estimated 300 deaths during the 1990 through 2007 study period, 93% of which were related to dressers and televisions falling onto children. Although the number of estimated deaths is potentially unstable because of small sample size, it is consistent with the CPSC's estimate of 135 television and/or furniture-related deaths among children ≤9 years old from 2000 through 2006.[2] Almost 98% of the deaths in our study involved children ≤3 years. The mechanisms of "falling/tip-overs" and "climbing on" accounted for 94% of deaths. Young children are mobile but do not possess the cognitive abilities to anticipate danger or comprehend the consequences of their actions. They lack the reaction time to avoid a falling piece of furniture and the strength to extricate themselves if trapped under a heavy item of fallen furniture. Securing televisions to their stable stands and dressers to the wall could decrease deaths among toddlers and preschoolers by eliminating the chance that these large objects could fall or be pulled onto them.

Desks falling onto children accounted for 5.2% of injuries, approximately 50% of which were to school-age children between the ages of 8 and 13 years. Almost 90% of these injuries were to the upper and lower extremities, about half of which were contusions. Nearly 60% of all desk-related injuries occurred at school, which may implicate the design of school desks as an issue. When a large desktop of a traditional 4-leg desk is filled with books and school supplies, the weight raises the center of gravity, making it more prone to tip-over. Desks with wider legs or bases with lower centers of mass will be more stable and resist tipping, reducing the risk of injury to children.

Approximately 36 400 children were injured by dressers tipping over onto them. Because drawers can be pulled out and act as a staircase, a common cause of injury in this study was climbing a dresser and pulling it over (24%). Simply opening drawers

too far can also shift the center of mass and can cause a dresser to tip-over, especially if the upper drawers are filled with heavy items. Manufacturers and parents can reduce the risk of dresser-related tip-over injuries by installing stops on all drawers to prevent them from being pulled more than two-thirds of the way out.[17] Drawer stops can also reduce incidents of drawers falling out and onto children.

In 2007, legislation was introduced at the federal level to help prevent furniture tip-over-related injuries to children. This bill would have required certain furniture being sold to be equipped with anchoring devices. This bill did not get passed into law.[18] Providing anchoring devices, such as straps or L-brackets at the time of purchase of furniture that is prone to tip-over would increase the likelihood that the devices would be used, because the customer would not have to make an extra effort to find and purchase them. Decreasing the effort required to implement a safety strategy will increase the probability that protection will occur.[19]

In 2008, legislation was introduced in New Jersey[20] and a resolution was introduced in Missouri[21] aimed at preventing furniture tip-over-related injuries to children. The companion bills in the New Jersey Senate and Assembly would require businesses selling or renting certain furniture (such as dressers, bookcases, bureaus, armoires, or similar furniture ≥42 inches in height), television stands, or televisions with screens ≥25 inches in length, to provide written notice to consumers regarding the existence of separate devices that can be used to prevent furniture tip-overs, such as straps or L-brackets.[20] The Missouri resolution urges the US Congress and the CPSC to enact regulations to increase incentives for the furniture industry to follow ASTM International voluntary standards, produce furniture with safety labels and securing devices, and educate the public regarding furniture tip-over hazards.[21]

Limitations

This study has several limitations. One limitation is inconsistency of documentation in NEISS narratives. Cases may have been missed because of the limited information available in some narratives. Cases also may have been miscategorized, because the event was not completely or clearly described. Another limitation is that the NEISS only captures injuries treated in EDs and will miss injuries treated in other types of medical facilities or those that are not treated at all. Therefore, it is likely that our study underestimates the actual number of furniture tip-over-related injuries. Because the NEISS includes only those injuries that are severe enough to require a visit to an ED, findings from this study may not be representative of all injuries associated with furniture tip-overs. In addition, the NEISS does not capture fatal cases well, because many fatalities never get transferred to an ED. Therefore, the number of fatalities in this study underestimates the true number. The number of reported deaths was also potentially unstable due to small sample size. Finally, the lack of exposure data prevented the calculation of true injury rates; however, our use of population data to calculate rates is an appropriate alternative method.

Conclusions

Furniture tip-overs are an important cause of injury to children. The number and rate of these injuries are increasing, which demonstrates the inadequacy of current prevention strategies and underscores the need for increased efforts to prevent these injuries. Many of these injuries could be prevented by securing large furniture to its stable stand and/or the wall, and not encouraging children to climb on furniture by removing attractive items placed on furniture above their reach. The CPSC should work with ASTM International and furniture manufacturers to require applicable furniture to be sold with anchoring devices. Desks should be designed to be sturdy and stable. Drawer stops should be used to prevent drawers from being opened all the way, thus helping prevent dresser tip-overs. These prevention strategies for the home and school will decrease the number of injuries to children associated with furniture tip-overs. Pediatricians and child caregivers should be aware of this important source of pediatric injury and the strategies for prevention.

Appendix
National Electronic Injury Surveillance System (NEISS) Product Codes

All NEISS product codes originally reviewed to identify cases:
5041, 5040, 5013, 5011, 5010, 5005, 5004, 4062, 4061, 4057, 4056, 4055, 4054, 4050, 4043, 4042, 4036, 4033, 4030, 4026, 4025, 4024, 4023, 4022, 4021, 4016, 4015, 4014, 4013, 4010, 4004, 4003, 3297, 3286, 3285, 3284, 3283, 3278, 3277, 3274, 3272, 3270, 3269, 3267, 3265, 3263, 3257, 3253, 3252, 3249, 3246, 3244, 3240, 3237, 3236, 3235, 3231, 3228, 3227, 3226, 3224, 3223, 3216, 3214, 2550, 1936, 1934, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1923, 1916, 1915, 1884, 1882, 1879, 1878, 1873, 1871, 1870, 1865, 1864, 1849, 1843, 1842, 1829, 1820, 1819, 1817, 1807, 1738, 1734, 1731, 1729, 1712, 1710, 1707, 1706, 1701, 1686, 1685, 1684, 1682, 1680, 1679, 1667, 1661, 1659, 1658, 1650, 1647, 1646, 1645, 1630, 1623, 1616, 1615, 1606, 1602, 1556, 1555, 1549, 1548, 1545, 1543, 1536, 1527, 1522, 1518, 1513, 1508, 1505, 1502, 1417, 1413, 1403, 1398, 1392, 1354, 1353, 1347, 1345, 1342, 1338, 1333, 1327, 1326, 1313, 1301, 1272, 1270, 1268, 1267, 1244, 1242, 1240, 1239, 1233, 1217, 1211, 1207, 1206, 1205, 12020, 1144, 1143, 1141, 1140, 1139, 1137, 1135, 1134, 1133, 1130, 1127, 1125, 1123, 1120, 1114, 1112, 1107, 1103, 1102, 977, 976, 966, 960, 956, 955, 954, 951, 949, 945, 943, 942, 936, 933, 931, 930, 929, 910, 909, 904, 892, 886, 881, 879, 872, 859, 857, 854, 835, 834, 832, 827, 820, 709, 707, 699, 694, 693, 692, 689, 687, 685, 679, 676, 672, 666, 663, 662, 661, 649, 648, 639, 627, 620, 612, 611, 604, 601, 572, 571, 570, 563, 559, 558, 557, 556, 555, 552, 550, 547, 546, 545, 536, 531, 519, 514, 480, 475, 474, 466, 464, 463, 461, 460, 459, 453, 452, 450, 438, 435, 428, 424, 420, 419, 413, 408, 405, 399, 384, 380, 379, 378, 374, 370, 348, 342, 322, 305, 276, 275, 273, 268, 266, 263, 257, 247, 238, 215, 213, 212, 134, 127, 126, 115, 112

All NEISS product codes included in final study data set:
Television: 0572
Dresser: 0604
Shelf/bookshelf: 4057, 4056
Other: 5040, 5010, 5004, 4078, 4076, 4074, 4022, 4014, 4010, 4003, 3297, 3227, 1884, 1864, 1842, 1819, 1807, 1685, 1684, 1658, 1645, 1615, 1545, 1522, 1353, 1240, 1141, 1135, 1125, 1112, 854, 852, 694, 679, 666, 661, 649, 620, 617, 601, 557, 556, 547, 546, 531, 519, 474, 408, 342, 214, 112

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