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CONSUMER PRODUCT SAFETY COMMISSION
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Memorandum

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TO : Patricia Hackett
Division of Mechnical Engineering
Directorate for Engineering Sciences

THROUGH: Susan Ahmed, Ph.D, AED
Directorate for Epidemiology

Russell Roegner, Ph.D., Director
Division of Hazard Analysis

FROM : Joyce McDonald
Program Analyst
Division of Hazard Analysis

SUBJECT : Portable Youth Bed Rail Entrapments and Hangings

This memorandum provides data on entrapment and hanging incidents involving portable youth bed rails.[1] Specifically, CPSC data files were searched to determine how many incidents occurred where the victim became entrapped or hung during the time period of January 1, 1990 to March 14, 2000.[2] The Office of Compliance has also received reports of entrapment and hanging incidents involving portable youth bed rails from manufacturers. Both data sources are discussed in this memorandum.

Table 1 shows a breakdown of the incidents by death, injury and no injury for both the CPSC data files and the incidents reported to Compliance by the manufacturing firms.

Table 1: Portable Youth Bed Rail Entrapment and Hanging Incidents

CPSC Data Files 1/1/90 to 3/14/00		Incidents Reported to Compliance by Firms		Total
Total	**36**	**Total[3]**	**16**	**52**
Deaths	12	Deaths	0	12
Incidents with Injury	5	Incidents with Injury	4	9
Incidents with No Injury	19	Incidents with No Injury or Not Reported	12	31

[1] These deaths and incidents are neither a complete count of all that occurred during this time period nor a sample of known probability of selection. However, they do provide a minimum number of deaths and incidents occurring during this time period and illustrate the circumstances involved in these entrapment or hanging incidents involving portable youth bed rails.

[2] The databases searched were the Indepth Investigation file, the Injury or Potential Injury Incident file, the Death Certificate file and the National Electronic Injury Surveillance System file.

[3] These 16 incidents shown in Table I are the portion of the firm reports that could be identified as not duplicating cases in the CPSC data files.

CPSC Reports

The following is a discussion of the fatal and non-fatal incidents found in the CPSC databases related to the entrapment and hanging hazards associated with the use of portable youth bed rails.

Deaths

The children involved in the 12 fatal incidents ranged in age from 3 months to 4 years of age. Eight of the fatalities were males and 4 were females. Three of the 12 children were disabled (a 2 year old female with brain deformities, a 2.5 year old female with cerebral palsy and a 4 year old male with mental retardation). The beds on which the bed rails were used were a full size bed, a king size bed, a bed described as an adult bed, 2 bunk beds, 3 toddler beds, 3 twin/single beds and a bed described as "youth size".

In 8 of the 12 cases, the child became entrapped in an area between the mattress on the bed and the attached bed rail, in one case the child slipped through the bars of the bed rail, in another a child was found hanging from a protrusion on the bed rail itself, and 2 children were entrapped in the space between the headboard/bedpost and the bed rail. The deaths were the result of asphyxia or strangulation, with the exception of one child who died of pnemonia due to the cervical injury sustained by hanging. Additional information on each of the 12 fatalities is detailed in Appendix A (attached to this memorandum).

Incidents with Injury

Five of the non-fatal incidents resulted in minor injuries: red marks on the head, a bruised back and swollen arm; a contusion to the neck; a red mark on the neck; a scraped nose and bruise to the back of the head; and a bruised right temple. These children were 6, 9, 14, 23 and 30 months old respectively. The beds involved were 3 twin beds, a king-size bed and an unspecified type of bed. In 4 of the cases, the children were found between the mattress and bed rail. The fifth case involved a bed rail which snapped together in the middle with plastic couplers. The victim became entrapped when the bed rail partially disengaged into a "V" shape where it snaps together. For further details on these cases, refer to Appendix A (attached).

Incidents with No Injury

The remaining 19 incidents of the 36 total did not involve an injury. The children ranged in age from 17 months to 3.5 years old. In 16 of the incidents, the child got a part of his/her body entrapped between the mattress of the bed and bed rail. Two incidents do not specify the exact location of the entrapment in relation to the bed/mattress and bed rail. In one incident the child partially slipped through a mesh net bed rail.

Comments

A number of cases contained comments about the role the youth bed rail played in causing the entrapment. The most common scenario was that the two rods/bars that go under the

mattress slipped out creating a space. This was reported to have happened in some cases when the child rolled or pushed against the bed rail itself. There were some comments made about the flexibility of the bed rail allowing a child to become wedged between the bed rail and bed without the bed rail pulling out from under the mattress. Lastly, there was the case in which the design of the bed rail (coupling in the middle) allowed an entrapment space to be created.

Compliance Reports

In addition to the 36 incidents found in the CPSC data files, the Office of Compliance has received 30 reports of entrapment and hanging incidents (no deaths) from manufacturers of portable bed rails.[4] Appendix B (attached) gives the details of the individual reports from the firms.

Only 17 of these reports contained enough information to determine whether they were duplicates of cases that we have in the CPSC data files. Of those, one case was a duplicate of an incident in the CPSC data files, leaving 16 reports.

Of the 16 incidents reported, 4 involved an injury: a ring around the neck with breathing cut off; 2 bruised necks; and a case of choking and vomiting. Fourteen of the incidents involved either entrapment or hanging between the bed rail and the bed or mattress. Two incidents indicate the child was caught or stuck in the rail.

The youngest child was 7 months and the oldest was 5 years, but ages are only available for 9 of the 16 cases. The gender of the child is not available. Most of the 16 incidents do not report the type of bed involved. Two twin beds and 1 queen size were reported.

Deaths from Falls from Bed and Wall Side Incidents

CPSC staff also reviewed data[5] for children 0-5 years old involving falls from beds and incidents occurring on the wall side of the bed that resulted in fatalities.

Falls

There were 47 deaths involving children 1 month to 2 years old from January 1, 1990 to May 17, 2000 involving a fall from a bed[6]. The great majority (38) were under a year old. Most of the children died when they fell into or onto an object (a bucket or bag of clothes, for example). Incidents of death due to blunt force trauma from the fall were rare with only 2 cases reported. In another case a massive intracerebral hemorrhage resulted from the fall out of the bed and this may have been a death due to blunt force trauma also. About 70% of the children died from asphyxia/suffocation/drowning. (See Appendix C.)

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[4] The information in these reports is minimal. The dates of the actual incidents and the city and state in which they occurred were not available for inclusion in this memorandum.

[5] The databases searched were the Indepth Investigation file, the Injury or Potential Injury file, the Death Certificate file and NEISS from January 1, 1990 to May 17, 2000. The search was limited to children under 6 years of age.

[6] Bunk beds were not included in this data.

Wall Side Incidents

There were 271 deaths involving children 1 month to 5 years old from January 1, 1990 to May 17, 2000 involving an incident on the wall side of the bed[7]. The deaths on the wall side included entrapments between the wall and bed/mattress; incidents between the wall and bed/mattress where entrapment was not indicated; and falls from the bed/mattress out of a window.[8] Table 2 shows a breakdown of these wall side deaths.

Table 2: Wall Side Deaths Involving Beds/Mattresses Involving Children 0-5 Years of Age 1/1/90 to 5/17/00

Total	**271**
Entrapments Between the Bed and Wall/Mattress	233
Incidents Between the Bed and Wall/Mattress with No Entrapment Indicated	30
Falls out of Windows	8

As with the fall deaths mentioned previously, a majority of these wall side incidents (232) involved children under 1 year of age. With the exception of the falls out of windows, almost all of the wall side deaths involved asphyxia. Where the type of bed was mentioned, most were adult beds of varying sizes.

[7] This data did not include bunk beds or incidents that happened at the headboard or footboard of a bed.

[8] Many incidents indicated an entrapment between a mattress and a wall or mentioned the mattress and not a bed specifically. Where it clearly stated that the mattress was on the floor, the case was not used in the count.