



Hazard Screening Report

Nursery Products

(1350, 1500-1530, 1532-1558)

This report and all others in this series are general overviews, which use data taken directly from the CPSC data files for the purpose of comparison among the products. No recoding or adjusting of the data is performed. For this reason, estimates of injuries provided in this report will differ from estimates presented in other documents produced by Epidemiology staff working in specific program areas. The figures presented here are not intended to compare to other reports outside this series of hazard screening reports. The views expressed in this report are those of CPSC staff, have not been reviewed or approved by, and may not reflect the views of the Commissioners.

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Natalie Marcy, B.S.
George Rutherford, M.S.
Alberta Mills, B.A.

CPSC/CPH/CPA
NO MFRS/PRVT LBS OR
PRODUCTS IDENTIFIED
EXCEPTED BY: PETITION
RULEMAKING ADMIN. PRCDG
WITH PORTIONS REMOVED: *6/10/04*

The Hazard Screening Project

As an aid in setting priorities, Consumer Product Safety Commission (CPSC) staff is preparing this series of Hazard Screening Reports. Each report covers a group of related products, such as nursery equipment, house wares, etc.

These reports follow a common format that allows readers to compare the risk for different types of products within a given category. Significantly, CPSC staff has also developed a measurement tool that allows comparisons of risks from products in different categories. This feature, called “Maximum Addressable Cost Estimates,” is explained more fully below. CPSC managers plan to use this information to set priorities for efficient use of resources.

Each Hazard Screening Report contains information on the estimated number of injuries and deaths associated with the type of products covered in that report. A graph shows the frequency of emergency-room treated injuries over time. This is followed by a pie chart showing the distribution of injuries by the source of the hazard, such as mechanical, fire, electrical, chemical and other. CPSC staff also estimates the total “cost” to society of each type of product. This includes the cost of injuries, deaths and property damage associated with the products.

To facilitate comparisons of risk between different types of products, CPSC staff has developed Maximum Addressable Cost Estimates. These build on the concept of “addressable” cost. Simply put, the “addressable” cost is the portion of the total cost that could possibly be reduced by some action that CPSC could take. Many of consumer injuries are not addressable. For example, if a boy trips over a rake in the driveway, any injury he suffers could be associated with the category of Yard and Garden Equipment. But it is very unlikely that such injuries could be prevented by changing the design of rakes. By eliminating these unaddressable costs from consideration, we are able to focus on what’s left -- the costs that we might be able to do something about. The name “Maximum Addressable Cost Estimates” is intended to emphasize that these estimates are upper limits of the cost that might be successfully addressed. It should also be stressed that the term does not necessarily mean that there is any existing method or technology for reducing the costs. For a more detailed explanation of this subject, please refer to the individual Hazard Screening Reports.

CPSC staff plans to complete 20 reports in 2005. As each report is completed there will be an active link to it on the CPSC website. All reports are in Portable Document Format (PDF). The 20 reports that will comprise the complete set are:

- Home Workshop Apparatus, Tools and Attachments
- Yard and Garden Equipment
- Toys
- Nursery Products
- Children’s Outdoor Activities and Equipment
- Major Team Sports
- Injuries to Persons 65 and Older

House wares and Kitchen Appliances
Recreational Cooking and Camping Products
Home Communication, Entertainment and Hobby Products
General Household Appliances
Home Furnishings and Fixtures & Home Alarm,
Escape and Protection Devices
Sports (minus major team sports)
Personal Use Items
Heating, Cooling and Ventilating Equipment
Packaging and Containers for Household Products
Miscellaneous Products
Home Structures and Construction Materials
Home and Family Maintenance Products – Household Chemicals
Drugs

These reports will be useful to individuals and organizations who are seeking reliable information about estimated deaths, injuries, and costs associated with consumer products and to CPSC's staff and Commissioners, who need objective data to identify candidates for future activities to reduce deaths and injuries.

CAUTION!

The report addresses the question of addressability of injuries by attempting to identify those injuries which are incidental and not addressable by mandatory or voluntary standards or by other action which the CPSC could take. Those injuries which remain are referred to as maximum addressable.

To know the actual addressability of the hazards associated with a product usually requires a detailed study of the problem, and the product. This level of study is not feasible for this type of overview report. What we do instead is try to eliminate those injuries and deaths which involve the product only marginally or incidentally. The remaining injuries are then run through the Injury Cost Model, to produce an estimate of *maximum* addressable costs.

The maximum addressable cost estimate does not necessarily represent the injury and death costs that the CPSC might actually be able to prevent each year through some type of action. It represents only a target population from which any successful prevention will have to come.

Therefore, while the report states that the maximum addressable percentage of the costs is about 64%, it would be incorrect to say that 64% of the injuries or 64% of the costs are addressable.

For example: If a child falls out of a stroller, but we have no information about whether the child was fastened in the stroller by the parent, or climbed into an unattended stroller by himself, we would count that injury as in the maximum addressable category. It may not be addressable; we just don't have enough information to rule it out.

Maximum addressable injury estimates include every case that we could not clearly rule out as incidental. They do not represent the number or percent of injuries that could actually be prevented.

Introduction

This report provides overall injury and death figures associated with Nursery Products. The first information presented is a summary of the injury, death and cost data for the entire class of products. A trend graphic (figure 1) is presented which shows the frequency of estimated emergency room-treated injuries since 1997. This is followed by a chart (figure 2) showing the distribution of the injuries for this class of products by energy source of the hazard, i.e., mechanical, fire, electrical, chemical, or other. There is also a summary table, which shows the injuries, deaths, and costs associated with each product group. This overview is one of a series of hazard screening reports. Each report provides information in a similar format to allow product and hazard comparison, both within and among the reports. The views expressed in this report are those of CPSC staff, have not been reviewed or approved by, and may not reflect the views of the Commissioners.

Nursery Products

Individual Product Categories

Carriages and strollers

Infant carriers and seating

(Includes: car seats, baby carriers or slings, baby carriers not specified, other baby carriers, baby bouncer seats)

Child seating

(Includes: youth chairs, potty chairs or training seats, high chairs, attachable high chairs (including booster seats))

Cribs and playpens

(Includes: playpens, portable cribs, car beds, bassinets or cradles, baby mattresses or pads, cribs (excluding portable cribs), cribs not specified)

Miscellaneous

(Includes: diapers, diaper pails, night-lights, crib extender rails or youth bed rails, shoelace fasteners, diaper fasteners, safety pins)

Parent tools

(Includes: baby bottles or nipples, bottle warmers, sterilizers, baby scales, baby harnesses)

Rattles, squeeze toys, pacifiers, and teethingers

Baby changing tables

Baby gates or barriers

Baby walkers or jumpers

Baby exercisers

Crib mobiles or crib gyms

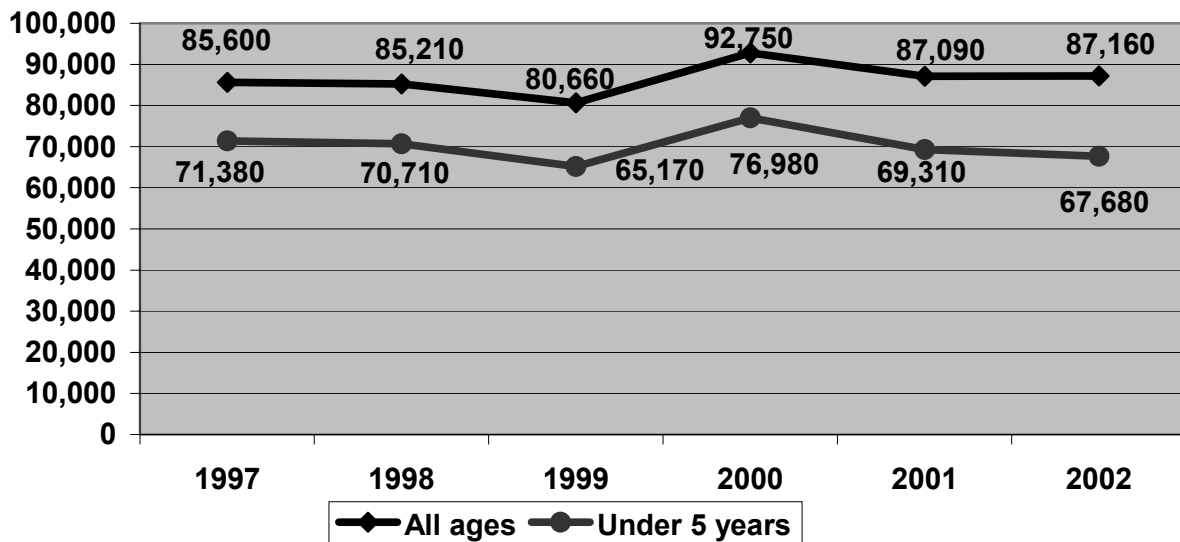
Portable baby swings

Baby baths, bathtub seats or rings

Overview: Nursery Products (1350, 1500-1530, 1532-1558)

ER Treated Injuries 2002	87,160	Percent of Households	not applicable
Medically Treated Injuries 2002	206,600	Number of Products in Use	not available
Percent of ER Treated Hospitalized	3.92%	Estimated Useful Life	not applicable
Deaths 2000	81	Estimated Retail Price Range	not applicable
Number of Incident Reports 2002	1,707	Death Costs (Millions)	\$405
Cost of Medically Treated Injuries (Millions)	\$5,471.5	Total Known Costs (Millions) ¹	\$5,876.5.6

Figure 1: Six year trend in emergency room treated injuries associated with nursery products, 1997-2002

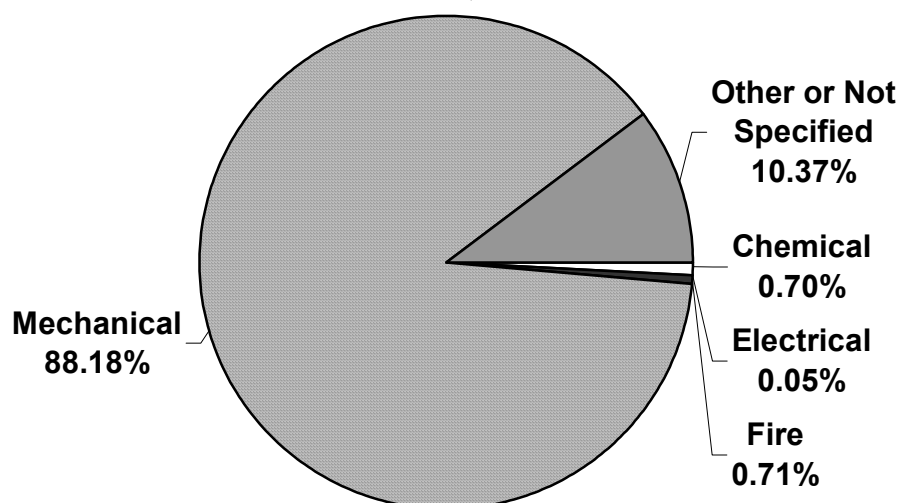


Source: National Electronic Injury Surveillance System (NEISS), 1997 – 2002

From 1997 to 2002, the estimated number of emergency room-treated injuries increased by 1,560. This is not a statistically significant change ($p=.8153$).

¹ This total represents an index rather than an actual single year estimate of costs, because injury costs are based on 2002 and death costs are based on 2000. These are the most recent years for which each of these cost items was available.

Figure 2. Distribution of Emergency Room-Treated Injuries by Energy Source of the Hazard for Nursery Products, 2002



Source: National Electronic Injury Surveillance System (NEISS), 2002

Emergency room-treated injuries by age groups, 2002

	Under 5 years	5 to 9 years	10 and older
Injury estimate ²	67,680	2,820	16,640

Source: National Electronic Surveillance System (NEISS), 2002

Deaths

For 2000, CPSC has reports of 81 deaths associated with these products. Forty-four of these deaths were associated with cribs and playpens. Sixteen were associated with baby baths, bathtub seats or rings and eleven with infant carriers and seating. There were three deaths associated with child seating, two with carriages and strollers, one with baby gates or barriers, and four with miscellaneous nursery products. Sixty-nine of the deaths were included in the maximum addressable category (see page 7 for description of this category). See Table 2 for the number of deaths in each product category included in the maximum addressable category.

Population Data

The majority of injuries associated with nursery products were sustained by children under the age of five. These products are intended for use by or with children under the age of five. Therefore, it is relevant to compare the yearly injury frequency with the US population for children under the age of five (Table A, Figure A) and with the number of live births each year (Table B). There is no indication, in the population data for children under five, of a dramatic increase or decrease that would have an affect on the yearly injury frequency.

² Numbers are rounded to the nearest tens.

Table A. Population of Children Under the Age of 15 Years, by Year, 1997 – 2002, Three Age Groups, (in thousands)

	1997	1998	1999	2000	2001	2002
Under 5	19,099	18,989	18,942	19,212	19,364	19,609
5-9 years	19,754	19,929	19,947	20,476	20,208	19,901
10-14 years	19,097	19,242	19,548	20,601	20,910	21,136
Total	57,950	58,160	58,437	60,289	60,482	60,646

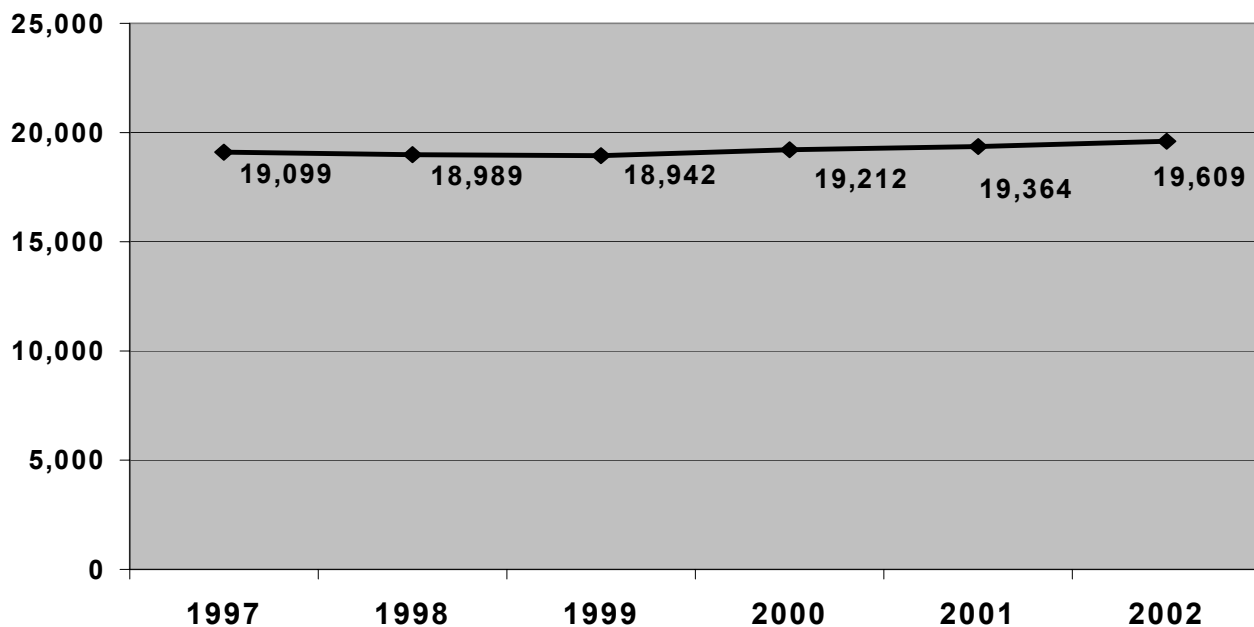
Source: National Vital Statistics Report, 1997 - 2002

Table B. Number of Live Births in the United States, by Year 1997 – 2002

	1997	1998	1999	2000	2001	2002
Number of Live Births	3,880,894	3,941,553	3,959,417	4,058,814	4,025,933	4,019,280

Source: National Vital Statistics Report, 1997 - 2002

Figure A. Estimated Population, in Thousands, of Children Less than 5 Years of Age, by Year, 1997 -2002



Source: National Vital Statistics Report, 1997 - 2002

Overview

The increase of 1,560 injuries over the 6-year period, 1997 – 2002, was not a statistically significant increase ($p=.8153$).

Table 1 provides a summary of all the product groups examined for this report. This table provides information on the number of emergency room-treated injuries, the number of medically-treated injuries, the percentage of the emergency room-treated injuries that resulted in admission to the hospital, the number of incident reports received, the number of deaths reported, the number of products of each type in use, the estimated useful product life for each category, the costs associated with deaths and medically-treated injuries, and the total of these two cost estimates. The figures include all ages unless noted otherwise.

Addressability

While it is useful to know the number of injuries, deaths, and related costs associated with a product, it is also important to have an estimate of how much of the associated social cost might actually be addressed through some action. Many of the injuries treated in emergency rooms that were related to nursery products may not be addressable because the injury was sustained to an adult or had only incidental product involvement. To know the actual addressability of the hazards associated with a product usually requires detailed study of the problem, and the product. This level of study is not feasible for this type of overview report. What we have done is to identify that portion of the injury and death costs that is not addressable through case by case review. The remaining injuries were then run through the Injury Cost Model, to produce an estimate of *maximum* addressable costs.

The maximum addressable cost estimate does not necessarily represent the injury and death costs that the CPSC might actually be able to prevent each year through some type of action. It represents only a target population from which any successful prevention will have to come.

The reason for doing this kind of review is to identify situations such as the following example and allow us to focus on the areas where CPSC action could have some effect.

For instance, the category carriages and strollers is ranked third with regard to total injury costs. Fourteen percent of the injuries were to someone five years of age or older. Many of the injuries to adults had only incidental product involvement. There is very little action CPSC could take to reduce injuries sustained by adults from tripping over a stroller. Thus, these injuries are considered to have only incidental product involvement and are not included in the maximum addressable injury and cost estimates. However, age of the injured person is not reason alone to remove an injury from the maximum addressable figures. If an adult lacerated his/her finger while collapsing a stroller, this injury was included in the maximum addressable figures.

The staff reviewed the narratives included in National Electronic Injury Surveillance System (NEISS) injury reports, and reviewed the death reports.³ Because the NEISS narratives are brief and often do not provide much detail, cases were categorized as “not addressable” only if it was clear that the injury was incidental or not related to the product. If, for example, a case involving a high chair resulted in an injury from a fall, this was not enough information to conclude that the case wasn’t addressable. Such cases would be in the maximum addressable category. The death reports often had more information, allowing for better determination of addressability.

To control for the possibility that there may be a difference between costs associated with addressable injuries and costs associated with non-addressable injuries, the addressable injuries were run through the Injury Cost Model. This provides both maximum addressable cost estimates for emergency room-treated injuries and medically attended injuries. Deaths were also reviewed and determined to be in either the not-addressable or maximum addressable category, and were valued at \$5 million dollars each. This value of \$5 million dollars for each death is consistent with current economic literature which usually expresses the value as ranging from \$3 million to \$7 million. For ease of tabulation, we have used the midpoint of this range. The maximum addressable cost estimate for medically attended injuries is added to the maximum addressable cost estimate for the deaths to obtain the total maximum addressable cost estimate. Table 2 shows the percentage of medically attended injuries included in the maximum addressable category for each product group. It also shows how many of the deaths reported were included in the maximum addressable category.

Overall, after applying this process of review of the data to the entire category of nursery products, we find that the total maximum addressable injury and death cost is \$3.7 billion dollars, out of a total cost associated with these products of \$5.9 billion dollars, which is about 64%⁴ maximum addressable. Note that the percentage of addressable injuries is different than the percentage of addressable costs. The cost estimates are derived from a number of variables associated with each injury⁵, so two cases may have the same weight but different cost estimates. Thus, the cost estimates do not have a one-to-one relationship with the injury estimates.

Figure 3 shows the index⁶ of estimated injury and death costs for each of the product categories and the estimated maximum addressability of those costs.

³ See Methodology Section for a description of these databases.

⁴ Based on the more precise totals provided in Table 3.

⁵ See Methodology Section for more description of how the cost estimates are computed.

⁶ This total represents an index rather than an actual single year estimate of costs, because injury costs are based on 2002 and the death costs are based on 2000. These are the most recent years for which each of these cost items was available.

Table 1: Product Summary Table – Injury, Death, and Cost Estimates

Product	Codes	ER Injuries 2002	All Medically Treated Injuries 2002	Hosp.% 2002	Incident reports 2002	DTHS 2000	# of Products in Use (millions)	Estimated Useful Product Life (Years)	Death Costs (millions)	Estimated Retail Price Range (\$)	Med. Trtd. Injury Costs (millions \$)	Total Known Costs (millions)
Carriages and Strollers	1505, 1522	13,040	29,990	3.4%	209	2	10.12	1 to 3	\$10	\$30-\$600+	\$772.3	\$782.3
Infant carriers and seating	1519, 1527, 1548, 1549, 1558	22,150	53,710	5.4%	245	11	17.4	1 to 4	\$55	\$15-\$150	\$1,863.2	\$1,918.2
Child Seating	1518, 1535, 1555, 1556	10,110	22,740	2.4%	208	3	8.9	3	\$15	\$50-\$200	\$582.1	\$597.1
Cribs and Playpens	1513, 1529, 1534, 1537, 1542, 1543, 1545	14,830	34,750	2.6%	470	44	39.92	1 to 3	\$220	\$30-\$250+	\$858.3	\$1,078.3
Miscellaneous	1512, 1528, 1533, 1536, 1539, 1551, 1554	5,900	13,260	4.7%	85	4	N/A	N/A	\$20	N/A	\$270.5	\$290.5
Parent Tools	1509, 1510, 1511, 1515, 1524	3,250	7,070	4.2%	33	0	N/A	N/A	\$0	N/A	\$128.6	\$128.6
Rattles, Squeeze Toys, Pacifiers, and Teethers	1350, 1517, 1525	1,190	2,570	5.8%	127	0	12	1	\$0	\$2 - \$25	\$44.6	\$44.6
Baby Changing Tables	1502	2,780	6,460	0.8%	22	0	4.8	2	\$0	\$25-\$300+	\$147.6	\$147.6
Baby Gates or Barriers	1506	6,660	18,110	1.1%	47	1	N/A	N/A	\$5	N/A	\$286.4	\$291.4
Baby Walkers or Jumpers	1508	5,310	12,360	6.0%	63	0	4	1	\$0	\$20-\$100	\$377.5	\$377.5
Baby Exercisers	1520	100	210	**	61	0	N/A	N/A	\$0	N/A	\$2.6	\$2.6
Crib Mobiles or Crib Gyms	1526	0	0	n/a	25	0	3.6	1	\$0	\$15-\$35	\$0.0	\$0.0
Portable Baby Swings	1553	2,060	4,640	1.1%	55	0	3	1	\$0	\$35-\$80	\$90.0	\$90.0
Baby Baths, Bathtub Seats or Rings	1544, 1557	330	730	**	57	16	N/A	N/A	\$80	N/A	\$47.8	\$127.8
Total		87,160 ⁷	206,600	3.9%	1,707	81					\$5,471.5	\$5,876.5

** Sample size is too small to report percentage.

N/A – Not available, n/a- not applicable, there is no actual product to estimate number in use or product life

Descriptions of how these estimates were derived can be found in the Methodology Section.

\$405

⁷ Some cases appear in more than one category. Thus, numbers may not add to totals.

Table 3 lists the product groups ranked in descending order by the Total Injury and Death Costs Index. This table also shows the total maximum addressable cost for each product group. For those product groups where there was an estimate of number of products in use, the maximum addressable cost per unit was calculated by dividing the maximum addressable cost estimate by the number of products in use. Rankings of the product groups on totals costs, maximum addressable costs, and maximum addressable cost per unit are also provided.

The main hazard pattern for nursery products is falls, which accounted for 37%⁸ of the emergency room-treated injuries in 2002, and were included in the maximum addressable figures. Although some of these falls may not be addressable, they were included in the addressability estimates because we could not be certain, due to the brevity of the narratives, that they are not addressable. Twenty-two percent of the nursery product-related injuries were sustained by people five years of age and older. For the most part, these injuries are not addressable because they were sustained by people who are not the intended user of these products.

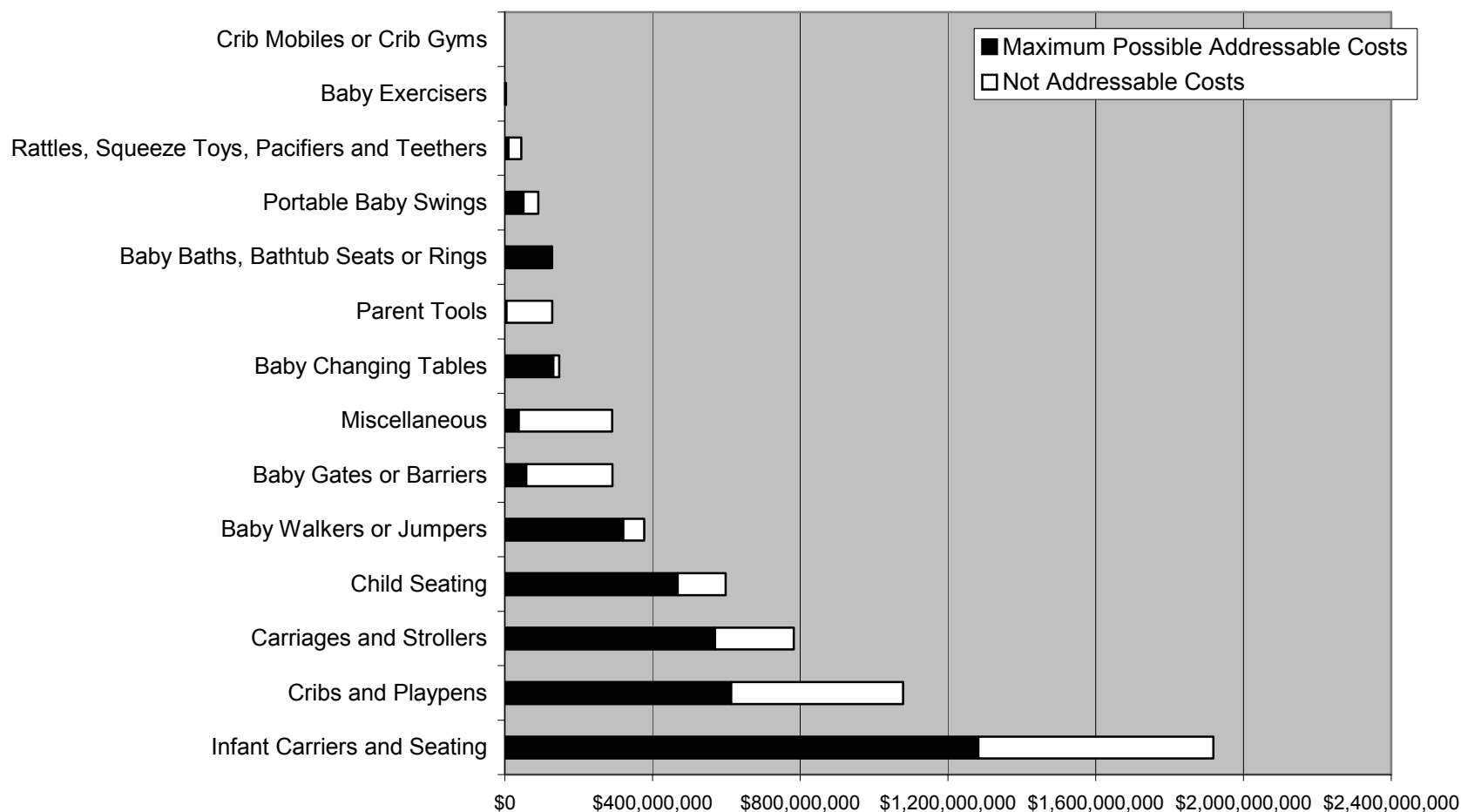
Products and hazards identified for which a new study or hazard reduction activity may be appropriate are noted below:

Infant carriers and seating: This product category ranks first in total injury and death costs. There has been a statistically significant increase in injuries from 1997 to 2002. Half of the injuries were due to falls, which may or may not be addressable. A NEISS based special study could provide more information about how these falls and other injuries are happening and any possible actions CPSC might take to prevent them.

Many of the nursery products have been the subject of significant CPSC activity over the past 30 years. This has resulted in a dramatic decline in deaths (cribs, playpens, rattles, pacifiers) and in injuries (baby walkers). For most of the products in this category, continuing the current strategy for identifying and addressing hazards through Compliance action or voluntary/mandatory standard work appears to be adequate.

⁸ In some product categories, falls are not addressable injuries and are not included in this figure.

Figure 3. Estimated Cost Index in Millions of Dollars, Nursery Products, by Total Costs



Source: National Electronic Injury Surveillance System (NEISS), 2002, Injury, Potential Injury, and Incident database (IPII), 2002, Death Certificate database (DCRT), 2000

NOTE: This estimate of maximum addressability does not necessarily represent the number of injuries or deaths or costs that the CPSC might actually be able to prevent each year through some type of action. It represents only a target population from which any successful prevention will have to come.

The data presented in this graphic are also contained in Table 3 under the headings “Total injury and death costs” and “Total maximum addressable costs”

Table 2: Product Hazard Addressability

Product	Codes	Percentage of injuries included in Maximum Addressable	Maximum Number of Addressable Deaths/ Total Deaths Reported
Carriages and strollers	1505, 1522	66%	1/2
Infant carriers and seating	1519, 1527, 1548, 1549, 1558	54%	10/11
Child seating	1518, 1535, 1555, 1556	71%	2/3
Cribs and playpens	1513, 1529, 1534, 1537, 1542, 1543, 1545	43%	36/44
Miscellaneous	1512, 1528, 1533, 1536, 1539, 1551, 1554	13%	3/4
Parent tools	1509, 1510, 1511, 1515, 1524	8%	0
Rattles, squeeze toys, pacifiers, and teething	1350, 1517, 1525	22%	0
Baby changing tables	1502	89%	0
Baby gates or barriers	1506	22%	1/1
Baby walkers or jumpers	1508	77%	0
Baby exercisers	1520	n/a	0
Crib mobiles or crib gyms	1526	n/a	0
Portable baby swings	1553	43%	0
Baby baths, bathtub seats, or rings	1544, 1557	n/a	16/16
Total		51%	69/81

The percentages presented in this table are the percents of injuries, not costs, included in the maximum addressable category. These percentages cannot be directly compared to maximum addressable costs because the costs, while deriving from the same cases, take into account a number of variables, not just case weight. For more information on how these cost estimates are derived, refer to the methodology section at the end of this report.

In the two pages that follow, the maximum addressable definitions for each product category are presented. While reading the injury/death narratives to determine addressability, hazard patterns were also coded. The hazard patterns determined to be un-addressable were removed and those that remained make up the maximum addressable definitions.

Maximum Addressability Definitions Used for Each Class of Products - Injuries

Carriages and strollers: body part caught, collapse, fell (no additional detail provided), injury occurred after child stood up in stroller, tip over, unspecified hazard pattern

Infant carriers and seating: body part caught, cut on infant carrier, falls involving children under the age of 2 (no additional detail provided), handle unlatched, tip over

Child seating: child fell backwards out of high chair, body part caught, cut on high chair, fell out of chair, child got out of restraint on chair, tip over

Cribs and playpens: child climbed out of crib/playpen (under 2 years of age), part broke on crib/playpen, fell (under 2 years of age, no additional detail provided), cut on sharp edge/point, tip over

Miscellaneous:

bed rail- body part caught, broken part, cut, fell

night light- bulb exploded, burn, broken part, sharp edge

Parent tools: broken part, cut on sharp edge/point, rubber allergy, electric shock

Rattles, squeeze toys, pacifiers, and teethingers: child pinched on pacifier clip, choking hazard

Baby changing tables: body part caught, cut, child fell off table, tip over

Baby gates or barriers: unspecified hazard, body part caught, child climbed over gate, child fell over gate (6 years old or younger), gate fell, child able to push gate out of place, child opened gate

Baby walkers or jumpers:

walker- body part caught, child climbed out of walker, child fell from/out of walker, walker went down steps, tip over, unspecified hazard

jumper- choking hazard (small part broke off), jumper became unhooked, child fell out of jumper, unspecified hazard

Portable baby swings: something broke on swing, swing collapsed, child fell out of swing, tip over, unspecified hazard

The following product categories had too few (or no) emergency room-treated injuries in 2002 to determine addressability: baby exercisers, crib mobiles or crib gyms, and baby baths, bathtub seats or rings.

Maximum Addressability Definitions Used for Each Class of Products – Deaths

Carriages and strollers: positional entrapment between cross bar and pillow

Infant carriers and seating: face down in carrier/car seat, unspecified hazard, carrier/car seat tipped over, entangled in restraint straps

Child seating: positional asphyxiation

Cribs and playpens: unspecified hazard, head entrapment, airway obstruction by bedding, face down on bedding, caught between mattress and side of crib,

Miscellaneous: caught between bed rail and mattress, caught head and neck on bed rail

Baby gates or barriers: struck by falling baby gate

Baby baths, bathtub seats or rings: drowned in baby bathtub (no additional details provided), drowned while unattended in baby bath seat (no additional details provided), bath seat tipped over

The following product categories had no reported deaths in 2000, so there is no addressability definition used with this report: parent tools, rattles, squeeze toys, pacifiers, and teethers, baby changing tables, baby walkers or jumpers, baby exercisers, crib mobiles or crib gyms, and portable baby swings.

Table 3 - Calculation of Indices using cost estimates from Injury Cost Model, Death Certificates File, and Estimates of Number of Products in Use.

Title	Medically Attended Injury Costs (Millions)	Total Death Costs (Millions)	Total Injury and Death Costs (Millions)	Total Maximum Addressable Costs (Millions)	Rank on Total Costs	Rank on Maximum Addressable Costs	Products in Use (Millions)	Maximum Addressable Costs per Unit	Rank on Maximum Addressable Costs per Unit
Infant carriers and seating	\$1,863	\$55	\$1,918	\$1,282	1	1	17.4 ⁹	n/a	n/a
Cribs and playpens	\$858	\$220	\$1,078	\$613	2	2	39.92	\$15.36	6
Carriages and strollers	\$772	\$10	\$782	\$569	3	3	10.12	\$56.23	2
Child seating	\$582	\$15	\$597	\$468	4	4	8.9 ¹⁰	\$52.58	3
Baby walkers or jumpers	\$378	\$0	\$378	\$321	5	5	4 ¹¹	\$80.25	1
Baby gates or barriers	\$286	\$5	\$291	\$58	6	8	N/A	N/A	n/a
Miscellaneous	\$270	\$20	\$291	\$37	7	10	N/A	N/A	n/a
Baby changing tables	\$148	\$0	\$148	\$131	8	6	4.8	\$27.29	4
Parent tools	\$129	\$0	\$129	\$4	9	12	N/A	n/a	n/a
Baby Baths, Bathtub Seats or Rings	\$48	\$80	\$128	\$127	10	7	N/A	N/A	n/a
Portable baby swings	\$90	\$0	\$90	\$50	11	9	3	\$16.67	5
Rattles, squeeze toys, pacifiers and teething	\$45	\$0	\$45	\$10	12	11	12	\$0.83	7
Baby exercisers	\$3	\$0	\$3	\$1	13	13	N/A	N/A	n/a
Crib mobiles or crib gyms	\$0.0	\$0	\$0	\$0	14	14	3.6	N/A	n/a
Total	\$5,472	\$450	\$5,878	\$3,741					

These “total injury and death costs” estimates and “total maximum addressable costs” estimates are indices, not actual estimates of cost and expected injury cost reduction. This is because injury cost estimates and addressability estimates are based on 2002 emergency room-treated injury reports, and death cost estimates are based on deaths reported which occurred in 2000. Estimates of number of products in use are also imprecise estimates. These cost figures were developed, using the data available, to provide indices for the purpose of comparison. They do not represent an actual estimate of the costs associated with any of the product groups for a specific year.

⁹ Economics data includes car seats but not bouncer seats.

¹⁰ Economics data only includes high chairs.

¹¹ Economics data also includes baby exercisers.

Methodology

NEISS

The Commission operates the National Electronic Injury Surveillance System (NEISS), a probability sample of 98 U.S. hospitals with 24-hour emergency rooms (ERs) with more than six beds. These hospitals provide CPSC with data on all consumer product-related injury victims seeking treatment in the hospitals' ERs. Injury and victim characteristics, along with a short description of the incident, are coded at the hospital and sent electronically to CPSC.

Because NEISS is a probability sample, each case collected represents a number of cases (the case's *weight*) of the total estimate of injuries in the U.S. The weight that a case from a particular hospital carries is associated with the number of hospitals in the U.S. of a similar size. NEISS hospitals are stratified by size based on the number of annual emergency-room visits. NEISS comprises small, medium, large and very large hospitals, and includes a special stratum for children's hospitals.¹²

CPSC's Death Certificate Database

CPSC purchases death certificates from all 50 states, New York City, the District of Columbia and some territories. Only those certificates in certain E-codes (based on the World Health Organization's International Classification of Diseases ICD-10 system) are purchased. These are then examined for product involvement before being entered into CPSC's death certificate database. This is not a statistical sample and therefore cannot be used to estimate the number of deaths in the U.S. associated with each product. The number of deaths for each product is at least a minimum count. To obtain a count of fatalities associated with each product category, the death certificate data was combined with the deaths found in the IPII (discussed below) database. The cases were then reviewed to eliminate duplicates and determine addressability.

Death certificate collection from the states takes time. Data for 2001 and 2002 were not complete when this report was prepared.

CPSC's Injury or Potential Injury Incident File (IPII)

IPII is a CPSC database containing reports of injuries or potential injuries made to the Commission. These reports come from news clips, consumer complaints received by mail or through CPSC's telephone hotline or web site, Medical Examiners and Coroners Alert Program (MECAP) reports, letters from lawyers, and similar sources. While the IPII database does not constitute a statistical sample, it can provide CPSC staff with guidance or direction in investigating potential hazards. Since cases in this database may come from a variety of sources, some cases may be listed multiple times. To obtain a more accurate count of the number of reported incidents associated with each product, they were reviewed to eliminate duplicates.

¹² Kessler, Eileen and Schroeder, Tom. The NEISS Sample (Design and Implementation). U.S. Consumer Product Safety Commission. October 1999.

CPSC's Injury Cost Model

The Injury Cost Model (ICM) is a computerized analytical tool designed to measure the direct and indirect costs associated with consumer product-related injuries. In addition to providing a descriptive measure of injury hazards in monetary terms, the ICM is also used to estimate the benefits of regulatory actions designed to reduce consumer product injuries and to assist the Commission in planning, budgeting, and evaluating projects.

The ICM is structured to measure the four basic categories of injury costs: medical costs, work losses, pain and suffering, and product liability and legal costs. Medical costs include doctor and hospital-related costs as well as costs for diagnostic procedures, prescription drugs, equipment, supplies, emergency transportation, follow-up care, and administrative costs. Both the initial treatment costs and the costs of long term care are included in the medically-treated injury costs.

Work-related losses represent the value of lost productivity, the time spent away from normal work activities as the result of an injury. Work-related losses include both the short-term losses resulting from being absent from work and the long-term losses resulting from permanent partial or total disability and their impact on lifetime earnings. They also include the value of work lost as a result of caring for injured children, the value of housework lost due to an injury, and the loss to the employer resulting from the disruption of the workplace.

Pain and suffering represents the intangible costs of injury, and is based on jury verdicts for consumer product-related injuries. Product liability and legal costs represent the resources expended in product liability litigation. These costs include the costs of administering the product liability insurance system (including the plaintiff's legal costs and the costs of defending the insured manufacturer or seller), the costs of claims investigation and payment, and general underwriting and administrative expenses; however, medical, work loss, and pain and suffering compensation paid to injury victims and their families is excluded, thus avoiding double counting.

The ICM estimates the costs of injuries reported through the NEISS, a national probability sample of hospital emergency departments. The injury cost estimates depend on a number of factors, and vary by the age and sex of the injured person, the type of injury suffered, the body part affected, and whether or not the victim was hospitalized, held for observation, transferred, or treated and released. The ICM also uses empirically derived relationships between emergency department injuries and those treated in other settings (e.g. doctor's offices, clinics) to estimate the number of injuries treated outside hospital emergency departments and the costs of those injuries.

A number of databases are used to calculate the four cost categories. National discharge data and discharge data from six states are used to estimate the costs of hospitalized injuries. Data from the Civilian Health and Medical Program of the Uniformed Services (CHAMPUS) (which includes medical records from almost two million retirees and civilian dependents of military personnel) and several National Center for Health Statistics surveys dealing with costs of treatment in different medical settings are used to calculate medical costs for injuries where the victim is treated and released from the emergency department or treated in a clinic or doctor's office. Other major data sources include the Annual Survey of Occupational Illnesses and Injuries and the Detailed Claims Information (DCI) database for work loss estimates; and the Jury Verdicts Research data for pain and suffering estimates. Product liability and legal costs are derived analytically from insurance industry information and several studies of product liability.

To determine the maximum addressable cost estimate, the injury narratives were read to determine which would not be addressable¹³. The remaining injuries were then run through the ICM, producing the estimate of maximum addressable costs.

Product Population Estimates- Economics Data

These estimates provided by Economics staff are not based on sales, as they are in some other Hazard Screening Reports, but on reported ownership cited in the Baby Products Tracking Study, 2003¹⁴. This study found that 40% to 70% of the baby products in use were either borrowed or from an older sibling. In order to estimate the number in actual use, Economics staff relied on past estimates, as well as input from the Human Factors Division on the length of time the products would likely be used. It should be noted that, in order to reconcile the number in use with yearly injury statistics, we have assumed that a product with an 18-month period of use would have been used in two separate injury periods, and thus two years of use.

¹³ See page 7, the discussion on addressability for more information on this process.

¹⁴ Study conducted by David Burnett & Associates for American Baby Group.