



United States  
**Consumer Product Safety Commission**

# Injuries and Deaths Associated with Nursery Products Among Children Younger than Age Five

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*This report was prepared by the CPSC staff.  
It has not been reviewed or approved by,  
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the Commission.*

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# Executive Summary

U.S. Consumer Product Safety Commission (CPSC) staff presents in this report statistics regarding injuries and deaths associated with nursery products among children younger than the age of 5 years, based on the most recently available information.<sup>1</sup>

## Emergency Department-Treated Injuries:

- In 2021, there were an estimated 53,000 emergency department-treated injuries associated with (*i.e.*, in use at the time of incident), but not necessarily caused by, nursery products among children younger than 5 years of age. This translates to an injury rate of an estimated 281 injuries per 100,000 children under the age of 5 years.<sup>2</sup> The increase from the total 2020 injury estimate is statistically significant and is presumed to reflect a reduction in emergency department avoidance due to COVID-19 that was apparent in 2020.<sup>3</sup>
- High chairs, cribs/mattresses, infant carriers, and strollers/carriages were associated with 63 percent of the total estimated injuries. Falls were the leading cause of injury; and the head, followed by the face, was the body part injured most frequently. A diagnosis of internal organ injury, contusion/abrasion, or laceration was associated with most of the injuries.
- A trend analysis based on the 3 years from 2019 through 2021 does not show any statistically significant trend in the injury estimates. A longer-term trend analysis over the period 2017 through 2021 does not show any statistically significant trend either.
- A review of the estimated injuries by victims' demographic characteristics shows that:
  - For 2019–2021, on average, race information is known in about 60 percent of the injuries, while ethnicity information is known in about 44 percent of the injuries.
  - Where information is available, the injury and population distributions by race appear to be closely aligned for each year from 2019 through 2021.
  - Ethnicity data are insufficient to allow for presentation of any estimates.

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<sup>1</sup> Not all these incidents are addressable by an action the CPSC could take; however, it was not the purpose of this report to evaluate the addressability of the incidents, but rather, to update estimates of emergency department-treated injuries and to quantify the number of fatalities reported to CPSC staff.

<sup>2</sup> The population data for the denominator is available at the U.S. Census Bureau website: <https://www.census.gov/data/datasets/time-series/demo/popest/2020s-national-detail.html>; Annual Estimates of the Resident Population by Single Year of Age and Sex for the United States: April 1, 2020 to July 1, 2021 (NC-EST2021-AGESEX-RES); last revised June 30, 2022.

<sup>3</sup> Schroeder, T. and Cowhig, M., "[Effect of Novel Coronavirus Pandemic on 2020 NEISS Estimates](#)", March-December, 2020

## Fatalities:

- CPSC staff has reports of 443 deaths during the 3-year period from 2017 to 2019—an annual average of 148 deaths among children younger than age 5—associated with (*i.e.*, in use at the time of incident), but not necessarily caused by, nursery products.
- Cribs/mattresses, playpens/play yards, bassinets/cradles, infant carriers, and inclined infant sleep products were associated with 82 percent of the fatalities reported.
- Causes of death included positional asphyxia, strangulation, and drowning, among others. In some instances, the fatalities were attributed to the product; in other cases, the fatalities resulted from a hazardous environment in or around the product, or a combination of contributions.

CPSC staff has evaluated the incidents characterized in the annual reports on nursery products for many durable infant and toddler products, along with other reported incidents, to assess the efficacy of voluntary standards. These evaluations have supported the staff's work with standards development organizations to refine these standards, and likewise, supported staff briefing packages for notices of proposed rulemaking (NPRs) and final rules under section 104 of the Consumer Product Safety Improvement Act of 2008 (CPSIA).<sup>4</sup> Early in fiscal year (FY) 2022, the Commission issued a final rule establishing a new standard for Crib Mattresses, which took effect August 15, 2022. The final rule for Infant Sleep Products became effective on June 23, 2022. The Commission also issued revised rules on Infant Swings, Carriages and Strollers, High Chairs, Baby Changing Products, Infant Bath Tubs, Frame Carriers, Slings, and Bouncer Seats in FY 2022.

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<sup>4</sup> There is much overlap between the products covered by this report and the products subject to rules issued under section 104 of the CPSIA. However, this report covers some nursery products that may not fall within section 104 and some products that are not currently regulated under section 104.

## Introduction

This report presents nursery product-related injury estimates for 2021,<sup>5</sup> as well as comparisons with historic injury estimates. Detailed information on deaths associated with nursery products that reportedly occurred during the 3-year period from 2017 to 2019, is also presented. Note that reporting is ongoing, and the number of reported fatalities for the period of time in this report may change as new reports are received.

## Nursery Product-Related Emergency Department-Treated Injury Estimates

An estimated 53,000 nursery product-related injuries among children younger than 5 years old were treated in U.S. hospital emergency departments (ED) in 2021. Table 1 shows the estimated injuries and the corresponding injury rates for the latest 3 years, as well as the annual averages for this 3-year period. Staff did not observe a trend in injury estimates over the 2019 through 2021 period (p-value= 0.732). The attached Appendix provides annual estimates for 2017 through 2021, as well as more detail about the data-selection processes.

### Table 1

**Estimated Emergency Department-Treated Injuries to Children Under Age Five: 2019–2021**

Calendar Year	Estimated Injuries	Estimated Injury Rates per 100,000 Children <sup>2</sup>
2019	60,600	310
2020	44,600	231
2021	53,000	281
2019 – 2021 Average	52,700	274

Source: NEISS, CPSC.

Note: Estimates rounded to the nearest 100. The average calculation is based on unrounded injury estimates.

Falls were the leading cause of all nursery product-related injuries reported through NEISS for 2021, like previous years. About 68 percent of the total injuries involved the head and the face, which were the body parts injured most frequently. Internal organ injuries, contusions/abrasions, or lacerations were the diagnoses in about 66 percent of the NEISS-reported injuries.<sup>6</sup> Approximately 93 percent of the injuries were treated and released; about 3 percent of the injuries required hospitalization; and 2 percent of the injuries were treated and transferred to a different hospital. These proportions have remained steady over the years; for example, both in 2020, as well as in 2019, 93 to 94 percent of the estimated injuries were treated and released. Any deaths reported through NEISS are included in the fatality discussion that follows.

<sup>5</sup> The source of the injury estimates is the National Electronic Injury Surveillance System (NEISS), a statistically valid surveillance system for collecting injury data. NEISS injury data are gathered from the emergency departments of hospitals selected as a probability sample of all the U.S. hospitals with emergency departments. The surveillance data gathered from the sample hospitals enable CPSC staff to make timely national estimates of the number of injuries associated with specific consumer products.

<sup>6</sup> Beginning in 2018, two diagnoses codes and two injured-body-parts codes are available in NEISS. To date, these newly introduced codes remain uncoded for more 80 percent of the injury reports. They were not used in this analysis.

Table 2 shows the breakdown of injury estimates by different product categories for 2021, along with the injury estimates for 2019 and 2020, for comparison purposes. As in 2020, there were more than 30 product codes associated with the injury estimates in 2021. The associated products have been aggregated into 13 product categories that align with standards development activities as in 2020. The top four categories: high chairs, cribs/mattresses, infant carriers, and strollers/carriages were associated with 63 percent of the total estimated injuries.

There was a statistically significant increase from an estimated total of 44,600 ED-treated injuries in 2020, to 53,000 injuries in 2021. This likely reflects a reversal of the reduction in emergency department avoidance due to COVID-19 that was apparent in 2020.<sup>7</sup> After the lifting of restrictions related to the COVID-19 pandemic, parents/caregivers were probably more likely to take young children to hospital EDs again following an injury. As a result, between 2020 and 2021, increases were observed in every product group except two. Three of the increases, annotated with a “\*\*\*” in Table 2, were statistically significant (p-value < 0.05). The only product groups showing a decrease were the high chairs and baby walkers/jumpers/exercisers categories.

## Table 2

### Estimated Emergency Department-Treated Injuries to Children Under Age Five By Type of Nursery Product: 2020–2021

PRODUCT CATEGORY	ESTIMATED EMERGENCY DEPARTMENT-TREATED INJURIES		
	2019	2020	2021
<b>TOTAL</b>	60,600	44,600	53,000
<b>High Chairs</b>	12,000	10,200	10,100
<b>Cribs/Mattresses</b>	11,800	8,700	9,900
<b>Infant Carriers (Excludes Motor Vehicle Incidents)</b>	7,700	5,900	6,900
<b>Strollers/Carriages</b>	7,200	5,100	6,600
<b>Changing Tables**</b>	3,400	2,600	3,800
<b>Baby Gates/Barriers</b>	3,000	2,500	3,400
<b>Baby Bouncer Seats**</b>	2,800	1,300	2,500
<b>Portable Baby Swings**</b>	2,000	1,200	2,100
<b>Playpens/Play Yards</b>	2,400	1,500	2,100
<b>Baby Walkers/Jumpers/Exercisers</b>	3,000	2,200	1,800
<b>Bassinets/Cradles</b>	--- <sup>8</sup>	---	1,200
<b>Baby Bottles/Warmers/Sterilizers</b>	1,300	---	---
<b>Baby Baths/Bath Seats/Bathinettes</b>	---	---	---
<b>Other<sup>9</sup></b>	1,300	1,400	1,500

Source: NEISS, CPSC. Estimates are rounded to the nearest 100. The injury estimates may not add up to the total due to rounding. Note: “\*\*\*” indicates statistically significant increase from 2020 to 2021 (p-value<0.05).

<sup>7</sup> Schroeder, T. and Cowhig, M., “Effect of Novel Coronavirus Pandemic on 2020 NEISS Estimates”, March-December, 2020

<sup>8</sup> ‘---’ represent estimates that do not meet the NEISS reporting criteria, which require estimates to be 1,200 or greater, sample sizes to be 20 or larger, and the coefficients of variation to be 33 percent or lower.

<sup>9</sup> In both 2020 and 2021, the “Other” category included: pacifiers/teething rings, diapers (excluding diaper rash cases), potty chairs/training seats, and harnesses. In 2020, the “Other” category also included diaper pails and safety pins while in 2021, it included night lights, plastic nipple guards, and baby rattles.

Table 3 shows the breakout of injury estimates by race for each year from 2019 through 2021. Over the 3-year time frame, on average, the victim's race was unspecified for 40 percent of the estimated nursery product injuries. White children made up 45 percent of victims under the age of 5; Black/African American children made up 10 percent of victims, and children of other races made up less than 5 percent of victims. When considering only the injuries where race was known, on average, 75 percent were White (compared to 70 percent of the population for that age), 17 percent were Black (compared to 16 percent of the population for that age), and 3 percent were Asian (compared to 6 percent of the population for that age). As Table 3 shows, the distribution of estimated injuries by race has not changed much year-over-year during the period 2019 through 2021. However, due to the high proportion of the data with race information unspecified, this finding should be interpreted with caution.

Staff explored the injury data for information on ethnicity of victims. Although NEISS is equipped to capture such information, for the period 2019 through 2021, for nursery product injuries among children under 5 years of age, the ethnicity is unspecified for most of the data.

## Table 3

**Distribution of Population<sup>2</sup> and Estimated Emergency Department-Treated Injuries by Race<sup>10</sup> Among Children Under Age Five: 2019–2021**

Race	2019		2020		2021	
	Percent of		Percent of		Percent of	
	Estimated Injuries	Population	Estimated Injuries	Population	Estimated Injuries	Population
White	75%	70%	74%	70%	76%	69%
Black/African American	19%	16%	18%	16%	15%	16%
Other <sup>11</sup>	4%	6%	3%	6%	6%	6%
Asian	1%	6%	4%	6%	3%	6%
American Indian/Alaska Native	1%	2%	1%	2%	1%	2%
Native Hawaiian/Pacific Islander	<0.5%	<0.5%	<0.5%	<0.5%	<0.5%	<0.5%
<b>Total</b>	100% <sup>†</sup>	100%	100% <sup>‡</sup>	100%	100% <sup>§</sup>	100%

Source: NEISS, CPSC. Percentages may not add up to 100, due to rounding.

Note: †This accounts for 58 percent of total estimated ED-treated nursery product-related injuries in 2019 for children under 5.

‡This accounts for 60 percent of total estimated ED-treated nursery product-related injuries in 2020 for children under 5.

§This accounts for 60 percent of total estimated ED-treated nursery product-related injuries in 2021 for children under 5.

<sup>10</sup> Where information is available in NEISS. See notes below Table 3 for information on the percentage of unknown in each year.

<sup>11</sup> Other: By NEISS definition, this category includes any race not explicitly listed in Table 3, or when more than one race is indicated.

## Deaths Associated with Nursery Products

Although all the Commission's databases are used to identify nursery product-related deaths, death certificates are a major source of information for this analysis. At the time of the data extraction for this analysis, the Commission's death certificates database was at least 93 percent complete through 2019. The deaths reported here are from 2017 through 2019, the latest 3-year time frame with sufficiently available information, like previous annual reports.<sup>12</sup>

Table 4 provides a summary of nursery product-related reported deaths (total and average annual) for 2017 through 2019, along with data previously reported for 2016 through 2018, for comparison purposes. Reporting is ongoing, and the number of reported fatalities may change. Moreover, these reports are anecdotal and do not constitute a statistical sample or a complete count of nursery product-related deaths. As such, CPSC staff strongly discourages drawing any inferences based on the year-to-year increase or decrease shown in the reported data.

CPSC staff has received reports of a total of 443 deaths associated with nursery products—an annual average of 148 deaths—during this period. About 31 percent (137 total, or an annual average of 46) were associated with cribs/mattresses. Bassinets/cradles accounted for 16 percent (71 total, or an annual average of 24) of the reported deaths. Playpens/play yards were also associated with 16 percent (a total of 70 or an annual average of 23) of the reported deaths, while infant inclined sleep products were associated with 11 percent (a total of 48 or an annual average of 16) of the reported deaths. Infant carriers accounted for 9 percent (a total of 38 or an annual average of 13) of the reported deaths. The remaining 79 reported fatalities were associated with a range of products, including baby bath/bathinettes, baby bouncer seats, baby gates/barriers, infant portable swings, changing tables/pads, high chairs, infant strollers/carriages, baby walkers/jumpers/exercisers, and a variety of other sleep-products (e.g., in-bed sleepers and toddler beds), seating products (e.g., floor seats), and miscellaneous products.

For certain incident scenarios in which direct product involvement or failure was not evident, consultation with staff from the CPSC's Directorate for Engineering Sciences was necessary to determine the most appropriate product category in which to place the fatalities. Details of the methodology are provided in the attached Appendix.

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<sup>12</sup> These deaths do not constitute a statistical sample of known probability and do not necessarily include all nursery product-related deaths that occurred during the 2017–2019 period. However, they do provide at least a minimum number for deaths associated with nursery products during that time. Furthermore, the number of reported incidents may change should staff receive additional reports. In addition, the number of fatalities for each product/group of products presented in this and previous annual nursery product reports are not expected to match the number of fatalities presented in any rulemaking packages on the same product/group of products because of the difference in the data-inclusion criteria applied. See Methodology section of the Appendix for the process used in this report.



## Table 4

### Reported Deaths Among Children Under Age Five by Type of Nursery Product

PRODUCT CATEGORY	TOTAL DEATHS		AVERAGE ANNUAL DEATHS	
	2016-2018	2017-2019	2016-2018	2017-2019
<b>TOTAL</b>	389	443	130	148
<b>Cribs/Mattresses<sup>13</sup></b>	127	137	42	46
<b>Bassinets/Cradles</b>	63	71	21	24
<b>Playpens/Play Yards</b>	73	70	24	23
<b>Infant Inclined Sleep Products<sup>14</sup></b>	26	48	9	16
<b>Infant Carriers (Excludes Motor Vehicle Incidents)</b>	31	38	10	13
<b>Baby Baths/Bath Seats/Bathinettes</b>	11	17	4	6
<b>Baby Bouncer Seats</b>	11	11	4	4
<b>Baby Gates/Barriers</b>	9	10	3	3
<b>Portable Baby Swings</b>	9	6	3	2
<b>Changing Tables</b>	5	3	2	1
<b>High Chairs</b>	1	3	<1	1
<b>Strollers/Carriages</b>	3	3	1	1
<b>Baby Walkers/Jumpers/Exercisers</b>	1	1	<1	<1
<b>Other<sup>15</sup></b>	19	25	6	8

Source: CPSC epidemiological databases: Consumer Product Safety Risk Management System (CPSRMS) and NEISS from 2017 to 2019, for reported deaths.

Deaths for 2016-2018, which are shown in italics, represent changes since publication of the previous annual report, due to availability of additional information.

Note: The average annual deaths do not add up to the total due to rounding.

A closer look at the top five product categories with the largest numbers of reported deaths provides some insight into the hazard patterns. Between 2017 and 2019, these product categories were associated with 82 percent of the reported fatalities; for the earlier period (2016 through 2018), they also accounted for 82 percent of the total reported fatalities.

Between 2017 and 2019, 137 deaths were associated with cribs/mattresses. This total includes one additional fatality in 2018, for which additional information became available since publication of the previous annual report. About 73 percent of these deaths were associated with a cluttered sleep environment (the presence of extra bedding in the crib, such as pillows, blankets, and/or

<sup>13</sup> Certain items, such as nursing pillows and lounger pillows, are usually placed within other products, such as cribs, bassinets, and play yards. Any report involving these items was categorized with the product in which they were located, to avoid double counting.

<sup>14</sup> Beginning with the annual report published in 2018, the Infant Inclined Sleep Products group is presented in a row of its own in Table 4. These products come with one or more inclined sleep surface adjustment positions for the seat back that are greater than 10 degrees, but do not exceed 30 degrees. Some specific examples are infant hammocks, recliner seats, and nappers. These products are subject to the safety standard for Infant Sleep Products that the Commission published on June 23, 2021, which became effective since June 23, 2022 (86 FR 33022).

<sup>15</sup> Of the 25 deaths in this category from 2017 through 2019, 14 deaths were associated with products used in the sleep environment that are not among the product categories listed in Table 4. Among the 14, a toddler bed (product code 4082) was involved in 2 deaths; portable youth bedrails (product code 4075) were involved in 2 deaths; and in-bed sleepers were involved in the remaining 10 deaths. As of June 23, 2022, the in-bed sleepers are subject to the safety standard for Infant Sleep Products (86 FR 33022). In addition to the 14 deaths, there were 4 asphyxiation deaths—1 in an unspecified infant seat, 1 on a baby bottle nipple and 2 on a pacifier; 4 drowning deaths, where an infant was left unattended on a non-bathing infant floor seat (product code 4074) in a water-filled tub; and 3 deaths in a rocker, where two unrestrained infants were found rolled over in a prone/sideways position, and another infant was found “slumped” in a supine position.

See <https://www.cpsc.gov/s3fs-public/Nursery-Products-Annual-Report-2021.pdf> p.10, for a list of products associated with deaths in the “Other” category in 2016–2018.

comforters, among others) that led to asphyxiation of the infant. Approximately 8 percent of the 137 deaths resulted from a range of hazards associated with the crib, including incomplete assembly; missing, broken, or nonfunctioning components; ill-fitting mattress; or ineffective crib repairs. Some of these incidents occurred in, or on, older, reassembled, recalled, or secondhand cribs. The remaining crib fatalities involved the presence of hazardous crib surroundings. Examples include strangulations from nearby cords or strings; suffocations from small objects located in/near the crib; asphyxiations due to co-sleeping with other children in the crib; entrapments between crib rail and a tied-down cover (e.g., a twin mattress); entrapments between crib rail and a picture frame; and in one case, an electrocution when the infant touched a power outlet from inside his crib.

Between 2017 and 2019, staff identified 71 deaths associated with bassinets/cradles. This total includes one new fatality in 2018, for which additional information became available since publication of the previous annual report. Most of these deaths were associated with extra bedding, with pillows involved in many of the suffocation deaths. A few of the bassinet-related deaths involved product failure and/or the presence of hazardous surroundings around the bassinet.

Playpens/play yards were associated with 70 deaths between 2017 and 2019. Most of the deaths were due to asphyxiation, where the infant suffocated on a blanket/pillow/other soft bedding placed inside the play yard. The presence of a hazardous environment in or around the product, such as makeshift covers (e.g., cardboards) used on top of play yards to contain the infant, use of ill-fitting, non-original mattresses and sofa cushions in the play yards, or co-sleeping arrangements with other infants in the play yard, were associated with some of the deaths. A few of the fatalities involved faulty products.

Between 2017 and 2019, infant inclined sleep products were associated with 48 deaths. This total includes 1 additional fatality in 2018, for which additional information became available since publication of the previous annual report. These products come with one or more inclined sleep surface adjustment positions for the seat back that are greater than 10 degrees, but do not exceed 30 degrees. All but one of these 48 fatalities happened in deep-seated recliner seats with rocking features; 1 fatality occurred in an inclined sleeper attachment that was placed in a crib. Some of the decedents were placed prone in the product, on soft bedding; some of the decedents were found to have rolled over, either completely or partially, ending up in a compromised position that resulted in asphyxiation deaths; a couple of the fatalities described the decedent as being found in a chin-to-chest position. These products are subject to the safety standard for infant sleep products that the Commission published on June 23, 2021, which became effective as of June 23, 2022 (86 FR 33022).

Finally, 38 deaths associated with infant carriers were identified during the period 2017 through 2019. Placing the infant in the carrier in a hazardous manner was the most common scenario. Examples include an infant partially restrained in the seat with shoulder straps only, who slid forward in the seat and strangled at the chest clip; a fatality resulting from an unattended and unrestrained infant, sometimes sleeping on top of a soft blanket in the seat, who managed to get into a compromised position; a fatality resulting from a carrier tipping over when placed on a nonrigid surface, trapping the infant inside; an infant positioned improperly in a carrier on the caregiver's body, which led to suffocation; and an infant left unsupervised for an extended period in a vehicle with the windows rolled up, resulting in death due to hyperthermia.

In conclusion, the hazard patterns described indicate that although a nursery product was involved, many of the fatalities were associated with how the product was used, including putting the product in a hazardous situation, and/or using it in a hazardous manner.

# Appendix

## Methodology

### ED-Treated Injuries (In-Scope Data):

- Database: NEISS from 01/01/2021 through 12/31/2021 (2017 through 2020 NEISS analytical datasets from previous years were used for comparison purposes); date of extraction was 05/19/2022.
- Product codes: 1500–1599, excluding 1550.<sup>16</sup> When multiple nursery products were coded as involved in an injury report, staff identified a “primary” product code based on the narrative description and used that for classification in this analysis.
- Age of victim: 0 through 4 years.
- Screened to ensure that no motor vehicle incidents were included.
- All cases of diaper rash (identified as side-effects of antibiotics use or exposure to prolonged moisture) were excluded.

Beginning with the 2016 report (using 2015 NEISS data), the injury estimates in annual reports on nursery products are based on non-incident, emergency department-treated injuries. The association of an incident/injury with a nursery product is incidental if the occurrence of the incident/injury is considered *not dependent* on the presence of that nursery product in the incident scenario. The exclusion of incidental injury cases aligns more closely with the way CPSC staff has prepared the CPSIA section 104 rulemaking packages for the Commission. Now that most of the nursery products discussed in this report have a mandatory rule in place, staff believes that annual estimates based on the non-incident data will provide a better tool for gauging the efficacy of the various standards.

### Examples of Additional Screenings (Applied to In-Scope Data to Arrive at Non-Incidental Data):

- If the official diagnosis indicated that no injury had been sustained, the case was excluded.
- If the product’s involvement was incidental, such as a child being stung by a bee, or getting bitten by a dog while in an infant stroller, the case was excluded.
- If a child suffered a medical crisis while seated in a high chair (e.g., choking on food), or gained access to adult medication by climbing on a crib, the case was excluded.
- If a child was injured by other young children (e.g., pulled out of an infant swing by a young sibling), the case was excluded.

All ED-treated injury estimates/analyses in this report are based on non-incident data.

### Deaths:

- Databases: CPSRMS and NEISS from 01/01/2017 through 12/31/2019; date of extraction was 08/08/2022.

Information available from CPSRMS and NEISS on incidents that have not been investigated is often incomplete or provides insufficient information on the hazard scenario. If these incident reports are investigated later, or as other associated reports come in, the

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<sup>16</sup> Product code 1550 (*Infant and Toddler Play Centers excluding Jumpers, Bouncers, and Exercisers*) represents a toy, not a nursery product.

initial information is corroborated or contradicted, and the fatality numbers reported may change.

- Product codes: 1500–1599, excluding 1550<sup>16</sup>; 4074 for *children’s chairs*, 4075 for *portable youth bed rails*, and 4082 for *toddler beds*.
- Age of victim: 0 through 4 years.
- Screened to ensure no duplicates were included; all records of the same incident that were reported through different data sources were associated and included as a single report.
- Miscoded products were recoded correctly. A common example was a play yard miscoded as a crib, but was counted as a play yard for this report.
- As with the emergency department-treated injuries, deaths involving certain products were grouped together. For instance, baby baths and bathinettes were counted together with bath seats; exercisers were counted with baby walkers and jumpers; and as noted earlier, any extra-bedding-in-crib incidents were counted with cribs, while incidents with extra bedding in a play yard were counted with play yards.
- Staff carefully screened to determine whether cases were in scope or out of scope. An example of an out-of-scope case would be an incident where no direct or circumstantial information was available to determine *how* the death occurred, or if Sudden Infant Death Syndrome was the only information available from the official report(s). These criteria differ from the inclusion criteria used in various rulemaking packages prepared by CPSC staff. In the latter, *all* data are included, but such incidents may be classified differently; for example, the incidents could be classified into “non-product-related” or “no information” categories, as appropriate (and are excluded from the data-based evidence used for rulemaking purposes). As such, the number of fatalities for each product/group of products presented in this and previous annual nursery product reports are not expected to match the number of fatalities presented in any rulemaking packages on the same product/group of products.

In some cases that were considered in scope, the death was not associated directly with the nursery product. However, hazards in the vicinity of the product, often created inadvertently by caregivers, led to the deaths. For instance, extra bedding inside the crib, or plastic bags that were within easy reach of the crib, have led to some deaths. These deaths have been included with crib deaths. Similarly, clutter and extra bedding inside the play yard, or placement of the play yard within easy reach of a window blind cord, have led to some fatalities. These have been counted with play yard deaths. While these deaths may not be due to product failure only, they highlight some common misconceptions and oversights, poorly drafted instructions, or warnings, and/or foreseeable use patterns for these products. Therefore, these deaths were included.

Staff excluded any report to the CPSC of a nursery product-related incident that occurred outside of the United States.

## Historical Data

Based on the non-incident data only, trend analysis for 2019–2021 shows no statistically significant trend (p-value=0.732). Additionally, when historical data from 2017 and 2018 are included, the 2017–2021 data do not show any statistically significant trend either (p-value=0.347).

Table 5 and Figure 1 present the 5-year injury estimates covering 2017 through 2021, based on ED-treated, non-incident data on nursery products. Figure 2 presents the corresponding 5-year estimated injury rates per 100,000 children under age 5.

### Table 5

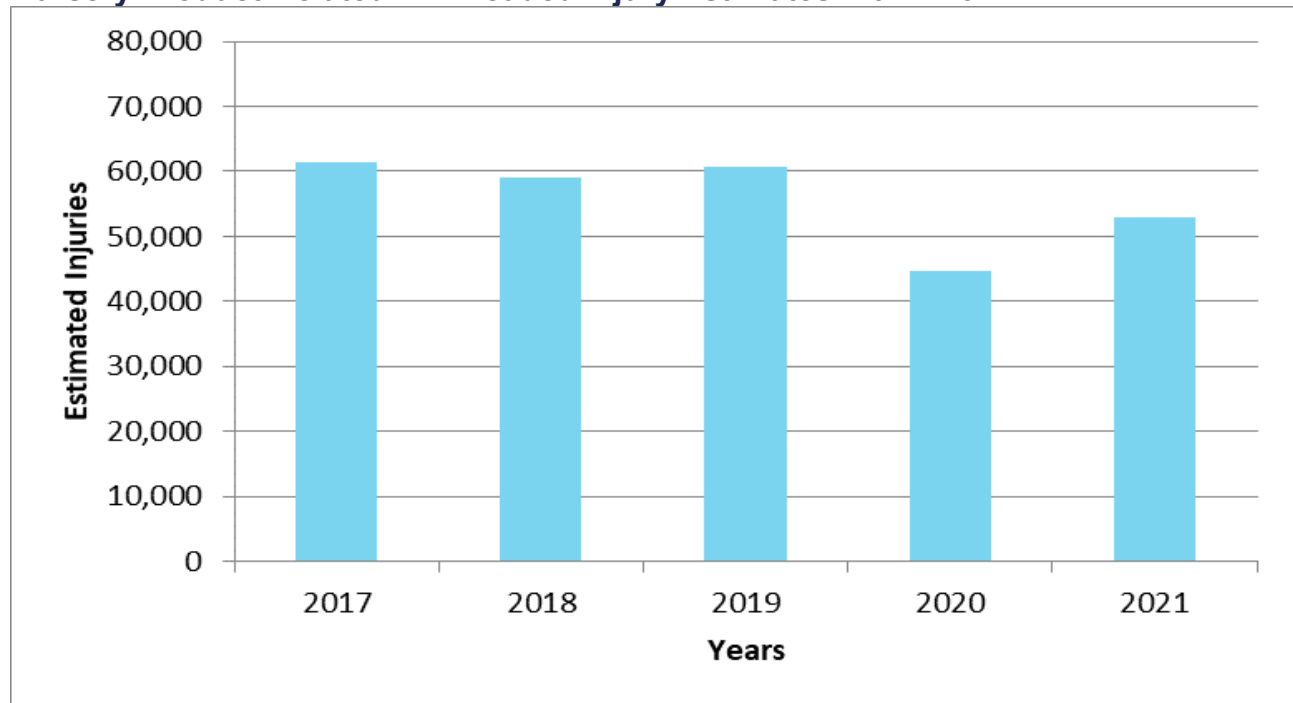
#### Nursery Product-Related ED-Treated Injury Estimates: 2017–2021

Calendar Year	Estimated Injuries	95% Confidence Interval
2017	61,400	42,700 – 80,100
2018	59,000	38,400 – 79,600
2019	60,600	38,000 – 83,200
2020	44,600	26,800 – 62,300
2021	53,000	34,900 – 71,000

Source: NEISS, CPSC. Estimates rounded to nearest 100.

### Figure 1

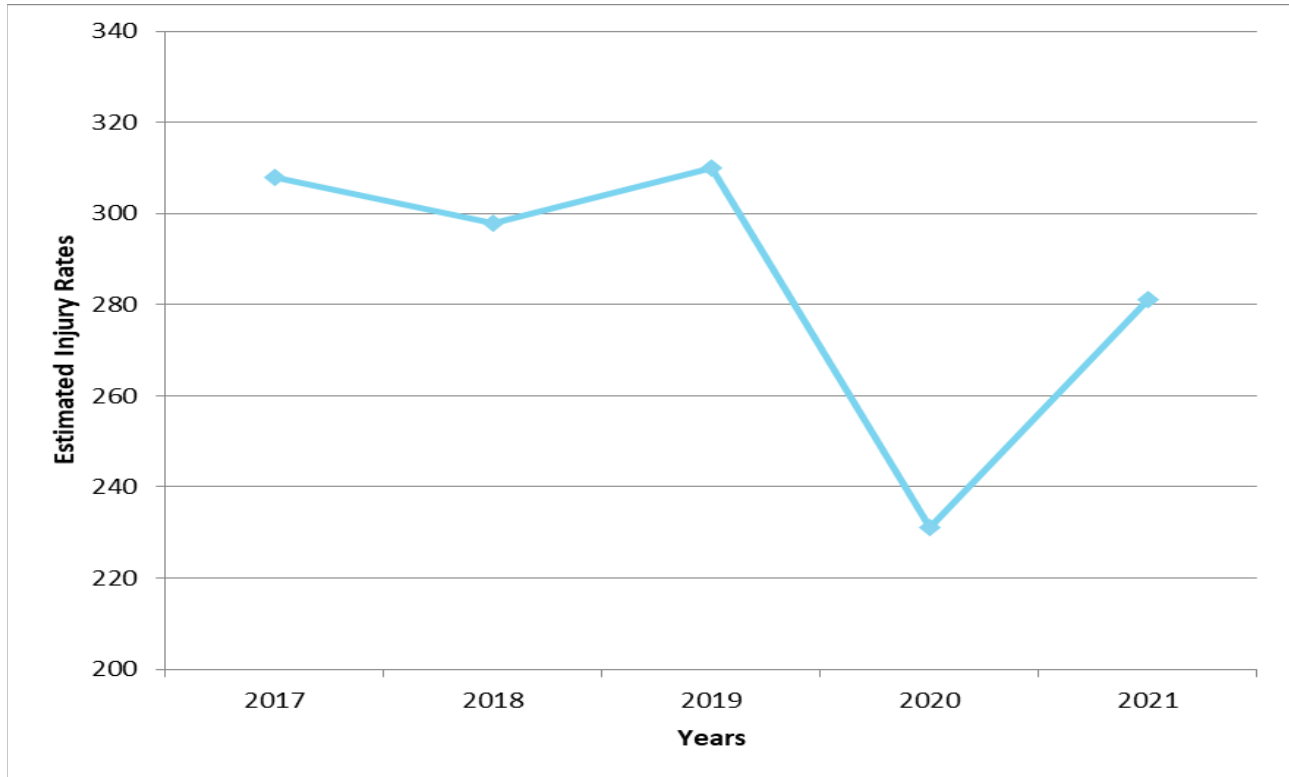
#### Nursery Product-Related ED-Treated Injury Estimates: 2017–2021



Source: NEISS, CPSC. Estimates are rounded to nearest 100.

## Figure 2

### Nursery Product-Related ED-Treated Estimated Injuries per 100,000 Children Under 5 Years: 2017–2021



Source: NEISS, CPSC. Estimates are rounded to nearest 100.

The population data for the denominator is from U.S. Census Bureau website (same as footnote 2):

<https://www.census.gov/data/datasets/time-series/demo/popest/2020s-national-detail.html>; Annual Estimates of the Resident Population by Single Year of Age and Sex for the United States: April 1, 2020 to July 1, 2021 (NC-EST2021-AGESEX-RES); last revised June 30, 2022.

With the completion of this report, analyses of non-incident hospital ED-treated injury data are now available for the seven years, 2015 through 2021. As analyses are completed for additional years, staff anticipates presenting 10- and 15-year trends in the future.