Pool or Spa Submersion: Estimated Nonfatal Drowning Injuries and Reported Drownings, 2021 Report

May 2021

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Executive Summary

This report presents annual estimates of the number of emergency department-treated, pool- or spa[1]-related, nonfatal drownings (submersion injuries[2]) that occurred between 2018 and 2020, involving children younger than 15 years of age. The report also sets forth the counts of reported pool- or spa-related fatal drownings (submersion fatalities[3]) that happened between 2016 and 2018, to children younger than 15 years of age. In addition, the report details the subset of submersion injuries and fatalities involving children younger than 5 years of age, excluding cases involving suction entrapment.[4]

There were, on average, an estimated 6,200 pool- or spa-related, hospital emergency department (ED)-treated, nonfatal drowning injuries each year for 2018 through 2020, and 397 pool- or spa-related fatal drownings reported per year for 2016 through 2018, involving children younger than 15 years of age. Additionally, an annual average of 78 percent of the ED-treated nonfatal drowning injuries from 2018 through 2020, and 75 percent of the reported fatal drownings from 2016 through 2018, involved children younger than 5 years of age.

For children younger than 15 years old, 43 percent of the victims of estimated ED-treated pool or spa submersion injuries for 2018 through 2020 were admitted to the hospital or treated and transferred to another hospital, compared to 5 percent for ED-treated injuries to children younger than 15 years old involving all consumer products in the CPSC's jurisdiction during the same period. Overall, annual estimates of the number of children who were treated in hospital emergency departments for pool- or spa-related, nonfatal drowning injuries in 2020 (5,800 injuries), were not statistically different from those in 2019 (6,300 injuries).

The total number of fatal drownings in 2018 (404 fatalities) was higher than the total number of fatal drownings in 2017 (395 fatalities). For children younger than 5 years of age, the total number of fatal drownings in 2018 (300 fatalities), was about the same as the total number of fatal drownings in 2017 (301 fatalities).

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[1] The term "spa" is used to refer to spas and hot tubs.
[2] The term "submersion injury" is used instead of "nonfatal drowning," when comparing or referring to injuries resulting from incidents involving non-pool- or non-spa-related products or hazards.
[3] The term "submersion fatality" is used instead of "drowning," when comparing or referring to fatalities resulting from incidents involving non-pool- or non-spa-related products or hazards. The periods for reported injury and fatality statistics differ due to the lag in fatality reporting. Incidents covered by this report were associated with a pool or spa, but the primary cause of the incident was not necessarily the pool or spa product.
[4] Note that circulation/suction entrapments in pools or spas are presented in a separate document: "2014–2018 Reported Circulation/Suction Entrapment Incidents Associated with Pools, Spas, and Whirlpool Bathtubs, 2019 Report," May 2019.

Emergency Department-Treated Injury Estimates

For 2018 through 2020, an estimated annual average of 6,200 children younger than 15 years of age were treated in U.S. hospital emergency departments (EDs) for nonfatal injuries associated with pool or spa submersions. Estimates are shown in Table 1. Estimates are also provided for injured children younger than 5 years of age and children 5 to 14 years of age. Injury estimates are based on CPSC's National Electronic Injury Surveillance System (NEISS) data, where sampling weights are used to project the cases from NEISS hospitals to national estimates. The corresponding annual average estimates for the years 2017 through 2019, are 6,700 children younger than 15 years of age and 5,100 children younger than 5 years of age were treated in hospital emergency departments for nonfatal drowning injuries related to pools or spas.

Table 1
Estimated Number of ED-Treated Nonfatal Pool or Spa Drowning Injuries
Children Younger than 15 Years of Age, 2018-2020

Year	Estimated Emergency Department-Treated Injuries		
	Younger than 5 Years	5-14 Years	Younger than 15 Years
Average	4,800	1,400	6,200
2020	4,400	1,300	5,800
2019	5,100	1,200	6,300
2018	4,900	1,500	6,400

Source: U.S. CPSC: NEISS. Appendix A details the methodology for data extraction.
Estimates for children under age 5 and ages 5 to 14 may not sum to the under age 15 total, due to rounding.
The estimates are rounded to the nearest hundred.

The 2020 estimates of children younger than 15 years of age and children younger than 5 years of age, who were treated in U.S. hospital EDs for pool- or spa-related nonfatal drownings, are not statistically different from the 2019 estimates. The reduction in the 2020 estimate from 2019, in part, may be due to issues associated with COVID-19 in 2020.[5] On average, from 2018 through 2020, 78 percent of children treated in EDs for pool- or spa-related, nonfatal drowning injuries were younger than 5 years of age. Children younger than 5 years of age comprised an estimated 76, 80, and 77 percent of the childhood pool- or spa- related ED-treated injuries in 2018, 2019, and 2020, respectively.

[5] See https://www.cpsc.gov/s3fs-public/Effect%20of%20Novel%20Coronavirus%20Pandemic%20on%202020%20Preliminary%20NEISS%20Estimates%20%28March%20%E2%80%93%20September%202020%29.pdf for a discussion of changes noted by CPSC that may be associated with the pandemic and consumer changes during that period.

Table 2 shows the percent of estimates for 2018 through 2020, associated with pool or spa submersions, by type of product. Spa-related submersions constitute 3 percent of the estimated number of the pool or spa submersion-treated, nonfatal drowning injuries for children younger than 15 years of age, and 4 percent of the estimated number of the pool or spa submersion-treated, nonfatal drowning injuries for children younger than 5 years of age.

Table 2
Percent of Estimated ED-Treated Nonfatal Pool or Spa Drowning Injuries
Children Younger than 15 Years of Age by Product Type, 2018-2020

Product Type	Estimated Emergency Department-Treated Injury Percentages		
	Younger than 5 Years	5-14 Years	Younger than 15 Years
Pool	96	100	97
Spa	4	0	3
Total	100	100	100

Source: U.S. CPSC: NEISS. Appendix A details the methodology for data extraction.
Percentages may not add up to 100, due to rounding or estimates for pool or spa drowning injuries for children of unknown gender. In this table, 0 represents < 0.5%.

Table 3 shows the percentage of the estimated number of pool- or spa-related, nonfatal drowning injuries by victim gender. Male children are more frequently treated for pool- or spa-related, nonfatal drowning injuries than female children. This is true of all injured children younger than 15 and the subset of children younger than 5 years of age.

Table 3
Percent of Estimated ED-Treated Nonfatal Pool or Spa Drowning Injuries
Children Younger than 15 Years of Age by Gender, 2018-2020

Gender	Estimated Emergency Department-Treated Injury Percentages		
	Younger than 5 Years	5-14 Years	Younger than 15 Years
Male	59	61	60
Female	41	39	40
Total	100	100	100

Source: U.S. CPSC: NEISS. Appendix A details the methodology for data extraction.
Percentages may not add up to 100, due to rounding or estimates for pool or spa drowning injuries for children of unknown gender.

Table 4 shows the percentage of the estimated number of pool- or spa-related, nonfatal drowning injuries by the victim's race. For more than 50 percent of estimated nonfatal drowning injuries involving children under 15 years of age, the victim's race was unspecified. White children made up 33 percent of victims younger than 5 years of age and 41 percent of victims between 5 and 14 years of age. Black/African American children were 7 percent of victims younger than 5 years of age and 18 percent of victims between 5 and 14 years of age. Children of other races made up less than 5 percent of victims across all age groups. Overall, White children represented the highest percentage of victims under 15 years of age, at 35 percent. Focusing on those injuries where race was known, 71 percent were White (compared to 72% of the population for that age), 18 percent Black (compared to 15% of the population for that age), and 2 percent Asian (compared to 5% of the population for that age) for children less than 15 years old, which shows a slightly higher percentage for Black/African Americans than the portion of the population. This skews more for the 5-14 year olds, where they represented approximately 30 percent of the incidents, yet only 15 percent of the population for that age group.[6] However, these findings are not definitive, given the high proportion of unspecified races.

Table 4
Percent of Estimated ED-Treated Nonfatal Pool or Spa Drowning Injuries
Children Younger than 15 Years of Age by Race, 2018-2020

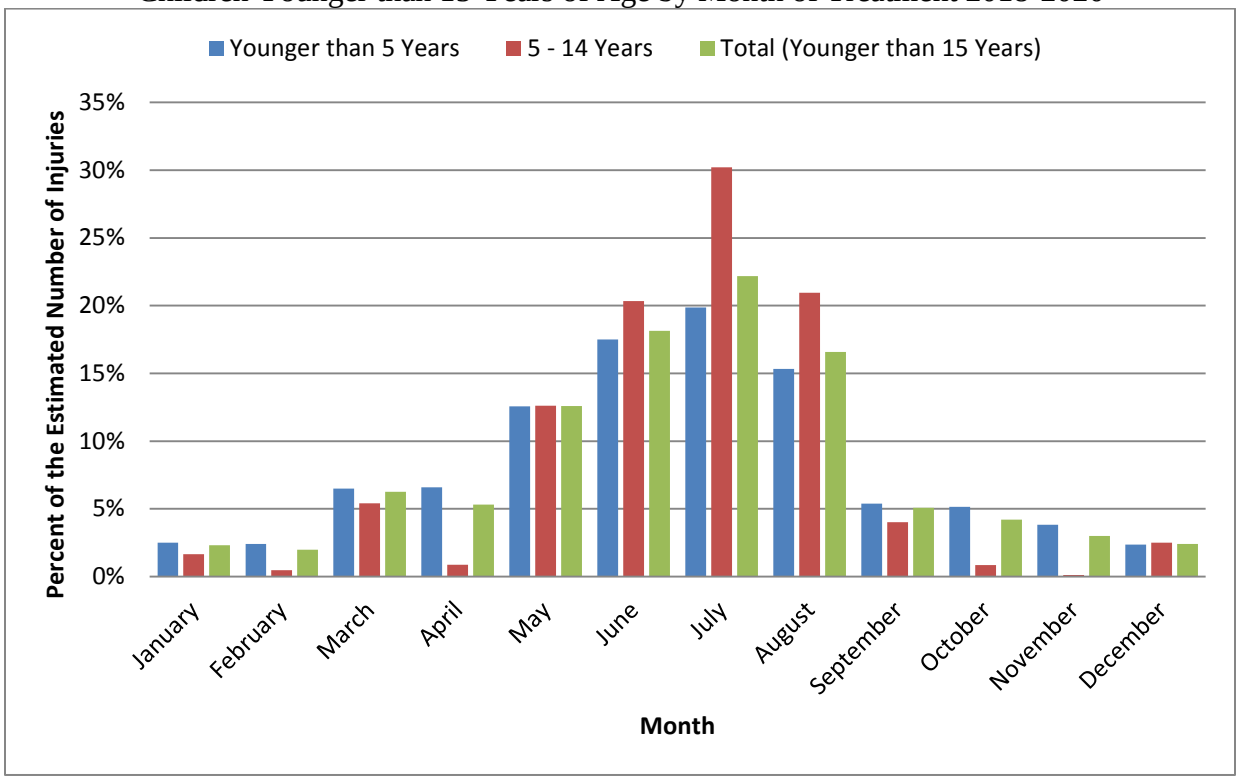
Race	Estimated Emergency Department-Treated Injury Percentages		
	Younger than 5 Years	5-14 Years	Younger than 15 Years
Not stated	55	39	51
White	33	41	35
Black/African American	7	18	9
Other	4	0	3
Asian	1	0	1
American Indian/Alaska Native	0	2	0
Native Hawaiian/Pacific Islander	0	0	0
Total	100	100	100

Source: U.S. CPSC: NEISS. Appendix A details the methodology for data extraction.
Percentages may not add up to 100, due to rounding: In this table, 0 represents < 0.5%.
NEISS injury data is equipped to capture details on the ethnicity of the patient. However, for 2018-2020 pool or spa drowning injuries among children under 15 years of age, the ethnicity is unspecified for the vast majority of the data.

[6] https://www2.census.gov/programs-surveys/popest/tables/2010-2019/national/asrh/nc-est2019-asr6h.xlsx

Figure 1 illustrates the monthly distribution of the percentages of the estimated ED-treated, nonfatal drowning injuries for each age group. The months of May, June, July, and August had the largest percentages.

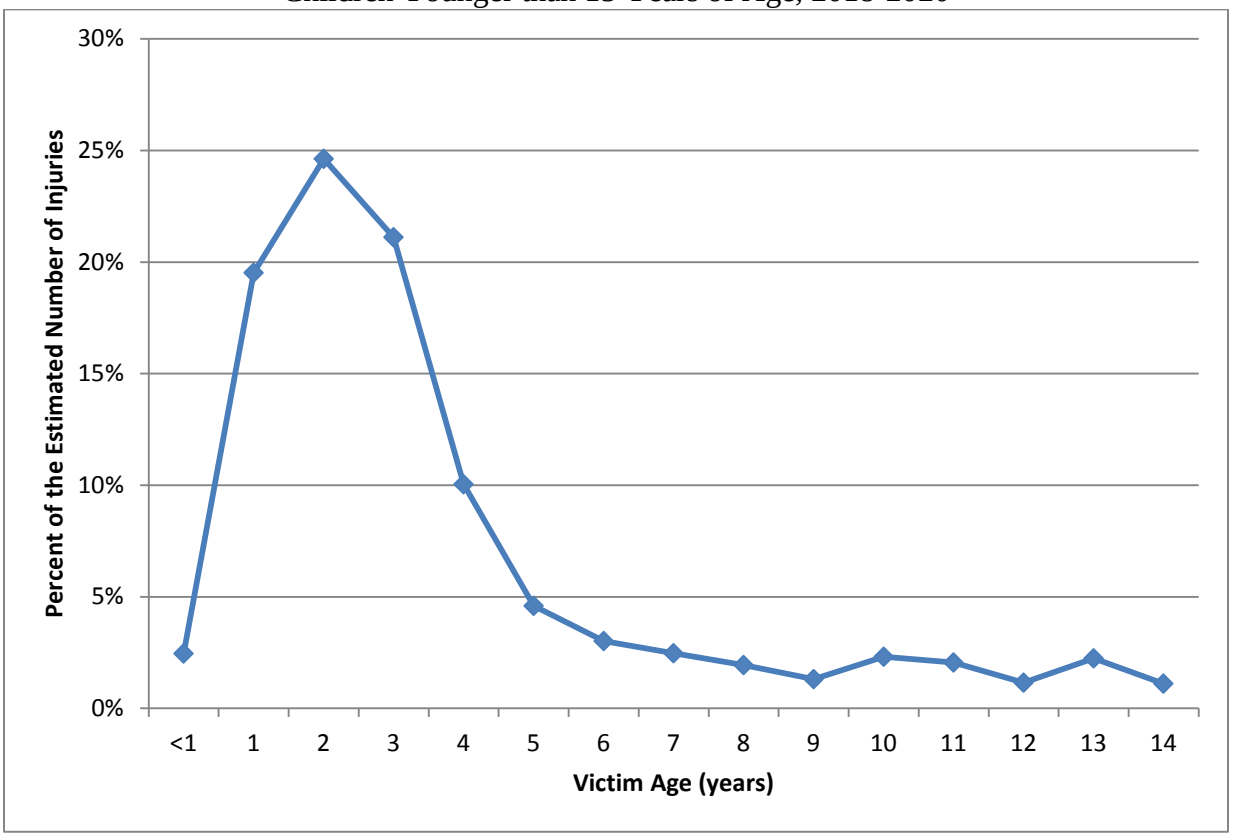
Figure 1
Percent of Estimated ED-Treated Nonfatal Pool or Spa Drowning Injuries
Children Younger than 15 Years of Age by Month of Treatment 2018-2020



Source: U.S. CPSC: NEISS.

Figure 2 plots the percentage of the estimated number of ED-treated, nonfatal drowning injuries as a function of the victim's age. Children younger than 1 year of age accounted for 2 percent of the estimated pool- or spa-related, nonfatal drowning injuries. Children between the ages of 1 and 3 years (12 to 47 months) comprised approximately 65 percent of the estimated number of children treated for pool- or spa-related, nonfatal drowning injuries. An additional 10 percent of the estimated childhood pool- or spa-related, nonfatal drowning injuries occurred in children 4 years of age (48 to 59 months). Children ages 5 to 9 and 10 to 14 accounted for 13 and 9 percent, respectively, of the estimated ED-treated pool or spa-related, nonfatal drowning injuries.

Figure 2
Percent of Estimated ED-Treated Nonfatal Pool or Spa Drowning Injuries by Age
Children Younger than 15 Years of Age, 2018-2020



Source: U.S. CPSC: NEISS.

Table 5 gives a breakdown of estimated ED-treated pool or spa submersion injuries by disposition. From 2018 through 2020, children younger than 15 years of age were admitted to the hospital or treated and transferred to another hospital 43 percent of the time. In 2020 alone, children younger than 15 years of age were admitted to the hospital or treated and transferred to another hospital 52 percent of the time, representing a 16 percent increase from 2019 (36%). By contrast, for all ED-treated injuries to children related to consumer products in the CPSC's jurisdiction, only 5 percent of children in the younger than 15 years of age category were admitted to the hospital, or treated and transferred. For Dead on Arrival (DOA), or Died in Emergency Department percentages, drowning victims younger than 5 years of age comprised a majority of all child drownings (see Table 6). The deaths recorded in NEISS are also included in the fatality count in the section on reported fatalities mentioned later in this report.

Table 5
Percent of Estimated ED-Treated Pool or Spa Submersion Injuries
Children Younger than 15 Years of Age by Disposition, 2017-2019 vs. 2018-2020

Disposition	**Estimated Emergency Department-Treated Injury Percentages**					
	Younger than 5 Years		**5–14 Years**		**Younger than 15 Years**	
	2017-2019	2018-2020	2017-2019	2018-2020	2017-2019	2018-2020
Examined or Treated and Released	54	48	61	64	56	52
Admitted to Hospital	30	40	23	21	29	36
Treated and Transferred	9	6	8	10	9	7
DOA or Died in Emergency Department	2	2	6	3	3	2
Held for Observation	4	2	1	2	3	2
Left Without Being Seen	1	2	0	0	1	1
Total	100	100	100	100	100	100

Source: U.S. CPSC: NEISS. Appendix A details the methodology for data extraction.
Percentages may not add up to 100, due to rounding: In this table, 0 represents < 0.5%.

Table 6 shows the percentages of the estimated number of injuries for each age group by the location of the submersion incident. Overall, 46 percent of the incidents involving injuries that led to emergency department visits occurred at a residence. Injured children younger than 5 years of age had the largest percentage (50%) of incidents in a residential location. For injured children 5 to 14 years of age, 40 percent of incidents occurred in public locations. In 2020, for all children younger than 15 years of age, 52 percent of the incidents involving ED-treated injuries occurred at a residence, an increase of 11 percent from 2019 (41%).

Table 6
Percent of Estimated ED-Treated Nonfatal Pool or Spa Drowning Injuries
Children Younger than 15 Years of Age by Location, 2018-2020

Location	Estimated Emergency Department-Treated Injury Percentages		
	Younger than 5 Years	5–14 Years	Younger than 15 Years
Residential	50	31	46
Undisclosed Location	32	30	31
Public	18	40	23
Total	100	100	100

Source: U.S. CPSC: NEISS. Appendix A details the methodology for data extraction.
Percentages may not add up to 100, due to rounding.

Reported Fatalities

On average, 397 fatalities associated with pool or spa submersions involving children younger than 15 years of age were reported to CPSC staff annually from 2016 through 2018. The years for the injury estimates in the previous section and the fatality statistics presented here differ due to the lag in fatality reporting.

Reported fatality frequencies by year and age category are shown in Table 7. Seventy-five percent of the victims of the reported pool- or spa-related, childhood submersion fatalities were younger than 5 years of age. As noted in the NEISS injury estimates section, victims in this age category also accounted for an average of 78 percent of the childhood submersion injuries related to pools or spas between 2018 and 2020. Cases in NEISS that were classified as DOA, or died in the ED, are included in fatality case counts for their respective years.

For the 1,178 reported drowning incidents from 2016 through 2018, there were 1,191 fatalities (98 percent of the incidents) that involved one victim; 13 incidents that involved two victims, and 7 incidents involving one victim who was included in the count, plus additional victims who were 15 years of age and older, and therefore, excluded from the counts.

The numbers of fatal drownings related to pools or spas presented in this section are based on all incidents reported to CPSC staff. These numbers are considered minimum counts only derived from anecdotal data and cannot be used as generalized estimates for determining trends in the U.S. population.

Table 7
Drowning Deaths Reported to CPSC Staff Associated with Pools or Spas
Children Younger than 15 Years of Age, 2016-2018

Year[7]	Reported Fatality Frequencies			
	Younger than 5 Years	5–9 Years	10–14 Years	Younger than 15 Years
Average[8]	298	73	26	397
2018	300	78	26	404
2017	301	67	26	395
2016	292	73	27	392
Totals 2016-2018	893	218	79	1,191

Source: U.S. CPSC: CPSRMS. Appendix A details the methodology for data extraction.

[7] Reporting may be incomplete for 2017 and 2018. The number of reported fatalities may change in the future.
[8] Row averages may not add to total, due to rounding. Total for 2017 reflects inclusion of one incident that involved an unknown victim under 15 years of age. Based on newly available information, 2017 fatality numbers for children younger than 5 years old and children 5-9 years old have been revised since the 2020 report.

Table 8 provides information on the interval between the submersion incident and the time of death for pool- or spa-related drownings. In some instances, a great deal of time may lapse from the submersion incident to death. In a few cases, the lapse may be years. For most of the fatalities (74 percent), the date of death was either the same as the date of the incident, or 1 day later. A higher percentage of children ages 10-14 (14 percent) survived for 8 or more days than children ages 9 and under (7 percent).

Table 8
Percentage of Drowning Deaths Reported to CPSC Staff Associated with Pools or Spas
Children Younger than 15 Years of Age by Interval Between Injury and Death,[9] 2016-2018

Days Between Incident & Death	Percentage of Reported Fatalities			
	Younger than 5 Years	5–9 Years	10–14 Years	Younger than 15 Years
0 days	65	66	67	65
1 day	10	7	6	9
2–7 days	18	20	13	18
8–31 days	4	5	11	5
> 31 days	3	2	3	3
Total	100	100	100	100

Source: U.S. CPSC: CPSRMS. Appendix A details the methodology for data extraction.
Percentages may not add up to 100, due to rounding and refer to percentages within each age group.

[9] Note that the age at time of death is used to determine the appropriate age category. In most cases, the difference between the date of incident and date of death is not sufficient to change the age category. There were 34 fatalities where the difference was more than 31 days.

Reported fatal drownings occurred predominantly in pools. A small number of fatal drownings (41) were associated with spas. Children younger than 5 years of age comprised almost all of the reported spa-related drownings. Table 8 records these percentages by product type.

Table 9
Percentage of Drowning Deaths Reported to CPSC Staff Associated with Pools or Spas
Children Younger than 15 Years of Age by Product Type, 2016-2018

Product	Percentage of Reported Fatalities			
	Younger than 5 Years	5–9 Years	10–14 Years	Younger than 15 Years
Pool	96	100	99	97
Spa	4	-	1	3
Total	100	100	100	100

Source: U.S. CPSC: CPSRMS. Appendix A details the methodology for data extraction.
"-" denotes no data recorded.
Percentages may not add up to 100, due to rounding and refer to percentages within each age group.

Table 10 gives the percentages of pool or spa drownings by victim age and gender. For all age groups under age 15, there were more reported male submersion victims than reported female submersion victims. This is consistent with the injury data, which show that more male children were treated in emergency departments for pool- or spa-related submersion injuries.

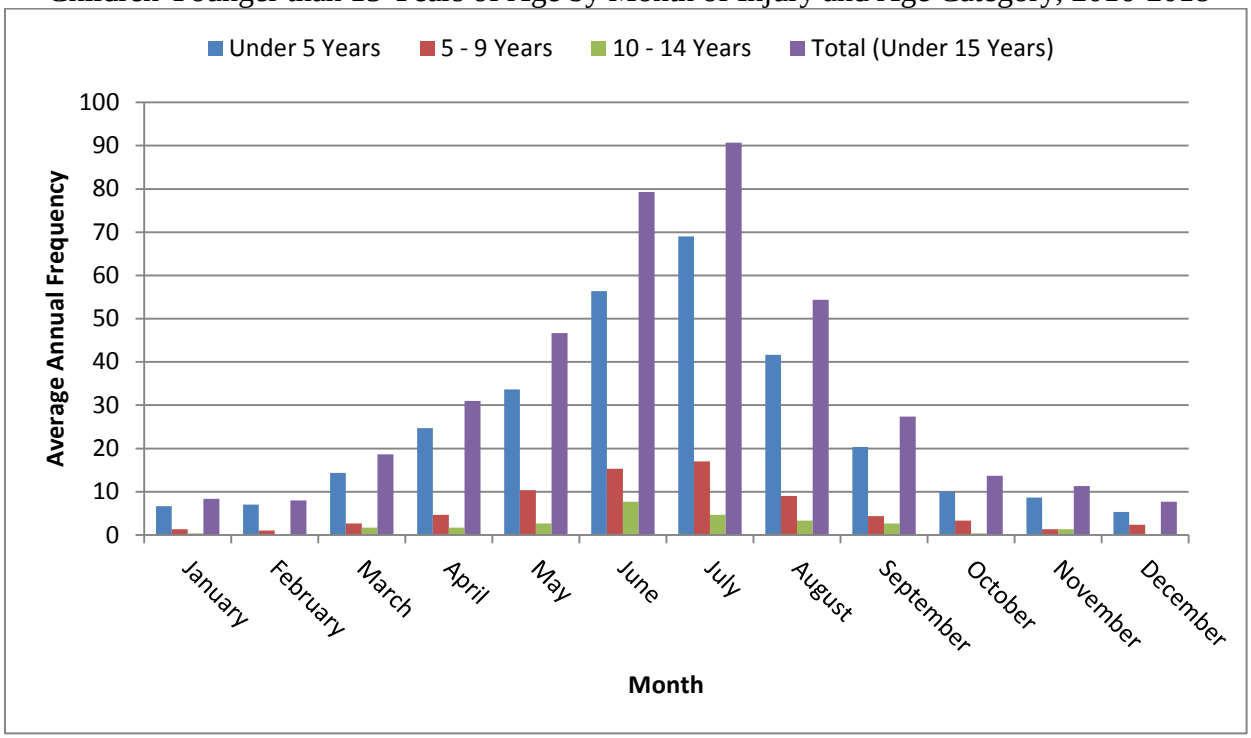
Table 10
Percentage of Drowning Deaths Reported to CPSC Staff Associated with Pools or Spas
Children Younger than 15 Years of Age by Gender, 2016-2018

Gender	Percentage of Reported Fatalities			
	Younger than 5 Years	5–9 Years	10–14 Years	Younger than 15 Years
Male	67	65	68	67
Female	33	34	32	33
Total	100	100	100	100

Source: U.S. CPSC: CPSRMS. System. Appendix A details the methodology for data extraction.
Percentages may not add up to 100, due to rounding and refer to percentages within each age group.

Figure 3 illustrates the monthly distribution of reported pool- or spa-related childhood drownings as a function of victim age. As expected, the summer months of May, June, July, and August had the largest annual fatality frequencies for all age groups.

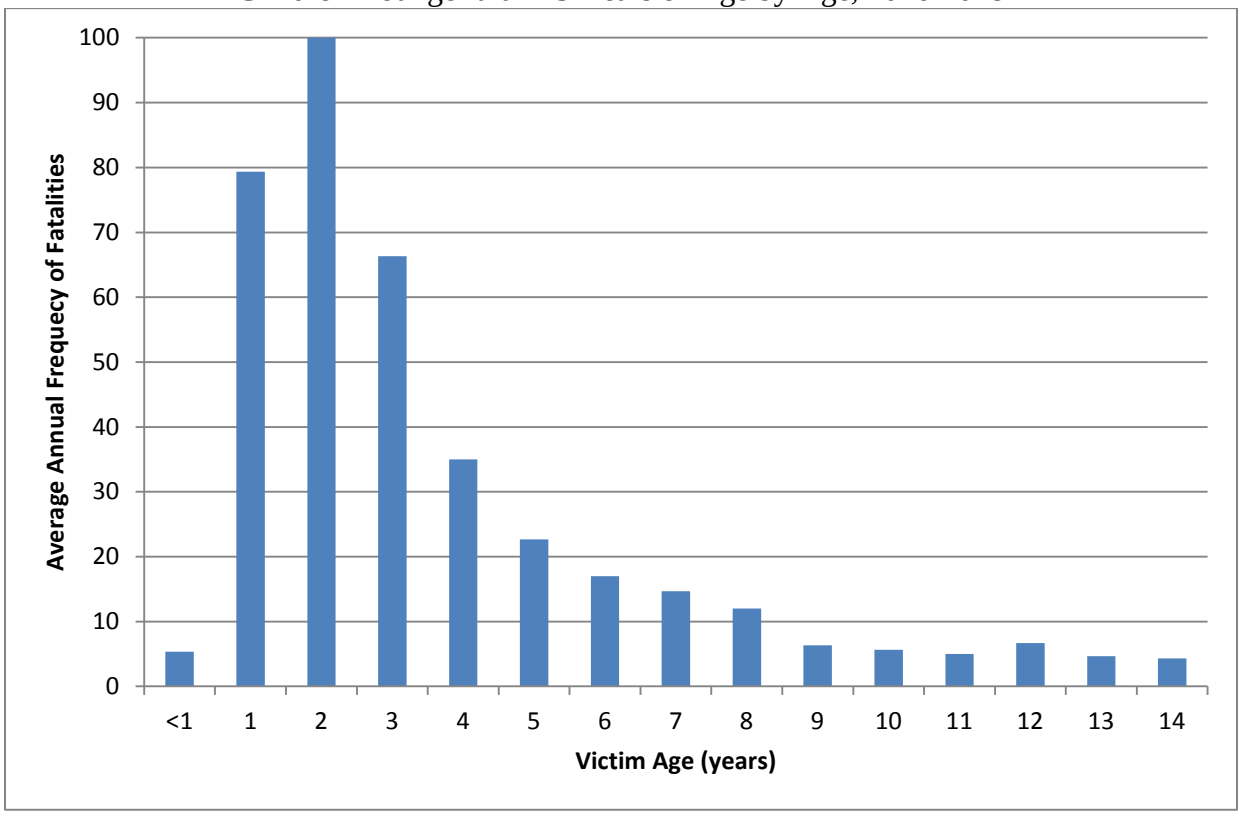
Figure 3
Average Annual Drowning Deaths Reported to CPSC Staff Associated with Pools or Spas
Children Younger than 15 Years of Age by Month of Injury and Age Category, 2016-2018



Source: U.S. CPSC: CPSRMS.

Figure 4 shows the annual average of reported pool or spa drownings in children younger than 15 years old as a frequency distribution of the victim's age. Children between the ages of 1 and 3 years (12 to 47 months) comprised approximately 65 percent of the reported pool or spa submersion fatalities. The graph shows a sharp decrease after age 2 (less than or equal to 35 months).

Figure 4
Average Annual Drowning Deaths Reported to CPSC Staff Associated with Pools or Spas
Children Younger than 15 Years of Age by Age, 2016-2018



Source: U.S. CPSC: CPSRMS.

Table 11 records the percentages of reported pool or spa drownings by incident location. The majority of reported deaths (70 percent for pools or spas) occurred in residential settings, such as the victim's home, a family or friend's house, or a neighbor's residence. The victim's home accounts for the largest percentage (44 percent) of all location categories for victims younger than 15 years of age. For children 5 to 9 years of age and children 10 to 14 years of age, the public/community/business location accounted for the largest percentage of reported drownings.

Table 11
Percentage of Drowning Deaths Reported to CPSC Staff Associated with Pools or Spas
Children Younger than 15 Years of Age by Incident Location, 2016-2018

Location	Percentage of Reported Fatalities			
	Younger than 5 Years	5–9 Years	10–14 Years	Younger than 15 Years
Home	53	18	9	44
Family/ Friend	21	7	5	18
Neighbor	9	9	6	8
Public/ Community/ Business[10]	11	47	61	21
Undisclosed Location	7	19	19	10
Total	100	100	100	100

Source: U.S. CPSC: CPSRMS. Appendix A details the methodology for data extraction.
Percentages may not add up to 100, due to rounding and refer to percentages within each age group.

[10] Condominium and apartment complex pools are included in this category.

Table 12 presents the percentages of reported fatal drownings by pool/spa type. The in-ground product type accounted for the largest percentage of known pool/spa types (53 percent for victims younger than 15). This was followed by the above-ground pool category and portable pool category for cases where pool/spa type was known.

Table 12
Percentage of Drowning Deaths Reported to CPSC Staff Associated with Pools or Spas
Children Younger than 15 Years of Age by Specific Pool/Spa Type Product Category,
2016-2018

Location	**Percentage of Reported Fatalities**			
	Younger than 5 Years	**5–9 Years**	**10–14 Years**	**Younger than 15 Years**
In-Ground (Pool Only)	51	57	66	53
Undisclosed Pool/Spa Type	16	38	30	21
Above-Ground (Pool Only)	23	4	3	19
Portable[11] (Pool Only)	5	1	-	4
Inside Home (Spa Only)	0	-	-	0
Outside Home (Spa Only)	4	-	1	3
Total	100	100	100	100

Source: U.S. CPSC: CPSRMS. Appendix A details the methodology for data extraction.
Percentages may not add up to 100 due to rounding and refer to percentages within each age group: In this table, 0 represents < 0.5%; "-" denotes no data recorded.

[11] A "portable pool" is defined as any pool that can be set up/taken down or moved to another location with relative ease.

Because the majority of reported fatal drowning victims were younger than 5 years of age, common scenarios for children younger than 5 years of age for pools or spas (893 reported drownings) were classified in Table 13. The highest percentage of the reports (57 percent) attributed the incident to a gap in adult supervision (an adult losing contact or knowledge of the whereabouts of the child, and during that period, the child managed to access the pool/spa). Eleven percent of the reports indicated barrier compromise or circumvention. Another common scenario—15 percent of the reports—involved observation of the victim in close proximity to the pool/spa, with the victim last seen in the pool/spa, or near the pool/spa, before the incident occurred. Additionally, in 17 percent of the reports, there was too little information available to determine the scenario.

Table 13
Percentage of Drowning Deaths Reported to CPSC Staff Associated with Pools or Spas
Children Younger than 5 Years of Age by Scenario, 2016-2018

Scenario	Percentage of Reported Fatalities for Pools and Spas
Lost Contact or Knowledge of Whereabouts	57
Not Enough Information to Determine Scenario	17
Barrier Integrity or Circumvented Barrier	11
Observed Near Pool/Spa or In Pool/Spa Prior to Incident	15

Source: U.S. CPSC: CPSRMS. Appendix A details the methodology for data extraction.

Appendix A

"Drowning" is defined as the process of experiencing respiratory impairment from submersion/immersion in liquid. Drowning outcomes can result in "death," "no morbidity," or "morbidity" (further categorized as "moderately disabled," "severely disabled," "vegetative state/coma," and "brain death").[12]

Methodology for Pool or Spa Submersion: Reported Drownings

Data were extracted on March 31, 2021, from CPSC's Consumer Product Safety Risk Management System (CPSRMS), for pool- or spa-related submersion deaths involving children younger than 15 years of age for the years 2016 to 2018. These data were merged with data from last year's report for 2016 and 2017, to cover the 2016 through 2018, reporting period. It should be noted that for a given year, date of death was used to determine the appropriate year category, and incidents are included on an ongoing basis. In particular, additional reports for several prior reported years are generally received during the most recent years. For the most recent period, two additional reports for 2016 were received since publication of last report.[13]

Fatal incidents associated with product codes 3251 (Built-in pools), 3221 (Above-ground pools), 5043 (Portable pools), 1284 (Pools, not specified), 3274 (Swimming, activity), and 698 (Hot tubs and Spas) were examined for inclusion in counts. Information from these cases was extracted into an Excel spreadsheet and sorted by date and incident location. CPSRMS contains various types of submitted voluntary information, including reports from consumers through the public-facing component SaferProducts.gov, newspaper clippings, state/local authorities, medical examiners, advocacy groups, as well as national death certificates. However, because of the voluntary and anecdotal nature of these reports, staff cannot be sure that information on all the deaths has been received. Since pool drowning incidents are notable events in the community where they occur, there were often multiple news reports, a medical examiner's report, a death certificate, an in-depth investigation, and less frequently, a hospital emergency department report (NEISS) for a single incident. As a result, source documents were checked to eliminate duplicate incident reports.

Methodology for Pool or Spa Submersion: Estimated Nonfatal Drowning Injuries

Injury estimates came from NEISS data extracted on April 12, 2021, for calendar year 2020. The NEISS product codes used for the data were 3251 (Built-in pools), 3221 (Above-ground pools), 5043 (Portable pools), 1284 (Pools, not specified), 3274 (Swimming, activity) and 698 (Hot tubs and Spas). Diagnoses codes of 69 (Submersions), 65 (Anoxia), and 42 (Aspirated on) were also used, along with the age constraint of "children younger than 15 years of age," to restrict the extracted data. Cases involving the activity of swimming were reviewed for potential inclusion in the data set. NEISS data from 2018 and 2019 were also used from last

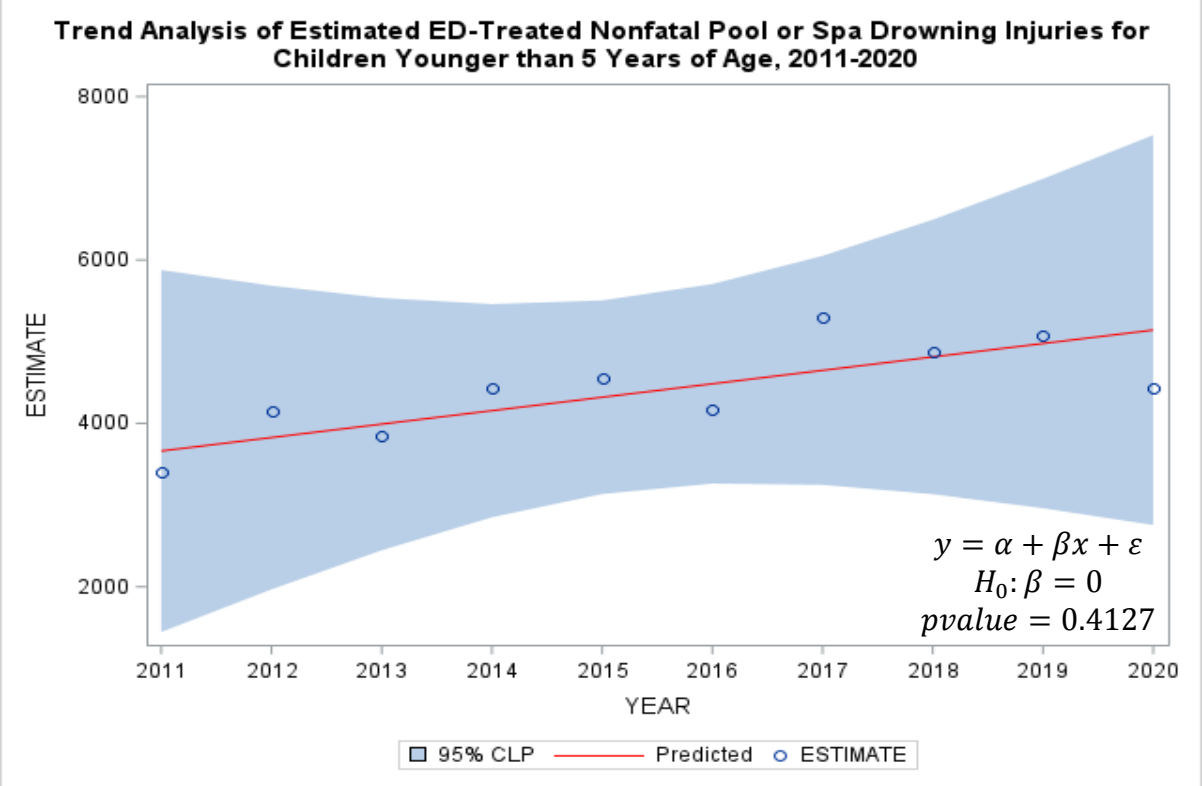
[12] https://pediatrics.aappublications.org/content/126/1/178 - avoid use of terms such as "near," "wet," "dry," "active," "passive," "silent," and "secondary" drowning.
[13] Pool or Spa Submersion: Estimated Nonfatal Drowning Injuries and Reported Drownings, 2020 Report

year's report to cover the 2018 through 2020 timeframe. NEISS data is from a probability-based sample. Sampling weights are used to project the cases from NEISS hospital-treated injury cases to national estimates. Because incidents in NEISS are unique, there were no duplicates.

The estimated numbers of emergency department-treated injuries are rounded to the nearest hundred. Because NEISS is a weighted sample, injury category percentages were based on the category weighted estimate (not rounded), divided by the total weighted estimate (not rounded); then the percentages are rounded to the nearest integer.

Historical Estimates

Injury estimates used for trend analyses are based on NEISS data from 2011 through 2020. Figure 5 provides the estimated number of injuries for children younger than 5 years of age, the fitted trend line, as well as the 95 percent confidence level for prediction intervals (CLP) for the fitted line. The p-value associated with the slope of the fitted line in the figure below is 0.4127, which indicates that no statistically significant trend exists for injury estimates from 2011 through 2020. While the number of estimated injuries has fluctuated since 2016, the population of children under age 5 in the U.S. has remained generally flat from 2005 through 2019.[14] Since the coefficients of variation associated with the injury estimates exceed the NEISS reliability threshold of 33 percent, trend analysis findings should be interpreted with caution.



[14] Because 2020 Census results are unavailable at the time of writing this report, annual estimates are from https://www.census.gov/data/tables/time-series/demo/popest/2010s-national-detail.html and https://www2.census.gov/programs-surveys/popest/datasets/2000-2010/intercensal/national/