



**CHILD INJURY IN THE UNITED STATES: A  
REPORT TO FUNDACIÓN MAPFRE FROM  
THE JOHNS HOPKINS CENTER FOR  
INJURY RESEARCH AND POLICY, 2019**

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# CONTENTS

<b>PURPOSE</b>	<b>4</b>
<b>ORGANIZATION</b>	<b>4</b>
Section I. Fatal Injuries	4
Section II. Nonfatal Injuries	4
Section III. Summary and Conclusions	4
<b>DESCRIPTION OF DATA SOURCES</b>	<b>5</b>
<b>SECTION I. FATAL CHILDHOOD INJURIES BY AGE GROUP, MECHANISM, AND INTENT 2005-2017. UNITED STATES, CALIFORNIA, MASSACHUSETTS AND OHIO</b>	<b>7</b>
<b>SECTION II. NONFATAL CHILDHOOD INJURIES BY AGE GROUP, MECHANISM, AND INTENT 2005-2017. UNITED STATES, CALIFORNIA AND MASSACHUSETTS</b>	<b>21</b>
<b>SECTION III. SUMMARY AND CONCLUSIONS</b>	<b>29</b>
Key Findings	30
Recommendations	31
<b>APPENDIX</b>	<b>32</b>

# **PURPOSE**

This report provides an overview of the burden of fatal and nonfatal injuries to children ages 0-14 in the U.S. for the period 2005-2017 and implications for prevention programming. We describe the magnitude and mechanism of injury for unintentional and intentional injury overall and by age group. Data from three states are also highlighted -- California, Massachusetts, and Ohio.

# **ORGANIZATION**

## **Section I. Fatal Injuries**

The report first presents the number and rates of fatal injuries by age group, injury mechanism and intent for the period 2005-2017, for the U.S., and for three states selected by Fundación MAPFRE: California, Massachusetts, and Ohio. Unintentional injury data are displayed in red tables; intentional injury data are depicted in green tables. Trends in death rates over the period under study are also displayed for selected injury mechanisms.

## **Section II. Nonfatal Injuries**

Nonfatal injury data by age group, injury mechanism and intent, and disposition are provided for the period 2005-2017 for the entire U.S. Because state-level data are not centrally compiled for nonfatal injuries, the authors accessed different data sources to produce the state level data tables in this section of the report, as described in the next section. Unintentional injury data are displayed in red tables; intentional injury data are depicted in green tables.

## **Section III. Summary and Conclusions**

Here we present a summary of the key findings and recommendations for injury prevention programming.

## DESCRIPTION OF DATA SOURCES

**Fatal injury data** for the U.S. as a whole and for individual states are available from the CDC's WISQARS™ (Web-based Injury Statistics Query and Reporting System), an interactive, on-line data base freely available at the CDC's National Center for Injury Prevention and Control (NCIPC)'s: <https://www.cdc.gov/injury/wisqars/>. WISQARS obtains its death data from the CDC's National Center for Health Statistic's national mortality database, using information from death certificates filed in state vital statistics offices. Causes of death are reported by attending physicians, medical examiners, and coroners. Demographic information about decedents is obtained from family members and other informants as reported by funeral directors (<https://www.cdc.gov/injury/wisqars/facts.html>). Rates are based on resident population data from the U.S. Census Bureau: [www.cdc.gov/nchs/about/major/dvs/popbridge/popbridge.htm](http://www.cdc.gov/nchs/about/major/dvs/popbridge/popbridge.htm)

To protect confidentiality, there are data use restrictions, including that counts of nine or fewer deaths cannot be reported (noted in the report with “—”), and rates that are calculated based on fewer than 20 deaths should be interpreted with caution (noted in the report with “\*”). These restrictions as indicated in tables and figures alert readers to consider these limitations when interpreting results.

Death data for the period covered by this report (2005-2017) used the International Classification of Diseases, ICD-10 codes: (<https://www.icd10data.com/ICD10CM/Codes>). ICD-10 uses alphanumeric codes (e.g. V01-X59, Y85-Y86) to communicate intent (i.e., unintentional, suicide, homicide, undetermined, legal intervention) and mechanism (e.g., motor vehicle accident, falls, etc.) in one code.

**Nonfatal injury data** for the U.S. as a whole for 2005-2017 were also taken from the CDC's WISQARS™ (Web-based Injury Statistics Query and Reporting System), an interactive, on-line data base freely available at the CDC's National Center for Injury Prevention and Control (NCIPC)'s: <https://www.cdc.gov/injury/wisqars/>. WISQARS obtains its nonfatal injury data from the NEISS All Injury Program (NEISS-AIP), which collects data about all types and mechanisms of nonfatal injuries and poisonings treated in 66 U.S. hospital emergency departments (EDs), in a collaborative effort with the Consumer Product Safety Commission. Approximately 500,000 injury-related emergency department (ED) cases are reported yearly, and data from these cases are weighted by the inverse of the probability of selection to provide national estimates. Rates are based on resident population data from the U.S. Census Bureau ([www.cdc.gov/nchs/about/major/dvs/popbridge/popbridge.htm](http://www.cdc.gov/nchs/about/major/dvs/popbridge/popbridge.htm)).

Some national estimates may be based on relatively few cases and are therefore unstable. The statistical criteria used to flag these unstable estimates (indicated by a \*) are those that are: based on fewer than 20 cases in the unweighted data, result in national estimates of less than 1,200 in the weighted data, or the coefficient of variation (CV) of the estimate is greater than 30%.

The national estimates of nonfatal injuries presented in this report are those treated in U.S. hospital EDs by intent and mechanism (cause) of injury, age, and disposition from the ED. Injuries are coded using ICD-9 codes to categorize injury mechanisms through an External Cause of Injury Code (E-Code). ICD-9 codes are generally subsumed under and consistent with ICD-10 codes used for fatal injuries, and the distinctions where they exist (e.g., commonly for “other specified” types of injury events) do not affect the results presented in this report. For more information on comparing ICD-9 to ICD-10 codes, see: [https://www.cdc.gov/nchs/nvss/mortality/comparability\\_icd.htm](https://www.cdc.gov/nchs/nvss/mortality/comparability_icd.htm).

Nonfatal injury data for specific states can only be obtained from the individual states themselves. Data were unavailable for Ohio. For California, data were accessed from EpiCenter, a website provided by the Safe and Active Communities Branch of the California Department of Public Health (<http://epicenter.cdph.ca.gov>), with data available for the period 2006-2014. For Massachusetts, nonfatal injury data are not generally available. The authors made a specific request and received the data from the Injury Surveillance Program at the Office of Statistics and Evaluation in the Bureau of Community Health and Prevention at the Massachusetts Department of Public Health for the period of 2005-2015; the data are reported using fiscal years rather than calendar years.

**SECTION I. FATAL CHILDHOOD INJURIES  
BY AGE GROUP, MECHANISM, AND  
INTENT  
2005-2017**

**UNITED STATES, CALIFORNIA,  
MASSACHUSETTS AND OHIO**

**Table 1. Leading Causes of Death in U.S., Number of Deaths, and Proportion of All Deaths, All Sexes, Ages 0-14, 2005-2017**

Rank	<1	1-4	5-9	10-14
<b>1</b>	Congenital Anomalies 66,897 (20.4%)	<b>Unintentional Injury 18,216 (32.6%)</b>	<b>Unintentional Injury 10,687 (32.9%)</b>	<b>Unintentional Injury 12,287 (30.2%)</b>
<b>2</b>	Short Gestation 56,295 (17.1%)	Congenital Anomalies 6,236 (11.2%)	Malignant Neoplasms 5,865(18.1%)	Malignant Neoplasms 5,822 (14.3%)
<b>3</b>	SIDS 24,776 (7.5%)	<b>Homicide 4,7784 (8.6%)</b>	Congenital Anomalies 2,394 (7.4%)	<b>Suicide 4168 (10.2%)</b>
<b>4</b>	Pregnancy Complication 20,785 (6.3%)	Malignant Neoplasms 4,658 (8.3%)	<b>Homicide 1,694 (5.2%)</b>	<b>Homicide 2,335(5.7%)</b>
<b>5</b>	<b>Unintentional Injury 15,596 (4.7%)</b>	Heart Disease 2,013 (3.6%)	Heart Disease 1106 (3.4%)	Congenital Anomalies 2,151 (5.3%)
<b>All Deaths</b>	<b>328,382</b>	<b>55,838</b>	<b>32,458</b>	<b>40,702</b>

SOURCE: Centers for Disease Control and Prevention, National Center for Injury Prevention and Control. Web-based Injury Statistics Query and Reporting System (WISQARS) [online] Available from URL: [www.cdc.gov/injury/wisqars](http://www.cdc.gov/injury/wisqars)

The overall picture of child injury in the U.S. from 2005-2017 can be seen in Table 1, illustrating the fact that unintentional injuries are the leading cause of child death after the age of one. From ages 1-14, unintentional injury represents about one-third of all deaths. Unintentional injuries include those caused by:

- cut/pierce
- drowning
- fall
- fire/heat
- firearm
- machinery
- natural/environmental
- overexertion
- poisoning
- struck by/against
- suffocation
- transportation-related, overall
- other specified and classifiable/other specific/NEC
- unspecified



## Unintentional Injury Deaths and SIDS in Infancy

Of the 15,596 unintentional injury deaths among infants (Table 1), 12,505 were due to suffocation, which is one of the three components of Sudden Unexpected Infant Death (SUID) -- the sudden and unexpected death of a baby less than 1 year old in which the cause was not obvious before investigation. These deaths often happen during sleep. SUIDs include sudden infant death syndrome (SIDS), accidental strangulation and suffocation in bed (ASSB), and other deaths from unknown causes. An additional 24,776 infants died of SIDS during the study period (Table 1). Monitoring rates of SUIDs is difficult because of differences across jurisdictions in investigating and reporting, and because caregivers do not usually see these deaths as they happen, making it hard for investigators to determine the cause. Nevertheless, there are evidence-based infant safe sleep recommendations from the American Academy of Pediatrics that address prevention, making this topic an essential component of any child injury prevention effort. <https://www.cdc.gov/sids/AboutSUIDandSIDS.htm>

**Table 2.A. Unintentional Injury Deaths\* in U.S. and Selected States, All Injuries, Races, and Sexes, Ages 0-14, 2005-2017**

Jurisdiction	<1	1-4	5-9	10-14	TOTAL
	Number (Rate)	Number (Rate)	Number (Rate)	Number (Rate)	Number (Rate)
<b>U.S.</b>	15,596 (30.03)	18,216 (8.74)	10,687 (4.08)	12,287 (4.55)	<b>56,786 (7.17)</b>
<b>CA</b>	752 (11.43)	1,744 (6.65)	916 (2.83)	1065 (3.15)	<b>4,477 (4.52)</b>
<b>MA</b>	48 (5.06)	105 (2.75)	71 (1.43)	104 (1.97)	<b>328 (2.19)</b>
<b>OH</b>	796 (43.54)	614 (8.27)	366 (3.81)	378 (3.77)	<b>2,154 (7.46)</b>

\*Includes cut/pierce; drowning; fall; fire/heat; firearm; non-firearm; machinery; natural/environmental; overexertion; poisoning; struck by/against; suffocation; terrorism; transportation-related, overall; other specified and classifiable; other specified/NEC; unspecified.  
Crude Rates per 100,000.

SOURCE: Centers for Disease Control and Prevention, National Center for Injury Prevention and Control. Web-based Injury Statistics Query and Reporting System (WISQARS) [online]. Available from URL: [www.cdc.gov/injury/wisqars](http://www.cdc.gov/injury/wisqars)

**Table 2.B. Intentional Injury Deaths+ in U.S. and Selected States, All Injuries, Races, and Sexes, Ages 0-14, 2005-2017**

Jurisdiction	<1	1-4	5-9	10-14	TOTAL
	Number (Rate)	Number (Rate)	Number (Rate)	Number (Rate)	Number (Rate)
<b>U.S.</b>	3,913 (7.54)	4,785 (2.30)	1,762 (0.67)	6,515 (2.41)	<b>16,976<sup>1</sup> (2.14)</b>
<b>CA</b>	338 (5.14)	419 (1.60)	150 (0.46)	600 (1.78)	<b>1,507<sup>2</sup> (1.52)</b>
<b>MA</b>	23 (2.43)	29 (0.76)	17 (0.34*)	63 (1.20)	<b>133<sup>3</sup> (0.89)</b>
<b>OH</b>	171 (9.35)	234 (3.15)	91 (0.95)	292 (2.91)	<b>788<sup>4</sup> (2.73)</b>

+Intentional includes homicide, suicide, and legal intervention.

<sup>1</sup> Includes 12,726 homicides, 4,235 suicides, 15 legal intervention. <sup>2</sup> Includes 1,195 homicides, 306 suicides. <sup>3</sup> Includes 82 homicides, 51 suicides; <sup>4</sup> Includes 597 homicides, 190 suicides. Legal intervention not included for individual states because data are suppressed when the number of deaths is 10 or less.

Crude rates per 100,000/population

\*Rates based on 20 or fewer deaths may be unstable; use with caution.

SOURCE: Centers for Disease Control and Prevention, National Center for Injury Prevention and Control. Web-based Injury Statistics Query and Reporting System (WISQARS) [online]. Available from URL: [www.cdc.gov/injury/wisqars](http://www.cdc.gov/injury/wisqars)

Tables 2.A. and 2.B. show unintentional (2.A.) and intentional (2.B.) injury death rates per 100,000 population by age groups for the U.S. as a whole and for each of the three states. Overall and in each state:

- the death rate is highest for infants less than one year of age for both unintentional and intentional injuries; and
- rates for unintentional injuries are substantially higher than those for intentional injuries.

In California, death rates are slightly below the rate of the U.S. as a whole across unintentional and intentional injuries for every age group with one exception: the unintentional death rate for infants is less than half the rate of the U.S. as a whole.

In Massachusetts, death rates are substantially below the U.S. overall rate for every age group as well as for both unintentional and intentional injury causes; however, in one case - intentional injury among 5-9 year olds - the rate is based on small numbers, and is thus less stable even after combining data across the 13 years.

In Ohio, the unintentional injury death rate for infants is almost one and a half times higher than the national rate, whereas for each of the other age groups the rates are fairly comparable. For intentional injury death rates, Ohio's are slightly higher than for the U.S. as a whole for all age groups.

**Table 3.A. Unintentional Injury Deaths by Top 5 Injury Mechanisms, All Races and Sexes, U.S. and Selected States, Ages 0-14, 2005-2017**

Injury ICD-10	CA	MA	OH	U.S. Total
	Number (Rate)	Number (Rate)	Number (Rate)	Number (Rate)
<b>Transport (All)<sup>1</sup></b>	2,161(2.18)	121 (0.81)	603 (2.09)	<b>21,571 (2.72)</b>
<b>Suffocation</b>	723 (0.73)	61 (0.41)	802 (2.78)	<b>15,299 (1.93)</b>
<b>Drowning</b>	944 (0.95)	78 (0.52)	297 (1.03)	<b>9,245 (1.17)</b>
<b>Fire/Burn</b>	140 (0.14)	23 (0.15)	202 (0.70)	<b>4,126 (0.52)</b>
<b>Poisoning</b>	98 (0.10)	--	65 (0.22)	<b>1,207 (0.15)</b>

<sup>1</sup>Transportation (All) includes motor vehicle occupant, motorcyclist, pedal cyclists (bicyclist, etc.) pedestrian, and other. Crude Rates per 100,000 population.

-- Data are suppressed when the the number of deaths is 10 or less.

\*Rates based on 20 or fewer deaths may be unstable; use with caution.

SOURCE: Centers for Disease Control and Prevention, National Center for Injury Prevention and Control. Web-based Injury Statistics Query and Reporting System (WISQARS) [online]. Available from URL: [www.cdc.gov/injury/wisqars](http://www.cdc.gov/injury/wisqars)

**Table 3.B. Unintentional Injury Deaths in U.S. by Top 5 Injury Mechanisms, All Races and Sexes, Ages 0-14, 2005-2017**

Injury ICD-10	<1	1-4	5-9	10-14
	Number (Rate)	Number (Rate)	Number (Rate)	Number (Rate)
<b>Transport (All)<sup>1</sup></b>	1,262 (2.43)	6,419 (3.08)	5,992 (2.29)	7,898 (2.93)
<b>Suffocation</b>	12,505 (24.08)	1,738 (0.83)	482 (0.18)	574 (0.21)
<b>Drowning</b>	555 (1.07)	5,611 (2.69)	1,687 (0.64)	1,392 (0.52)
<b>Fire/Burn</b>	296 (0.57)	1,882 (0.90)	1,234 (0.47)	714 (0.26)
<b>Poisoning</b>	159 (0.31)	405 (0.19)	175 (0.07)	468 (0.17)

<sup>1</sup>Transportation (All) includes motor vehicle occupant, motorcyclist, pedal cyclists (bicyclist, etc.) pedestrian, and other. Crude Rates per 100,000 population.

-- Data are suppressed when the the number of deaths is 10 or less.

\*Rates based on 20 or fewer deaths may be unstable; use with caution.

SOURCE: Centers for Disease Control and Prevention, National Center for Injury Prevention and Control. Web-based Injury Statistics Query and Reporting System (WISQARS) [online]. Available from URL: [www.cdc.gov/injury/wisqars](http://www.cdc.gov/injury/wisqars)

Tables 3.A. and 3.B. show the five leading injury mechanisms responsible for child deaths in the three states of interest and in the U.S. as a whole, and by age groups for the U.S. Please see the Appendix tables 3.A.1. – 3.A.3. for detailed tables of mechanisms by age group for each of the three states.

As shown in Table 3.A., death rates per 100,000 population are highest for transportation deaths for the U.S. as a whole (2.72) as well as for California (2.18) and Massachusetts (0.81); they are the second highest in Ohio, where suffocation is higher (2.78 vs 2.09). Ohio's overall child death rate due to suffocation is being driven by the rate among infants, which is substantially higher than the U.S. as a whole (see Appendix). Drowning is the third leading mechanism in the U.S. (1.17) and in each of the three states (0.95 in CA, 0.52 in MA, and 1.03 in OH). Drowning rates are highest among the 1-4 year old children in all jurisdictions (see Appendix).

In the U.S. as a whole, among infants, suffocation caused 12,505 deaths (24.08/100,000), which is 10 times higher than the second leading cause, transportation (1,262 deaths, 2.43/100,000). For every other age group, transportation is the leading cause. Rates of death due to drowning and fires/burns are highest among the 1-4 year olds. Unintentional poisoning death rates are highest among infants.

**Table 3.C. Intentional Injury Deaths in U.S. and Selected States by Injury Mechanism, All Races and Sexes, Ages 0-14, 2005-2017**

Injury ICD-10	<1	1-4	5-9	10-14	TOTAL
	Number (Rate)	Number (Rate)	Number (Rate)	Number (Rate)	Number (Rate)
<b>United States</b>					
Homicide	3,913 (7.54)	4,784 (2.30)	1,694 (0.65)	2,335 (0.87)	<b>12,726 (1.61)</b>
Suicide	--	--	67 (0.03)	4,168 (1.54)	<b>4,235 (0.53)</b>
<b>California</b>					
Homicide	338 (5.14)	419 (1.60)	146 (0.45)	292 (0.86)	<b>1,195 (1.21)</b>
Suicide	--	--	--	303 (0.90)	<b>306 (0.31)</b>
<b>Massachusetts</b>					
Homicide	23 (2.43)	29 (0.76)	17 (0.34*)	13 (0.25*)	<b>82 (0.55)</b>
Suicide	--	--	--	50 (0.95)	<b>51 (0.34)</b>
<b>Ohio</b>					
Homicide	171 (9.35)	234 (3.15)	87 (0.91)	105 (1.05)	<b>597 (2.07)</b>
Suicide	--	--	--	186 (1.85)	<b>190 (0.66)</b>

Crude Rates per 100,000 population.

-- Data are suppressed when the the number of deaths is 10 or less.

\*Rates based on 20 or fewer deaths may be unstable; use with caution.

SOURCE: Centers for Disease Control and Prevention, National Center for Injury Prevention and Control. Web-based Injury Statistics Query and Reporting System (WISQARS) [online]. (2005) [cited 2018 May 8]. Available from URL: [www.cdc.gov/injury/wisqars](http://www.cdc.gov/injury/wisqars)

Table 3.C. presents rates of homicide and suicide by age group for the U.S., and for each state. Homicide rates are highest among infants, with Ohio having the highest (9.35/100,000). Suicide as a cause of death is seen mostly after age 10, although the U.S. data include 67 children in the 5-9 year old age group whose deaths were recorded as suicides. Among all children 0-14 years old in the U.S. as a whole and in each of the states, the numbers and rates of homicide are substantially higher than suicide; Ohio had the highest rates for both (2.07 and 0.66, respectively).

**Figure 1. Unintentional All Transport Deaths, 2005-2017**  
0-14 Year Old Children in the United States by Year and Age, Rates per 100,000 population  
Source: CDC/NCIPC/WISQARS

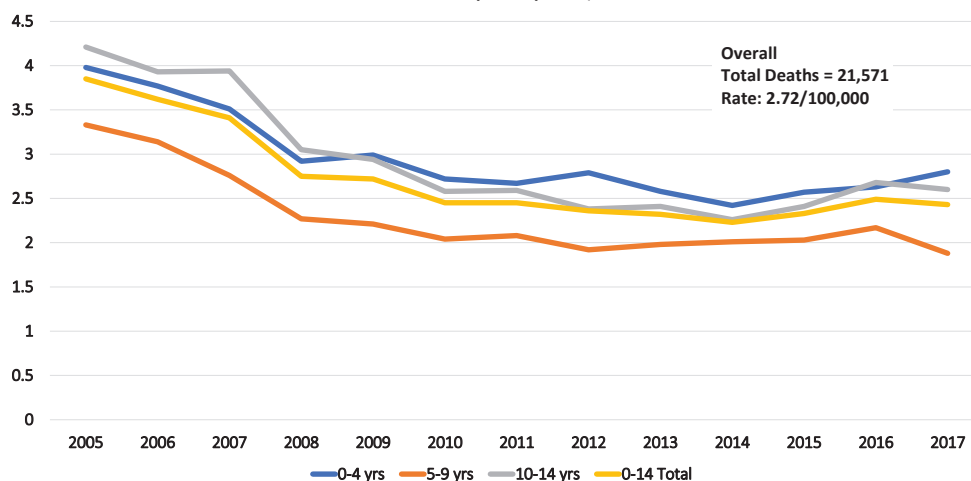


Figure 1 shows a downward trend in transportation death rates for children ages 0-14, from almost 4/100,000 in 2005 to < 2.5/100,000 in 2017. A slight uptick in rates can be seen beginning in 2014 and continuing most noticeably for those in the 0-4 year old age group through 2017. Rates show a down turn from 2016-2017 for the older ages (5-9 and 10-14 year old children).

**Figure 2. Unintentional Drowning Deaths, 2005-2017**  
0-14 Year Old Children in the United States by Year and Age, Rates per 100,000 population  
Source: CDC/NCIPC/WISQARS

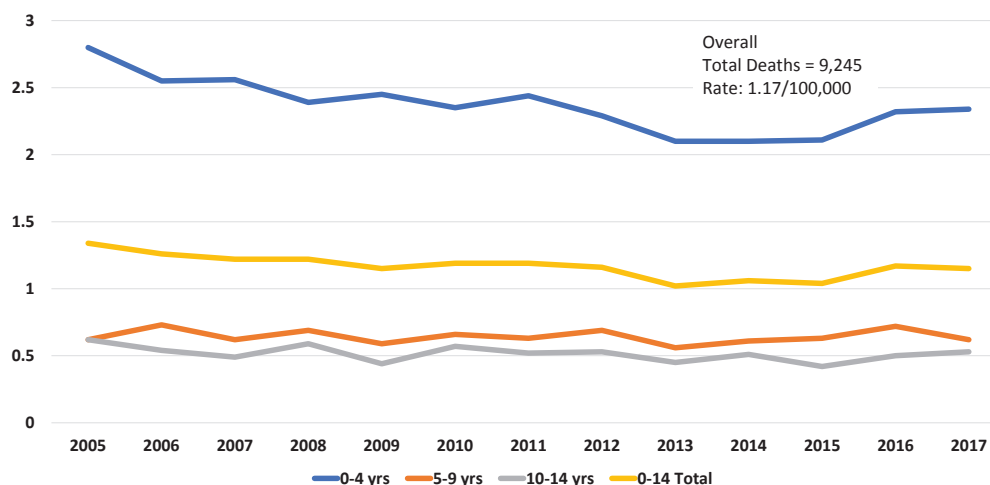


Figure 2 shows very little overall change in drowning rates for the 0-14 year age group over the time period, although for the youngest age group of 0-4 year olds, rates showed a decrease to almost 2/100,000 in 2013-14, but then increased from 2015-2016. Moreover, rates for the 0-4 year age group have remained consistently and substantially higher than those seen in any other age group.



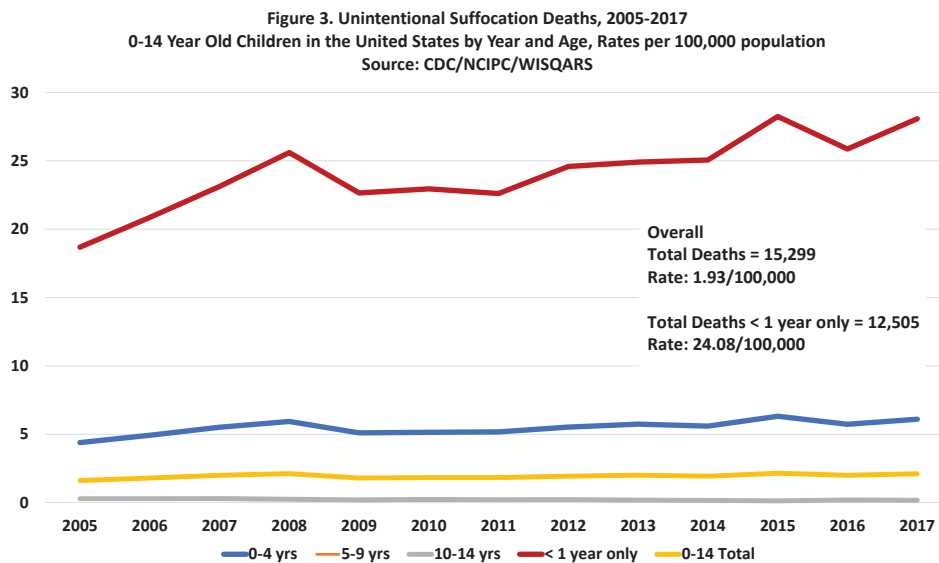


Figure 3 shows that infants (red line) experience a dramatically higher overall rate of suffocation deaths, and that this rate has been increasing over time. Some of the increase is thought to be due to changes in death scene investigations and reporting of infant sleep-related deaths, although this would not explain the disproportionately higher rates overall when compared to older children.

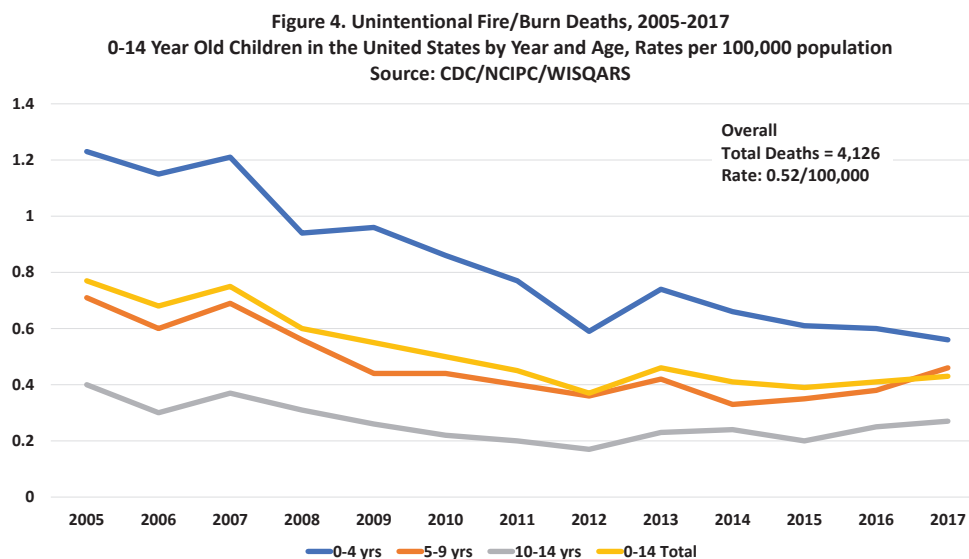


Figure 4 shows an overall downward trend in fire and burn-related deaths among children in all age groups over the years under study. The most recent years suggest a slight increase in the rates for older children. Although the decline in death rates seems most dramatic among the youngest age group, 0-4, their rates remain the highest.

**Figure 5. Unintentional Drug Poisoning Deaths, 2005-2017**  
0-14 Year Old Children in the United States by Year and Age, Rates per 100,000 population

Source: CDC/NCIPC/WISQARS

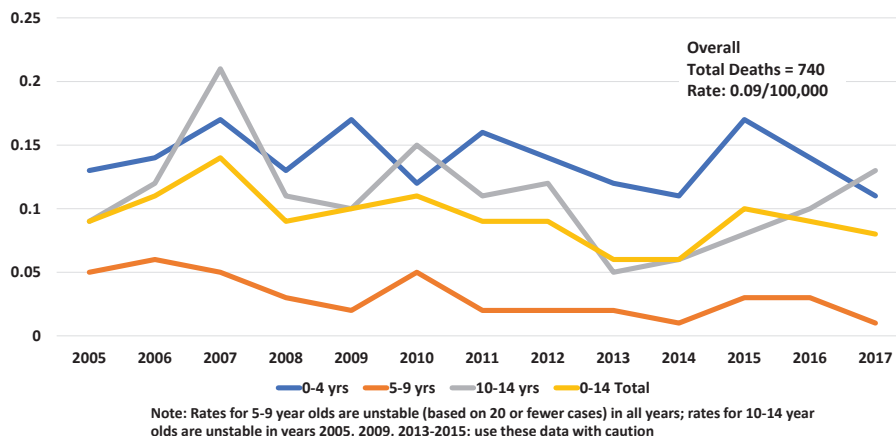


Figure 5 shows an increase from 2014-2015 in all age groups in deaths from drug poisoning. The highest rate is among the youngest age group of 0-4 year olds until 2017 when the rate among 10-14 year olds surpassed it. The rates in the 10-14 year old age group have shown a steady increase from 2013. Whether the drug poisonings are due to the increased number of adult prescription pain medications in U.S. households cannot be determined from WISQARS.

**Figure 6. Homicides, 2005-2017**  
0-14 Year Old Children in the United States by Year and Age, Rates per 100,000 population

Source: CDC/NCIPC/WISQARS

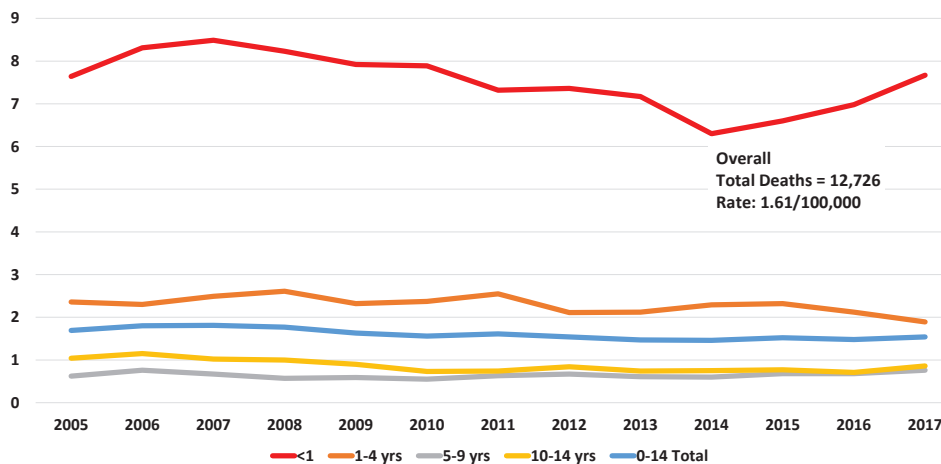


Figure 6 shows a slight decrease in child homicides over time, although there appears to be a slight increase from 2016-17 for the older age groups. Most noticeable is the substantial and consistent differential between children ages 0-4 and all other ages.

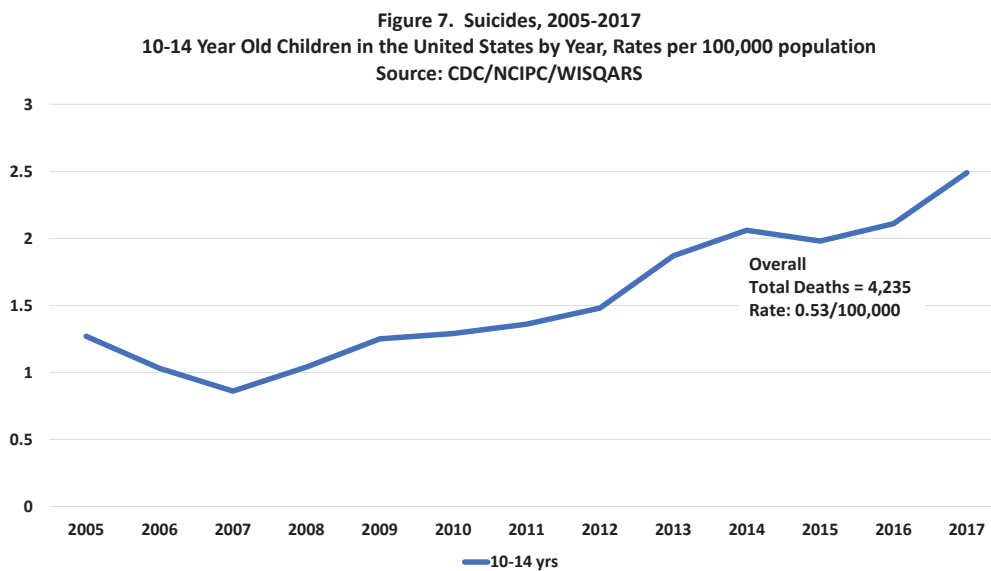


Figure 7 shows a substantial increase in suicide rates for children ages 10-14. Over the period 2005-2017, there were a total of 4,235 suicide deaths in this age group.



**SECTION II. NONFATAL CHILDHOOD  
INJURIES BY AGE GROUP, MECHANISM,  
AND INTENT 2005-2017**

**UNITED STATES, CALIFORNIA AND  
MASSACHUSETTS**

**Table 4.A. Top 10 Leading Causes of Nonfatal Unintentional Injuries\* in U.S., All Races and Sexes, Ages 0-14, 2005-2017**

RANK	<1	1-4	5-9	10-14	TOTAL
1	Fall 1,703,199	Fall 11,156,763	Fall 8,125,522	Fall 7,470,212	Falls 28,455,695
2	Struck by/Against 401,669	Struck by/Against 4,521,035	Struck by/Against 5,118,817	Struck by/Against 7,293,615	Struck by/Against 17,335,135
3	Other Bite/Sting 165,377	Other Bite/Sting 1,962,188	Transport (All) 2,449,284	Overexertion 3,658,284	Transport (All) 6,876,289
4	Foreign Body 132,718	Foreign Body 1,668,248	Cut/Pierce 1,394,629	Transport (All) 3,251,562	Overexertion 5,798,948
5	Fire/Burn 119,809	Transport (All) 1,100,600	Other Bite/Sting 1,314,264	Cut/Pierce 1,624,338	Other Bite/Sting 4,254,491
6	Other Specified 116,168	Cut/Pierce 1,053,758	Overexertion 1,043,700	Unknown 1,161,101	Cut/Pierce 4,151,187
7	Inhalation/Suffoc 92,734	Overexertion 1,026,734	Foreign Body 754,338	Other Bite/Sting 812,662	Foreign Body 2,851,782
8	Cut/Pierce 78,462	Other Specified 816,456	Dog Bite 541,553	Dog Bite 426,227	Unknown 2,258,704
9	Transport (All) 74,843	Fire/Burn 656,302	Unknown 474,515	Other Specified 348,156	Other Specified 1,509,436
10	Overexertion 70,229	Unknown 556,747	Fire/Burn 261,454	Foreign Body 296,477	Dog Bite 1,452,285

\* Disposition for nonfatal injuries = All Cases (Treated & Released; Transferred; Transferred or Hospitalized; Hospitalized; Observed/Left AMA/Unknown)

SOURCE: Centers for Disease Control and Prevention, National Center for Injury Prevention and Control. Web-based Injury Statistics Query and Reporting System (WISQARS) [online]. Available from URL: [www.cdc.gov/injury/wisqars](http://www.cdc.gov/injury/wisqars)

**Table 4.B. Top 5 Leading Causes of Nonfatal Unintentional Injuries\* in U.S. as Percent of Total, All Races and Sexes, Ages 0-14, 2005-2017**

RANK	<1	1-4	5-9	10-14	TOTAL
1	Fall 54.7%	Fall 43.5%	Fall 37.1%	Fall 27.8%	Falls 36.7%
2	Struck by/Against 12.9%	Struck by/Against 17.6%	Struck by/Against 23.4%	Struck by/Against 27.2%	Struck by/Against 22.4%
3	Other Bite/Sting 5.3%	Other Bite/Sting 7.7%	Transport (All) 11.2%	Overexertion 13.6%	Transport (All) 8.9%
4	Foreign Body 4.3%	Foreign Body 6.5%	Cut/Pierce 6.4%	Transport (All) 12.1%	Overexertion 7.5%
5	Fire/Burn 3.9%	Transport (All) 4.3%	Other Bite/Sting 6.0%	Cut/Pierce 6.1%	Other Bite/Sting 5.5%
<b>Total, all causes</b>	<b>All injuries N=3,111,669 100%</b>	<b>All injuries N=25,619,729 100%</b>	<b>All injuries N=21,876,394 100%</b>	<b>All injuries N=26,835,735 100%</b>	<b>All injuries N=77,443,526 100%</b>

\* Disposition for nonfatal injuries = All Cases (Treated & Released; Transferred; Transferred or Hospitalized; Hospitalized; Observed/Left AMA/Unknown)

SOURCE: Centers for Disease Control and Prevention, National Center for Injury Prevention and Control. Web-based Injury Statistics Query and Reporting System (WISQARS) [online]. Available from URL: [www.cdc.gov/injury/wisqars](http://www.cdc.gov/injury/wisqars)

Table 4.A. shows the leading causes of nonfatal unintentional injuries and includes all visits to an emergency department, including those who were observed, treated and released, transferred, and hospitalized. Falls and being struck by or against an object are consistently in first and second place respectively across the age groups. Transportation related injuries are the third leading cause overall and are concentrated in the 5-9 year age group. Overexertion ranks fourth overall and is most commonly seen among the 10-14 year old age group. Other bites and stings are frequent, ranking fifth overall (and third for those in the <1 and 1-4 year age groups); there are more than twice as many of these injuries relative to dog bites, which ranked tenth overall.

Table 4.B. shows the top five causes of nonfatal injuries as a proportion of all nonfatal injuries in within each age group, and for the 0-14 year old population in the U.S. in total. Falls cause the largest proportion of injuries, ranging from 27.8% among 10-14 year olds to 54.7% among infants. More than one-half of all nonfatal injuries in 0-14 year olds in the U.S. are due to one of two causes – falls (36.7%) and being struck by/against (22.4%).

## DEFINITIONS

**Fall:** injuries from striking a surface at the same or lower level following abrupt descent due to the force of gravity.

**Struck by/Against:** injuries due to being struck by (hit) or crushed by a human, animal, or inanimate object other than a vehicle or machinery; and due to striking (hitting) against a human, animal, or inanimate object other than a vehicle or machinery.

**Overexertion:** acute overexertion causing damage to muscles, tendons, ligaments, cartilage, joints, or peripheral nerves; due to lifting, pushing, or pulling, excessive force (e.g., the stretching or pulling of an arm or leg by another person or inanimate object); strains and sprains not due to falling.

**Other bite/sting:** injuries due to human or animal bites (excluding dog bites), poisonous or nonpoisonous snake and lizard bites, poisonous or nonpoisonous insect and spider bites, bee and wasp stings, scorpion stings, and stings from coral or jellyfish; and penetration of the skin by poisonous or nonpoisonous plant parts.

For more definitions, go to: [https://www.cdc.gov/injury/wisqars/cost\\_help/mechanism\\_injury.html](https://www.cdc.gov/injury/wisqars/cost_help/mechanism_injury.html)

**Table 5.A. Unintentional Nonfatal Injuries in U.S. and Selected States, All Injuries, Races, and Sexes, Ages 0-14, Number and Rates per 100,000 Population**

Jurisdiction	<1	1-4	5-9	10-14	TOTAL
	Number (Rate)	Number (Rate)	Number (Rate)	Number (Rate)	Number (Rate)
<b>U.S.</b> 2005-2017	3,111,669 (5,992)	22,322,450 (12,653)	25,619,729 (12,296)	26,835,735 (9,944)	<b>77,443,526</b> <b>(9,774)</b>
<b>CA</b> 2005-2014	241,912 (4,857)	1,799,089 (9,025)	1,378,376 (5,503)	1,549,347 (5,979)	<b>4,968,724</b> <b>(6,548)</b>
<b>MA</b> FY 2005-2015	59,192 (7,346)	429,922 (13,244)	386,930 (9,190)	532,946 (11,882)	<b>1,408,980</b> <b>(11,053)</b>

**SOURCE:**  
**U.S. Data:** Centers for Disease Control and Prevention, National Center for Injury Prevention and Control. Web-based Injury Statistics Query and Reporting System (WISQARS) [online] Available from URL: [www.cdc.gov/injury/wisqars](http://www.cdc.gov/injury/wisqars)  
**CA Data:** California Emergency Department Data (2006-2014) and Inpatient Discharge Data (2005-2014), California Office of Statewide Health Planning and Development, <http://epicenter.cdph.ca.gov>;  
**MA Data:** Massachusetts Inpatient Hospital Discharge, Outpatient Observation Stay, and Emergency Department Discharge databases; Center for Health Information and Analysis. Data are collected and reported by fiscal year, October 1, 2005 – September 30, 2015

**Table 5.B. Intentional Nonfatal Injuries in U.S. and Selected States, All Races and Sexes, Ages 0-14, Number and Rates per 100,000 Population**

Jurisdiction	<1	1-4	5-9	10-14	TOTAL
	Number (Rate)	Number (Rate)	Number (Rate)	Number (Rate)	Number (Rate)
<b>U.S.</b> 2005-2017	54,590 (105.12)	285,850 (137.19)	380,369 (145.07)	1,489,586 (551.99)	<b>2,210,395</b> <b>(278.97)</b>
<b>CA</b> 2005-2014	2,609 (56.99)	5,660 (31.00)	9,213 (40.41)	67,721 (288.41)	<b>85,203</b> <b>(123.28)</b>
<b>MA</b> FY 2005-2015	614 (76.21)	1,740 (53.60)	2,725 (64.73)	16,620 (370.55)	<b>21,699</b> <b>(170.23)</b>

**SOURCE:**  
**U.S. Data:** Centers for Disease Control and Prevention, National Center for Injury Prevention and Control. Web-based Injury Statistics Query and Reporting System (WISQARS) [online] Available from URL: [www.cdc.gov/injury/wisqars](http://www.cdc.gov/injury/wisqars)  
**CA Data:** California Emergency Department Data (2006-2014) and Inpatient Discharge Data (2005-2014), California Office of Statewide Health Planning and Development, <http://epicenter.cdph.ca.gov>;  
**MA Data:** Massachusetts Inpatient Hospital Discharge, Outpatient Observation Stay, and Emergency Department Discharge databases; Center for Health Information and Analysis. Data are collected and reported by fiscal year, October 1, 2005 – September 30, 2015



Tables 5.A. and 5.B. display the nonfatal injury data for unintentional (5.A.) and intentional (5.B.) injuries for the U.S., California, and Massachusetts. In the U.S., there were more than 77 million unintentional and 2.2 million intentional injuries from 2005-2017. While numbers of injuries cannot be directly compared due to differences in data sources and time periods, the rates in California were 6,548 for unintentional and 123.28 for intentional injuries; in Massachusetts, rates were 11,053 and 170.23 respectively. Across age groups, the rate of unintentional injuries is highest for children 1-4 years, a pattern that is seen in the U.S. as a whole and in California and Massachusetts (Table 5.A.). Across age groups, the rate of intentional injuries is highest for children 10-14 years, in the U.S. as a whole and in California and Massachusetts. Rates for 10-14 year old children are notably higher than the rates seen in the younger age groups (Table 5.B.).

**Table 6.A. Unintentional Nonfatal Injuries by Leading Injury Mechanisms, All Races and Sexes, U.S. and Selected States, Ages 0-14, Number and Rates per 100,000 Population**

Injury ICD-10	CA 2005-2014	MA FY 2005-2015	U.S. Total 2005-2017
	Number (Rate)	Number (Rate)	Number (Rate)
Fall	1,938,381 (2,804.58)	486,812 (3,819.08)	<b>28,455,695 (3,591.31)</b>
Struck by/Against	960,374 (1,389.53)	315,947 (2,478.63)	<b>17,335,135 (2,187.82)</b>
Transport (All)	377,130 (545.66)	104,831 (822.41)	<b>6,876,289 (867.84)</b>
Overexertion	267,917 (387.64)	106,017 (831.71)	<b>5,798,948 (731.87)</b>
Cut/Pierce	246,258 (356.30)	83,674 (656.43)	<b>4,151,187 (523.91)</b>

SOURCE:  
 U.S. Reporting System (WISQARS) [online] Available from URL: [www.cdc.gov/injury/wisqars](http://www.cdc.gov/injury/wisqars)  
 CA Data: California Emergency Department Data (2006-2014) and Inpatient Discharge Data (2005-2014), California Office of Statewide Health Planning and Development, <http://epicenter.cdph.ca.gov>;  
 MA Data: Massachusetts Inpatient Hospital Discharge, Outpatient Observation Stay, and Emergency Department Discharge databases; Center for Health Information and Analysis. Data are collected and reported by fiscal year, October 1, 2005 – September 30, 2015

**Table 6.B. Unintentional Nonfatal Injuries in U.S. by Leading Injury Mechanisms, All Races and Sexes, Ages 0-14, 2005-2017, Number and Rates per 100,000 Population**

Injury ICD-10	<1	1-4	5-9	10-14	TOTAL
	Number (Rate)	Number (Rate)	Number (Rate)	Number (Rate)	Number (Rate)
Fall	1,703,199 (3,279.86)	11,156,763 (5,354.53)	8,125,522 (3,098.95)	7,470,212 (2,768.22)	<b>28,455,695 (3,591.31)</b>
Struck by/Against	401,669 (773.50)	4,521,035 (2,169.81)	5,118,817 (1,952.24)	7,293,615 (2,702.78)	<b>17,335,135 (2,187.82)</b>
Transport (All)	74,843 (144.13)	1,100,600 (528.22)	2,449,284 (934.12)	3,251,562 (1,204.92)	<b>6,876,289 (867.84)</b>
Overexertion	70,229 (135.24)	1,026,734 (492.77)	1,043,700 (398.05)	3,658,284 (1,355.64)	<b>5,798,948 (731.87)</b>
Cut/Pierce	78,462 (151.09)	1,053,758 (505.74)	1,394,629 (531.89)	1,624,338 (601.93)	<b>4,151,187 (523.91)</b>

Transport (All) includes motor vehicle occupant, motorcyclist, pedal cyclists (bicyclist, etc.) pedestrian, and other. Crude Rates per 100,000.

SOURCE: Centers for Disease Control and Prevention, National Center for Injury Prevention and Control. Web-based Injury Statistics Query and Reporting System (WISQARS) [online]. (2005) [cited 2018 May 8]. Available from URL: [www.cdc.gov/injury/wisqars](http://www.cdc.gov/injury/wisqars)

**Table 6.C. Intentional Nonfatal Injuries in U.S. and Selected States by Injury Mechanism, All Races and Sexes, Ages 0-14**

Injury ICD-10	<1	1-4	5-9	10-14	TOTAL
	Number (Rate)	Number (Rate)	Number (Rate)	Number (Rate)	Number (Rate)
<b>United States<sup>1</sup> 2005-2017</b>					
Assault-All	55,885 (103.77)	284,392 (136.49)	370,069 (141.14)	1,129,595 (418.59)	<b>1,837,941 (231.96)</b>
Self-Harm	--	562 (0.27)	9,080 (3.46)	341,608 (126.59)	<b>351,250 (44.33)</b>
<b>California<sup>2</sup> 2006-2014</b>					
Assault-All	2,580 (56.35)	5,376 (29.45)	8,663 (38.01)	44,307 (188.69)	<b>60,926 (88.15)</b>
Self-Harm	29 (0.63)	284 (1.56)	550 (2.41)	23,414 (99.72)	<b>24,277 (35.13)</b>
<b>Massachusetts<sup>3</sup> FY2005-2015</b>					
Assault	571 (70.88)	1,528 (47.07)	2,435 (57.84)	10,484 (233.75)	<b>15,018 (117.82)</b>
Self-Inflicted	43 (5.34)	212 (6.53)	290 (6.89)	6,136 (136.81)	<b>6,681 (52.41)</b>

Crude Rates per 100,000

SOURCE: <sup>1</sup> Centers for Disease Control and Prevention, National Center for Injury Prevention and Control. Web-based Injury Statistics Query and Reporting System (WISQARS) [online]. Available from URL: [www.cdc.gov/injury/wisqars](http://www.cdc.gov/injury/wisqars); <sup>2</sup> California Emergency Department Data (2006-2014) and Inpatient Discharge Data (2005-2014), California Office of Statewide Health Planning and Development, <http://epicenter.cdph.ca.gov>; <sup>3</sup> Massachusetts Inpatient Hospital Discharge, Outpatient Observation Stay, and Emergency Department Discharge databases; Center for Health Information and Analysis. Data are collected and reported by fiscal year, October 1 thru September 30, 2005-2015.

The five leading mechanisms of nonfatal injuries in the U.S. are displayed in Tables 6.A. and 6.B. There were 28.4 million falls and 17.3 million injuries due to being struck among 0-14 year olds from 2005-2017 (Table 6.A.). Rates of nonfatal injuries were higher in Massachusetts relative to California, and for all but transportation Massachusetts rates were higher than the U.S. overall (Table 6.A.). Children ages 1-4 were at the highest risk for fall injuries (11.1 million, 5,354/100,000 population), while 10-14 year olds were at the highest risk for being struck (7.29 million, 2,702/100,000 population) (Table 6.B.).

Table 6.C. shows that there were a total of 1.8 million assault-related injuries in the U.S. from 2005-2017, with the highest rates and numbers occurring in the 10-14 year age group; this pattern was seen in California and Massachusetts as well. In both states, the second highest rate of assault-related injuries was among infants < 1 year; in the U.S. as a whole, there were 55,885 assault-related injuries among this age group. The vast majority of all self-inflicted injuries occurred in the 10-14 year age group in the U.S., as well as in California and Massachusetts.

**Table 7. Nonfatal Injuries in U.S. by Disposition and Type, All Races and Sexes, Ages 0-14, 2005-2017**

Injury Type	<1 year old			1-4 years old		
	Treated & Released # (Rate)	Transferred/ Hospitalized # (Rate)	Other # (Rate)	Treated & Released # (Rate)	Transferred/ Hospitalized # (Rate)	Other # (Rate)
<b>Unintentional</b>	2,855,547 (5,498.95)	165,949 (319.57)	90,173* (173.65)	24,404,510 (11,712.61)	675,500 (324.20)	539,719 (259.03)
<b>Assault</b>	34,097 (65.66)	17,438 (33.58)	2,350* (4.53)	254,125 (121.96)	23,320 (11.19)	6,946 (3.33)
<b>Self-harm</b>	0*	0*	0*	436* (0.21)	118* (0.06)	8* (0.00)
Injury Type	5-9 years old			10-14 years old		
	Treated & Released # (Rate)	Transferred/ Hospitalized # (Rate)	Other # (Rate)	Treated & Released # (Rate)	Transferred/ Hospitalized # (Rate)	Other # (Rate)
<b>Unintentional</b>	21,061,573 (8,032.57)	554,015 (211.29)	260,806 99.47	26,032,466 (9,646.79)	592,158 (219.43)	211,111 (78.23)
<b>Assault</b>	352,010 (134.25)	10,655 (4.07)	7,349* (2.82)	1,079,449 (400.01)	29,106 (10.79)	21,041* (7.80)
<b>Self-harm</b>	5,038 (1.92)	3,624 (1.38)	418* (0.16)	145,701 (53.99)	184,183 (68.25)	11,724* (4.34)

\*Estimate is unstable due to small numbers and/or CV >30%; use with caution  
 Crude rates per 100,000 population  
 Other = Observed/Left AMA/Unknown other  
 SOURCES: Centers for Disease Control and Prevention, National Center for Injury Prevention and Control. Web-based Injury Statistics Query and Reporting System (WISQARS) [online]. Available from URL: [www.cdc.gov/injury/wisqars](http://www.cdc.gov/injury/wisqars)

Table 7 shows the disposition of the patients seen in an emergency department during the period of 2005-2017 for the U.S. as a whole by age group. A majority of cases are treated and released for all three injury types, and across all age groups. The rates per 100,000 population for transferred or hospitalized patients were highest among 1-4 year olds who were seen for an unintentional injury, compared to the rates for assault and self-harm injuries among any of the age groups.

**SECTION III.  
SUMMARY AND CONCLUSIONS**

This report is a snapshot of childhood injuries in the United States and selected states between 2005-2017 and brings into focus both the progress made and continuing needs. While there is always room for improvement, the trend analyses clearly demonstrate the continued decline in childhood deaths from all transport injuries, drowning injuries and fire and burn injuries. The report also importantly shines a light on the troubling trends for unintentional poisonings, youth suicides, and the unique burden of injuries on the youngest age group, 0-4 year olds.

## Key Findings

- Injuries continue to be the leading cause of death for children after the age of 1. Transport, suffocation, and drowning deaths are the three leading mechanisms of fatal injury for children ages 0-14 in the U.S.
- Overall and in each state under study, the death rate is highest for infants less than one year of age for both unintentional and intentional injuries; and rates for unintentional injuries are substantially higher than those for intentional injuries.
- Children in the 0-4 year old age group are at substantially higher risk than children in other age groups for many of the leading causes of injury deaths, including suffocation, drowning, and homicide.
- Trend analyses indicated that transport related deaths have been reduced for all ages over the thirteen years under study.
- Trend analyses also revealed a concerning increase in drug poisoning deaths among the 10-14 year old age group in recent years.
- Suffocation deaths are much higher among infants (i.e., those less than one year of age) than in any other age group, and there has been an increase in the rate of infant deaths due to suffocation, which most often is sleep-related.
- Nonfatal unintentional injury numbers and causes show a very different pattern relative to fatal injuries. The leading mechanisms are falls and being struck; those ages 1-4 are at highest risk for falls, and those ages 10-14 at highest risk for being struck by or against.
- For intentional injuries, homicide death rates are highest for infants, whereas the rate of nonfatal assault injuries is highest for the 10-14 age group.
- Suicide rates among 10-14 year olds are increasing according to the trend analysis.

## Recommendations

- Additional data explorations are needed:
  - » Examine transport deaths by type (e.g., pedestrian, occupant, scooter) and age to identify prevention priorities within transport-related deaths.
  - » Ohio's elevated suffocation death rate among infants warrants further exploration (e.g., through the National Child Death Review Case Reporting System), and may be due to differences in cause of death coding for sleep-related infant deaths.
  - » Variations in children's locations and activities are important variables to further explore to identify prevention priorities to address the nonfatal unintentional injuries caused by falls and being struck by or against.
- Prevention effort priorities should be focused on:
  - » the three leading causes of death: transportation injuries, suffocation, and drowning;
  - » intentional and unintentional injuries during infancy, especially infant safe sleep;
  - » drug poisoning deaths and suicides among the 10-14 year old children; and
  - » drowning prevention, especially among children ages 1-4.
- Evidence on effective interventions and best practices for prevention should be compiled and assessed to guide action on these priorities.





# **APPENDIX**

**Table 3.A.1. Unintentional Injury Deaths in California by Top 5 Injury Mechanisms, All Races and Sexes, Ages 0-14, 2005-2017**

Injury ICD-10	<1	1-4	5-9	10-14	TOTAL
	Number (Rate)	Number (Rate)	Number (Rate)	Number (Rate)	Number (Rate)
<b>Drowning</b>	52 (0.79)	667 (2.54)	128 (0.40)	97 (0.29)	<b>944 (0.95)</b>
<b>Fire/Burn</b>	--	63 (0.24)	40 (0.12)	29 (0.09)	<b>140 (0.14)</b>
<b>Poisoning</b>	17 (0.26*)	28 (0.11)	14 (0.04*)	39 (0.12)	<b>98 (0.10)</b>
<b>Suffocation</b>	509 (7.74)	138 (0.53)	33 (0.10)	43 (0.13)	<b>723 (0.73)</b>
<b>Transport (All)</b>	106 (1.61)	685 (2.61)	602 (1.86)	768 (2.27)	<b>2,161 (2.18)</b>
<b>Total, all causes of unintentional injury deaths</b>	<b>752 (11.43)</b>	<b>1,744 (6.65)</b>	<b>916 (2.83)</b>	<b>1065 (3.15)</b>	<b>4,477 (4.52)</b>

Crude Rates per 100,000 population.

-- Data are suppressed when the the number of deaths is 10 or less.

\*Rates based on 20 or fewer deaths may be unstable; use with caution.

SOURCE: Centers for Disease Control and Prevention, National Center for Injury Prevention and Control. Web-based Injury Statistics Query and Reporting System (WISQARS) [online]. Available from URL: [www.cdc.gov/injury/wisqars](http://www.cdc.gov/injury/wisqars)

**Table 3.A.2. Unintentional Injury Deaths in Massachusetts by Top 4<sup>1</sup> Injury Mechanisms, All Races and Sexes, Ages 0-14, 2005-2017**

Injury ICD-10	<1	1-4	5-9	10-14	TOTAL
	Number (Rate)	Number (Rate)	Number (Rate)	Number (Rate)	Number (Rate)
<b>Drowning</b>	--	33 5 (0.92)	14 (0.28*)	26 (0.49)	<b>78 (0.52)</b>
<b>Fire/Burn</b>	--	--	--	--	<b>23 (0.15)</b>
<b>Suffocation</b>	33 (3.48)	14 (0.31*)	--	--	<b>61 (0.41)</b>
<b>Transport (All)</b>	--	34 (0.89)	28 (0.57)	54 (1.03)	<b>121 (0.81)</b>
<b>Total, all causes of unintentional injury deaths</b>	<b>48 (5.06)</b>	<b>105 (2.75)</b>	<b>71 (1.43)</b>	<b>104 (1.97)</b>	<b>328 (2.19)</b>

<sup>1</sup>Poisoning row was deleted due to suppressed data.

Crude Rates per 100,000 population.

-- Data are suppressed when the the number of deaths is 10 or less.

\*Rates based on 20 or fewer deaths may be unstable; use with caution.

SOURCE: Centers for Disease Control and Prevention, National Center for Injury Prevention and Control. Web-based Injury Statistics Query and Reporting System (WISQARS) [online]. Available from URL: [www.cdc.gov/injury/wisqars](http://www.cdc.gov/injury/wisqars)

**Table 3.A.3. Unintentional Injury Deaths in Ohio by Top 5 Injury Mechanisms, All Races and Sexes, Ages 0-14, 2005-2017**

Injury ICD-10	<1	1-4	5-9	10-14	TOTAL
	Number (Rate)	Number (Rate)	Number (Rate)	Number (Rate)	Number (Rate)
<b>Drowning</b>	18 (0.98*)	189 (2.55)	46 (0.48)	44 (0.44)	<b>297 (1.03)</b>
<b>Fire/Burn</b>	17 (0.93*)	87 (1.17)	71 (0.74)	27 (0.27)	<b>202 (0.70)</b>
<b>Poisoning</b>	--	25 (0.34)	--	23 (0.23)	<b>65 (0.22)</b>
<b>Suffocation</b>	690 (37.74)	65 (0.88)	24 (0.25)	23 (0.23)	<b>802 (2.78)</b>
<b>Transport (All)</b>	34 (1.86)	171 (2.30)	179 (1.86)	219 (2.18)	<b>603 (2.09)</b>
<b>Total, all causes of unintentional injury deaths</b>	<b>796 (43.54)</b>	<b>614 (8.27)</b>	<b>366 (3.81)</b>	<b>378 (3.77)</b>	<b>2,154 (7.46)</b>

Crude Rates per 100,000 population.

-- Data are suppressed when the the number of deaths is 10 or less.

\*Rates based on 20 or fewer deaths may be unstable; use with caution.

SOURCE: Centers for Disease Control and Prevention, National Center for Injury Prevention and Control. Web-based Injury Statistics Query and Reporting System (WISQARS) [online]. Available from URL: [www.cdc.gov/injury/wisqars](http://www.cdc.gov/injury/wisqars)

**Table 6.A.1. Unintentional Nonfatal Injuries in California by Injury Mechanism, All Races and Sexes, Ages 0-14, 2006-2014**

Injury ICD-10	< 1	1-4	5-9	10-14	TOTAL
	Number (Rate)	Number (Rate)	Number (Rate)	Number (Rate)	Number (Rate)
<b>Cut/Pierce</b>	5,190 (113.36)	71,016 (389.01)	80,789 (354.34)	89,263 (380.15)	<b>246,258 (356.30)</b>
<b>Drowning/ Submersion</b>	562 (12.28)	4,914 (26.92)	1,228 (5.39)	860 (3.66)	<b>7,564 (1.094)</b>
<b>Fall</b>	123,745 (2,702.87)	779,045 (4,267.39)	551,367 (2,418.29)	484,224 (2,062.21)	<b>1,938,381 (2,804.58)</b>
<b>Fire/Flame/Burn</b>	723 (15.79)	4,057 (22.22)	2,679 (11.75)	2,649 (11.28)	<b>10,108 (14.62)</b>
<b>Overexertion</b>	5,333 (116.48)	70,012 (383.51)	46,419 (203.59)	146,153 (622.44)	<b>267,917 (387.64)</b>
<b>Poisoning</b>	13,888 (303.35)	139,456 (763.90)	56,519 (247.89)	158,264 (674.01)	<b>100,210 (144.99)</b>
<b>Struck by Object</b>	22,897 (500.12)	275,719 (1,510.31)	272,418 (1,194.82)	389,340 (1,658.12)	<b>960,374 (1,389.53)</b>
<b>Suffocation</b>	3,572 (78.02)	6,088 (33.35)	1,031 (4.52)	602 (2.26)	<b>11,293 (16.34)</b>
<b>Transport (All)</b>	11,123 (242.95)	72,607 (397.72)	121,064 (530.98)	172,336 (733.94)	<b>377,130 (545.66)</b>
<b>Other, specified</b>	<b>41,665 (910.06)</b>	<b>293,853 (1,609.64)</b>	<b>167,435 (734.37)</b>	<b>163,949 (698.22)</b>	<b>666,902 (964.92)</b>

Transport (All) includes motor vehicle occupant, motorcyclist, pedal cyclists (bicyclist, etc.) pedestrian, and other. Rates per 100,000.

SOURCE: California Office of Statewide Health Planning and Development, Emergency Department Data and Inpatient Discharge Data. <http://epicenter.cdph.ca.gov>

**Table 6.A.2. Unintentional Nonfatal Injuries in Massachusetts by Injury Mechanism, All Races and Sexes, Ages 0-14, FY 2005-2015**

Injury ICD-10	<1	1-4	5-9	10-14	TOTAL
	Number (Rate)	Number (Rate)	Number (Rate)	Number (Rate)	Number (Rate)
<b>Cut/Pierce</b>	1,519 (188.55)	20,357 (627.15)	27,208 (646.27)	34,590 (771.20)	<b>83,674 (656.43)</b>
<b>Drowning/ Submersion</b>	61 (7.57)	354 (10.91)	193 (4.58)	178 (3.97)	<b>786 (6.17)</b>
<b>Fall</b>	31,420 (3,900.03)	176,383 (5,433.89)	136,373 (3,239.25)	142,636 (3,180.14)	<b>486,812 (3,819.08)</b>
<b>Fire/Burn</b>	1,952 (242.29)	9,779 (301.27)	3,687 (87.58)	3,302 (73.62)	<b>18,720 (146.86)</b>
<b>Overexertion</b>	1,478 (183.46)	21,019 (647.54)	19,311 (458.69)	64,209 (1,431.57)	<b>106,017 (831.71)</b>
<b>Poisoning</b>	1,714 (212.75)	15,643 (481.92)	4,131 (98.12)	4,230 (94.31)	<b>25,718 (201.76)</b>
<b>Struck by/Against</b>	5,711 (708.88)	67,639 (2,083.78)	83,610 (1,985.98)	158,987(3,544.70)	<b>315,947 (2,478.63)</b>
<b>Suffocation/ Inhalation</b>	569 (70.63)	1,485 (45.75)	344 (8.17)	167 (3.72)	<b>2,565 (20.12)</b>
<b>Transport (All)</b>	3,744 (464.73)	17,108 (527.05)	33,838 (803.75)	50,141 (1,117.92)	<b>104,831 (822.41)</b>
<b>Other, specified</b>	<b>4,000 (496.50)</b>	<b>37,990 (1,170.37)</b>	<b>26,045 (618.64)</b>	<b>20,362 (453.98)</b>	<b>88,397 (692.48)</b>

SOURCE: Massachusetts Inpatient Hospital Discharge, Outpatient Observation Stay, and Emergency Department Discharge databases; Center for Health Information and Analysis. Data are collected and reported by fiscal year, October 1 thru September 30, 2005-2015. Crude rate per 100,000

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