



Consumer Product-Related Injuries and Deaths Among Adults 65 Years of Age and Older

This report is intended to provide a general overview, using data taken directly from CPSC files to compare products. The reported injuries and fatalities were associated with, but not necessarily caused by, consumer products.

The views expressed in this report are those of CPSC staff, and this report has not been reviewed or approved by, and may not reflect the views of, the Commissioners.

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Executive Summary

In this report, U.S. Consumer Product Safety Commission (CPSC or Commission) staff of the Division of Hazard Analysis in the Directorate for Epidemiology presents statistics on injuries and deaths associated with consumer products among adults 65 years and older. Although coverage of all hazard areas is not feasible, we provide statistics for those areas that pose the highest risk for older adults and also involve consumer product(s) under CPSC's jurisdiction.

Emergency Department-Treated Injuries:

- From 2016–2020, the latest 5 years of data available from emergency department-treated injuries, adults 65 and older sustained an estimated 14.6 million emergency department (ED)-treated (an annual average of more than 2.9 million) injuries, associated with, but not necessarily caused by, consumer products. Although there is a statistically significant drop in the estimated ED-treated injuries from 2019 to 2020, staff observed no statistically significant linear trend over the 2016 through 2020 period.
- The estimated rate of emergency department-treated injuries sustained by the older adult population (more than 5 consumer product-related injuries per 100 older adults in the population) is higher than the rate for adults 25 to 64 (3 injuries per 100 adults aged 25 to 64) and more frequently leads to hospitalization (nearly 28 percent of injuries for older adults, versus 8 percent for adults 25 to 64 during 2016–2020).
- Nearly two-thirds of the estimated consumer product-related injuries to older adults were due to falls, by far the most common hazard to them. From 2016 through 2020, emergency departments treated nearly 7.3 million (an annual average of 1.5 million) estimated injuries sustained by older adults associated with floors, stairs/steps, and beds.
 - For fall injuries sustained on or associated with floors, stairs/steps, and beds that were treated in emergency departments, the top two diagnoses (at around 27% and 21%, respectively) were fractures and internal organ injuries.
 - For fall injuries associated with floors, stairs/steps, and beds, the most frequently injured body part was the head (around 29%), followed by lower trunk (around 18%).
- The other major consumer product-related hazards facing adults 65 and older are being struck-by/struck-against objects, receiving cut/pierce injuries, and injuries from accidents related to the “other transportation” category in the CDC WISQARS data, shown in Table A of the Appendix. The “other transportation” category includes

mobility products, such as bicycles, golf carts, and off-highway vehicles, among others.

- For the struck-by/struck-against category of injuries associated with consumer products, doors/windows, exercise equipment, and cans/containers together account for nearly 1.1 million estimated injuries (an annual average of 213,300 estimated injuries) among older consumers during the 5-year period.
- For cut/pierce injuries associated with consumer products, cutlery, saws, and lawn equipment together account for about 482,900 estimated injuries (an annual average of 96,600 estimated injuries) to older adults during the 5-year period.
- Accidents in the category of “other transportation” involve mobility-related products. For older adults, the use of some vehicles under CPSC jurisdiction, such as bicycles, off-highway vehicles, golf carts, and micromobility products, account for a combined injury estimate of 258,500 during 2016–2020 (an annual average of 51,700 injuries). Bicycles alone account for 80 percent of these estimated injuries.
- Other than the above-mentioned specific consumer products associated with the major hazards to older adults, many more product categories exist that are associated with a high number of estimated injuries sustained by adults 65 and over. For example, in 2018 (the mid-point in the 5-year timeframe) the NEISS Data Highlights report¹ shows that annually, more than a dozen other product groups were associated with 10,000 to 20,000 ED-treated estimated injuries among adults 65 and older. Another dozen or so product groups were associated with 5,000 to 10,000 ED-estimated injuries annually.
- There are many product groups where the estimated rate of emergency department-treated injuries is higher for the 65 and over group, than people aged 25 to 64. For example, for recliner chairs, during 2016–2020, there were 32.6 ED-treated injuries to adults 65 and over per 100,000 in the population versus 2.6 ED-treated injuries per 100,000 adults aged 25 to 64.
- It is expected that the drastic lifestyle changes brought on by COVID-19 has affected the 2020 ED-treated injury estimates to some extent, perhaps some product areas more than others. Some of these changes are reflected in the NEISS COVID-19 report.²

¹https://www.cpsc.gov/s3fs-public/2018%20Neiss%20data%20highlights.pdf?NGBgKPVgISz.ShB_W6Y0ENRjhr6qAtWr.

²<https://www.cpsc.gov/content/Effect-of-Novel-Coronavirus-Pandemic-on-2020-NEISS-Estimates-March%E2%80%93December-2020>.

Fatalities:

- From 2016–2018, the most recent 3-years for which nearly-complete information is available, CPSC staff is aware of more than 11,500 reports of deaths reported in the CPSC databases that involve adults 65 and older; these deaths are associated with, but not necessarily caused by, consumer products.
- The major fatal hazards that are associated with the use of consumer products among adults 65 and older are falls, fires, drownings, accidents categorized as “other transportation,” and poisonings.
- Falls are, by far, the most common hazard in fatalities, accounting for a total of nearly 5,500 fatalities (an annual average of more than 1,800); these fatalities were identified from more than 7,000 reports received by CPSC. Of the numerous consumer products involved with fatal falls, the top three products, floors, stairs/steps, and beds, account for more than 3,500 (annual average of nearly 1,200) fatalities among older adults.
- Fires are associated with an *estimated* total of nearly 2,800 fatalities (an annual average of 930) among adults 65 and older across the nation during the 3-year period. Smoking materials and cooking are two major fire sources, accounting for an estimated 740 (250 annually) and 180 (60 annually) deaths, respectively, among older adults. Clothing fire deaths are a hazard that disproportionately affects this group. While older adults were about 16 percent of the population in 2016–2018, they were an estimated 72 percent of the clothing fire deaths. The estimated clothing fire death rate for the 65-plus group is 14 times higher than the rate for people under 65.
- Drownings, associated with the use of consumer products, such as swimming pools, bathtubs, and spas, account for a total of 915 (an annual average of about 300) fatalities among older adults during the 3-year period. These statistics are based on more than 1,100 reports received by CPSC.
- Other transportation fatalities involving consumer products under CPSC jurisdiction, such as off-highway vehicles, bicycles, and e-scooters, are identified through incident reports received by CPSC. These products account for over 700 deaths over the 3-year period—averaging at nearly 240 deaths per year, for adults 65 and older.
- Poisonings, specifically Carbon Monoxide (CO) poisonings, are associated with an *estimated* total of 134 (an annual average of 45) fatalities among older consumers across the nation. Heating devices, portable generators, and other engine-driven tools account for nearly three-quarters of these estimated deaths. Anecdotally, staff is also aware of an additional 27 deaths due to chemical poisoning during 2016–2018, where household cleaners and liquid laundry pods were specifically identified as the major contributors.

Background

The U.S. Consumer Product Safety Commission (CPSC) compiles and reports data on consumer product-related injuries, fatalities, and hazards. Adults 65 and older have higher rates of medically treated, consumer product-related injuries and consumer product-related deaths than adults ages 55 to 64.³

According to the Centers for Disease Control and Prevention (CDC),⁴ from 2016–2019 (2020 data are not yet available), more than 19 million (an annual average of 4.8 million) adults 65 and older suffered unintentional, nonfatal injuries that were seen in emergency departments. See Table A in the Appendix of this report. Unintentional falls were the leading cause of nonfatal injuries, accounting for nearly two-thirds of all injuries seen in emergency departments.

More than 166,300 unintentional deaths from fatal injuries occurred to adults 65 and older between 2016 and 2018 (an annual average of 55,435 deaths). Nearly 60 percent of those deaths resulted from falls.⁴ See Table B in the Appendix of this report. The CDC data provide a national picture of both injuries and deaths; as such, they inform the larger picture of hazards facing older adults. However, they are based on the mechanism that causes the injuries and deaths and not the products involved in the incidents. Moreover, not all these causes are associated with a consumer product under CPSC's jurisdiction.

Data from CPSC's National Electronic Surveillance System (NEISS) database on consumer product-related injuries show an estimated annual average of more than 2.9 million injuries to adults aged 65 and older that were seen in emergency departments between 2016 and 2020. When divided by the population of that age, this equates to 5.5 visits per 100 older adults during 2016–2020. Looking at injuries sustained by adults older than 64, 39.2 percent were between the ages of 65 and 74; 33.4 percent were between 75 and 84; and 27.5 percent were aged 85 and older. The injuries skewed older than the population during this 5-year timeframe (see Table 1), because in the corresponding population, 62.3 percent of adults were aged 65 to 74; 27.1 percent were 75 to 84; and 10.6 percent were 85 or older. Nearly three-fifths (60.5%) of the older adult victims were women versus two-fifths (39.5%) were men. Nearly three-quarters of injuries were given one of five specific diagnoses: fractures were most common (22.8%), followed by internal organ injury (15.3%, which include brain injuries), contusions/abrasions (15.0%), lacerations (13.0%), and strains/sprains (6.1%). More than a quarter (27.5%) of older adult victims seen in emergency departments during 2016–2020 were admitted to the hospital or transferred to another hospital.

By contrast, there were an estimated 5.2 million consumer product-related injuries to adults between 25 and 64 years of age seen in emergency departments. When divided by the population of that age, this equates to 3.0 visits per 100 adults in this age group during 2016–2020. When compared to the injury rate of adults 65 and older, the older adults are injured 1.8

³ Schroeder, Tom “Consumer Product-Related Injuries and Deaths in the United States: Estimated Injuries Occurring in 2020 and Estimated Deaths Occurring in 2019” pp.8–9.

⁴ CDC data were retrieved from [WISQARS \(Web-based Injury Statistics Query and Reporting System\) | Injury Center | CDC](#).

times more than the younger adults. During 2016–2020, 7.9 percent of victims age 25 to 64 and seen in emergency departments, were admitted to the hospital or transferred to another hospital, which is less than one-third of what occurs among the older adults.

CPSC received more than 11,500 incident reports on fatalities associated with the use of a consumer product that occurred between 2016 and 2018 among adults aged 65 years and older. These include death certificates purchased by CPSC from all 50 states and its territories based on a select set of the World Health Organization's ICD-10 codes, fatal injuries reported through NEISS, and many other sources reporting fatal incidents to the Consumer Product Safety Risk Management System (CPSRMS). Because one death may be reported by multiple sources, the number of fatal incident reports exceed the number of fatal incidents. Although CPSC attempts to avoid duplicate counting, unidentified redundant cases may be present. The fatality statistics based on these incident reports are *not* national estimates; they are not based on a representative probability sample, nor are they a census of all fatalities that have occurred in the United States. However, the statistics likely provide a minimum number of deaths that adults 65 and older suffered during 2016 through 2018.

For a couple of the major causes of death that CDC cites as high risks for older adults, namely fire and poisoning, CPSC staff presents national fatality estimates that use data from external sources. For fire deaths, the U.S. Fire Administration-maintained National Fire Incident Reporting System (NFIRS) database is used, while for poisoning deaths, CDC's National Center for Health Statistics-maintained Mortality files are used.

Methods

The injuries included in this report are emergency department-treated injuries from CPSC's NEISS database and do not reflect injuries treated in other settings. The fatalities are from CPSC's CPSRMS database, the U.S. Fire Administration-maintained NFIRS database, or CDC's National Center for Health Statistics (NCHS)-maintained Mortality files.

With thousands of consumer products under CPSC's jurisdiction, a full enumeration of each product was neither practical, nor advisable. Instead, using CDC's guidance on the major causes of unintentional nonfatal or fatal injuries that are likely to overlap with products within CPSC's jurisdiction, staff focused on a few product/hazard areas to present in this report.

For injuries, data from the NEISS database can be extracted by the diagnoses codes assigned to each injury. However, the diagnoses codes do not always map onto an injury mechanism provided by CDC. For example, in NEISS, a fall can be identified only through reading the injury narrative; an entire slew of diagnoses (such as internal organ injury, fracture, or contusion/abrasion) may be associated with such a fall injury. Hence, a one-to-one mapping from CDC injury causes to diagnoses in NEISS is not always feasible.

Even within each hazard area, it is not feasible to run analyses on all possible products that may be involved to rank and identify the top contributors. Furthermore, injuries may be associated with more than a single product, so an injury could be counted in more than one category.

In this report, staff presents detailed analyses on products (or product groups) associated with a large volumes of estimated injuries, as indicated by the NEISS Data Highlights report and/or staff's prior knowledge of particularly hazardous products for adults 65 and older, from among the specific major causes outlined by CDC. In addition, staff presents abbreviated results from certain product areas where CPSC has active, ongoing work, even if these areas do not have a large volume or a high rate of injuries associated with them. Staff expects to expand on many of the analyses or add analyses of additional product groups in the future.

The data analyses and findings are presented in the following order:

Estimated Injuries

- Falls
 - Floors
 - Stairs/Steps
 - Beds
 - Others
- Struck-by/struck against
 - Doors/Windows
 - Exercise Equipment
 - Can/Containers
 - Others (Tip overs)

- Cut/pierce
 - Cutleries
 - Saws
 - Lawn Equipment
- Other transportation
 - Bicycles
 - Golf Carts
 - Others (OHVs, Micromobility)
- Other causes
 - Fire
 - Poisoning (Household cleaners/drugs).

Injuries may involve multiple products, so an injury could be counted in more than one category.

Fatalities

- Falls – reported deaths
- Fires – national estimates
- Drownings – reported deaths
- Other transportation
 - Bicycles – reported deaths
 - OHVs – reported deaths
- Poisonings
 - Carbon Monoxide – national estimates
 - Household cleaners/Liquid laundry – reported deaths
- Other Causes
 - Adult Bed Rail-related reported deaths

For injury and death estimates presented, rates per 100,000 population are also presented. The population data are from the U.S. Census Bureau.⁵ Table 1 shows the distribution of the older adult population over the years 2016–2020.

Table 1 – Census Estimates of the 65 and Older Resident Population 2016–2020

Year	Males 65+	Females 65+	Total 65-74	Total 75-85	Total 85+	Total 65+
2016	22,122,033	27,802,357	31,000,264	13,410,981	5,513,145	49,924,390
2017	22,888,319	28,649,138	32,175,633	13,777,218	5,584,606	51,537,457
2018	23,642,918	29,500,574	33,159,146	14,319,731	5,664,615	53,143,492
2019	24,463,082	30,426,494	34,196,070	14,977,717	5,715,789	54,889,576
2020	25,213,684	31,283,615	35,273,392	15,473,419	5,750,488	56,497,299

Source: U.S. Census Bureau.

⁵ <https://www.census.gov/programs-surveys/popest/technical-documentation/research/evaluation-estimates/2020-evaluation-estimates/2010s-national-detail.html> Monthly National Population Estimates by Age, Sex, Race, Hispanic Origin, and Population Universe for the United States: April 1, 2010 to December 1, 2020.

Consumer Product-Related Estimated Injuries Among Older Adults 2016–2020

The CDC guidance on the major causes, which are likely to involve consumer products under CPSC jurisdiction, allowed staff to focus on the product groups to analyze and present in this report.

Throughout the injury section of this report, the information for each product group includes, from NEISS, the estimated number of consumer product-related injuries to older adults seen in emergency departments for each year between 2016 and 2020. A two-tailed test for statistical significance ($p < .05$) on the change in the number of injuries over time (upward or downward) was computed to determine whether any apparent trend over time is statistically significant.⁶ The estimated rate of consumer product-related, ED-treated injuries per 100,000 adults 65 and older also appears on the graph.

Additional detail from NEISS is provided for the years 2016–2020. First, the estimated rate of consumer product-related injuries per 100,000 population that is 25–64 and 65 and older in the United States is provided to allow comparison between adults over 64 and adults below that age.⁷ These rates are presented for all injuries (for the specific product or product group) as well as for serious injuries. Serious injuries are those that needed hospitalization or transfers to other hospitals. Then, the estimated number of injuries is presented by age group (for the 25–64, 65–74, 75–84, and 85+ age groups) and by gender for older adults.⁸ For some of the product groups that include different products (such as tip over injuries that include televisions, furniture, and appliances) the injury estimates are broken out further by product codes to provide a sense of which products within a product group are most frequently associated with emergency department visits by adults 65 and over. Estimates less than 1,200 are not reported per NEISS standards.⁹ Some statistics on the more common diagnoses and the injured body parts follow. Finally, the distribution of race among the injured older adults is compared with that in the U.S. population. The race and ethnicity information has been captured in the NEISS since 2018. Given that the injury timeframe covered in this report starts in 2016, information is missing for a sizeable portion of the data, specifically for ethnicity. A note on the extent of the missing information is included for each analysis.

⁶ The significance tests used for trending is described in Schroeder, T., *Trend Analysis of NEISS Data*, February 2000, U.S. Consumer Product Safety Commission.

⁷ <https://www.census.gov/programs-surveys/popest/technical-documentation/research/evaluation-estimates/2020-evaluation-estimates/2010s-national-detail.html> Monthly National Population Estimates by Age, Sex, Race, Hispanic Origin, and Population Universe for the United States: April 1, 2010 to December 1, 2020

⁸ NEISS injury estimates by age and gender may not sum to the total presented in the figure.

⁹ According to the NEISS publication criteria, an estimate must be 1,200 or greater, the sample size must be 20 or greater, and the coefficient of variation must be 33 percent or smaller.

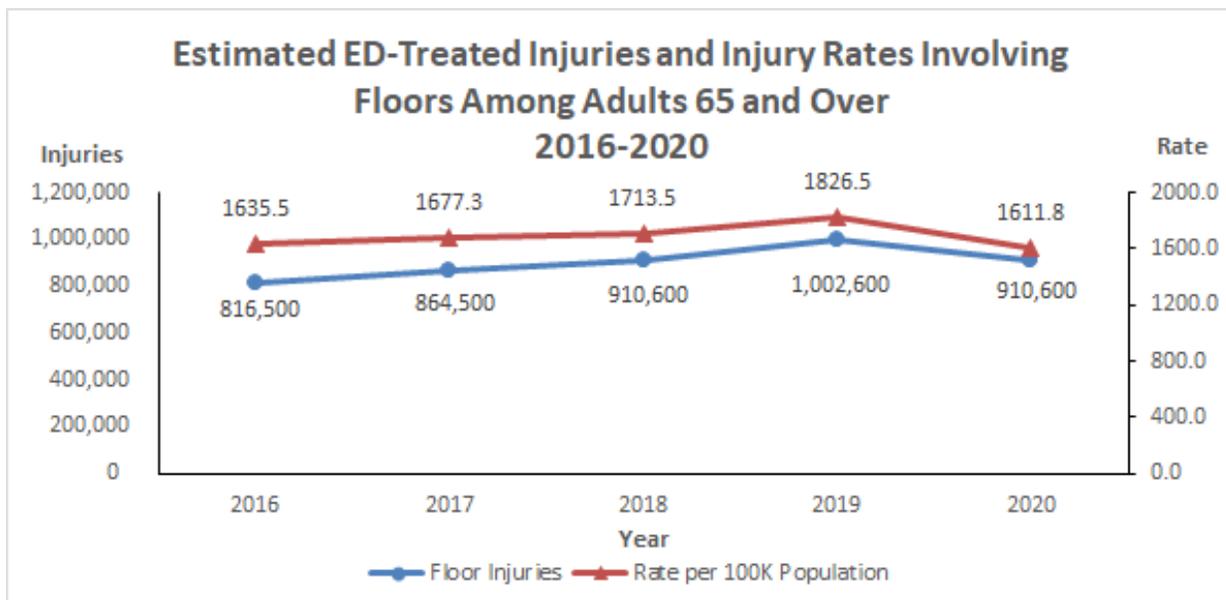
I. Fall Injuries

Staff examined NEISS injury case narratives to identify falls among older adults. The 25 most frequent product codes involving fall-related injuries among adults ages 65 and older were selected for analysis. Based on these 25 product codes, an estimated 9.6 million fall-related injuries were treated in U.S. emergency departments from 2016 to 2020, averaging over 1.9 million injuries annually among adults 65 and over.

From among the large array of products involved in the fall-related emergency department visits for older adults, the top three product codes were identified for more in-depth analysis.

Floors

During 2016–2020, adults 65 and older sustained an estimated 4,504,800 floor-related ED-treated fall injuries (an annual average of 901,000 injuries).



There were no statistically significant linear trends detected in ED-treated, floor-related fall injuries between 2016 and 2020.

Injury Rates (per 100,000 Population) Comparisons: 2016 – 2020

25-64 years old:	275.7
65 years and older:	1692.9
Rate Ratio:	6.1 times higher for older adults, aged 65 and older.

(Fall Injuries – Floors)

Rate Ratio for serious injuries: 14.1 times higher for older adults, if *only* hospitalized and treated/transferred (to another hospital) injuries are considered.

Details of Estimated ED-Treated Fall Injuries Involving Floors: 2016–2020 Total

Estimated ED-Treated Injuries by Age Group

<i>Age Group</i>	<i>Estimated Number of ED-Treated Injuries</i>
25-64	2,351,400
65-74	1,242,400
75-84	1,529,000
85+	1,733,300

Disposition of ED-Treated Estimated Injuries by Age Group

<i>Age Group</i>	<i>Disposition of ED-Treated Injuries</i>				
	<i>Treated & Released</i>	<i>Hospitalized</i>	<i>Fatality</i>	<i>Treated & Transferred</i>	<i>Other</i>
25–64	80.4%	14.9%	0.1%	1.6%	3.0%
65 and Older	59.4%	34.9%	0.1%	3.0%	2.6%

Note: Percentages may not add to 100 due to rounding.

Estimated ED-Treated Injuries by Gender Among Adults 65 and Older

<i>Gender</i>	<i>Estimated Total Number of ED-Treated Injuries</i>	<i>Percent of Estimated ED-Treated Injuries</i>	<i>Percent of Estimated Population</i>
Male	1,486,300	33%	44.5%
Female	3,018,400	67%	55.5%

Most Common Diagnoses for Injuries Among Adults 65 and Older: 2016 – 2020

Fracture (Code 57): 26 percent,
Internal Organ Injury (Code 62): 23 percent,
Other/Not Stated (code 71): 17 percent,
Contusions/Abrasions (Code 53): 16 percent.

Most Common Body Parts Injured Among Adults 65 and Older: 2016 – 2020

Head (code 75): 31 percent,
Lower Trunk (code 79): 21 percent,
Face (code 76): 9 percent,
Upper Trunk Excluding Shoulders (code 31): 6 percent.

(Fall Injuries – Floors)

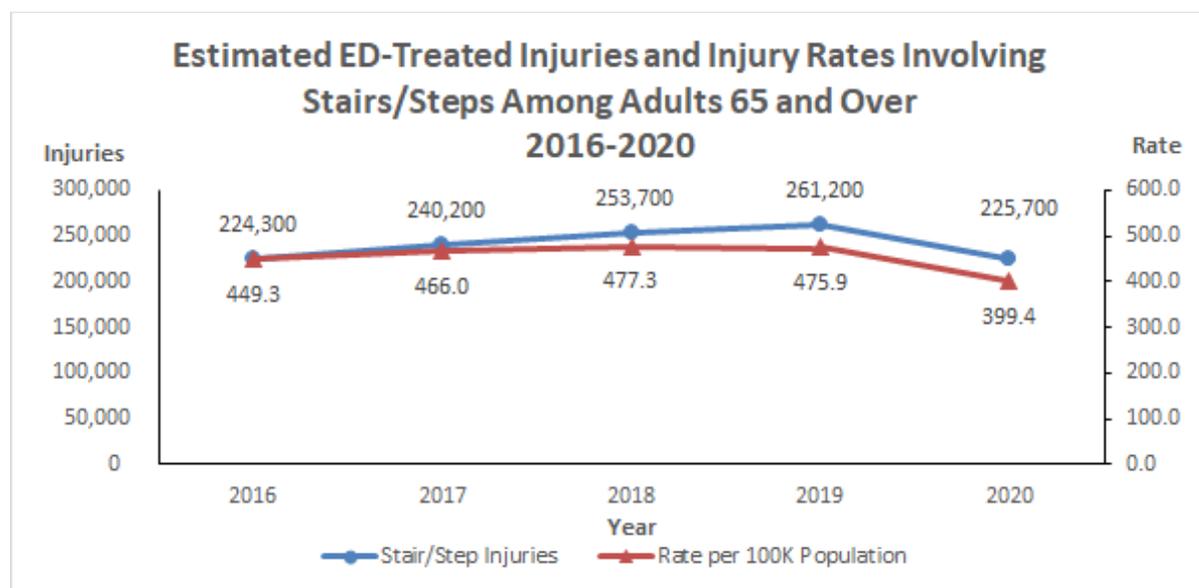
Distribution of Race Among Estimated Injuries (with Race Information Available) and U.S. Population (Adults 65 and Older)

<i>Race</i>	<i>Injured Population</i>	<i>U.S. Population</i>
White	89.7%	84.1%
Black/African American	7.1%	9.5%
Asian	1.0%	4.6%
American Indian/Alaska Native	0.3%	0.7%
Native Hawaiian/Pacific Islander	0.2%	0.1%
Other	1.8%	1.0%

Note: **Race/Ethnicity data are captured in NEISS starting in 2018.** Race is “Not Stated” for 41 percent of the injuries. ‘Other’ includes bi/multi/interracial, as well as races not already listed. Ethnicity was unknown or not stated in 73 percent of the injuries, and hence, not presented.

Stairs/Steps

During 2016–2020, adults 65 and older sustained an estimated 1,205,000 stair/step-related fall injuries to older adults over the 5-year period (an annual average of 241,000 injuries).



There were no statistically significant linear trends detected in ED-treated stairs/steps-related fall injuries between 2016 and 2020.

(Fall Injuries – Stairs/Steps)

Injury Rates (per 100,000 Population) Comparisons: 2016 – 2020

25-64 years old: 297.8
 65 years and older: 453.6
 Rate Ratio: 1.5 times higher for older adults, aged 65 and older.
 Rate Ratio for serious injuries: 4.7 times higher for older adults, if *only* hospitalized and treated/transferred (to another hospital) injuries are considered.

Details of Estimated ED-Treated Fall Injuries Involving Stairs/Steps: 2016–2020 Total

Estimated Injuries by Age Group

<i>Age Group</i>	<i>Estimated Number of ED-Treated Injuries</i>
25-64	2,539,700
65-74	559,200
75-84	424,300
85+	221,500

Disposition of Estimated Stair/Step-Related Fall Injuries by Age Group

<i>Age Group</i>	<i>Disposition of ED-Treated Injuries</i>				
	<i>Treated & Released</i>	<i>Hospitalized</i>	<i>Fatality</i>	<i>Treated & Transferred</i>	<i>Other</i>
25–64	88.1%	8.0%	0.1%	0.9%	2.0%
65 and Older	69.9%	24.9%	0.2%	2.5%	2.5%

Note: Percentages may not add to 100 due to rounding.

Estimated Injuries by Gender Among Adults 65 and Older

<i>Gender</i>	<i>Estimated Total Number of ED-Treated Injuries</i>	<i>Percent of Estimated ED-Treated Injuries</i>	<i>Percent of Estimated Population</i>
Male	437,400	36%	44.5%
Female	767,500	64%	55.5%

Most Common Diagnoses for Injuries Among Adults 65 and Older: 2016 – 2020

Fracture (Code 57): 34 percent,
 Internal Organ Injury (Code 62): 19 percent,
 Contusions/Abrasions (Code 53): 14 percent,
 Other/Not Stated (code 71): 12 percent,
 Lacerations (Code 59): 9 percent.

(Fall Injuries – Stairs/Steps)

Most Common Body Parts Injured Among Adults 65 and Older: 2016 – 2020

Head (code 75): 27 percent,
 Lower Trunk (code 79): 14 percent,
 Upper Trunk Excl Shoulder (code 31): 9 percent,
 Face (code 76): 8 percent.

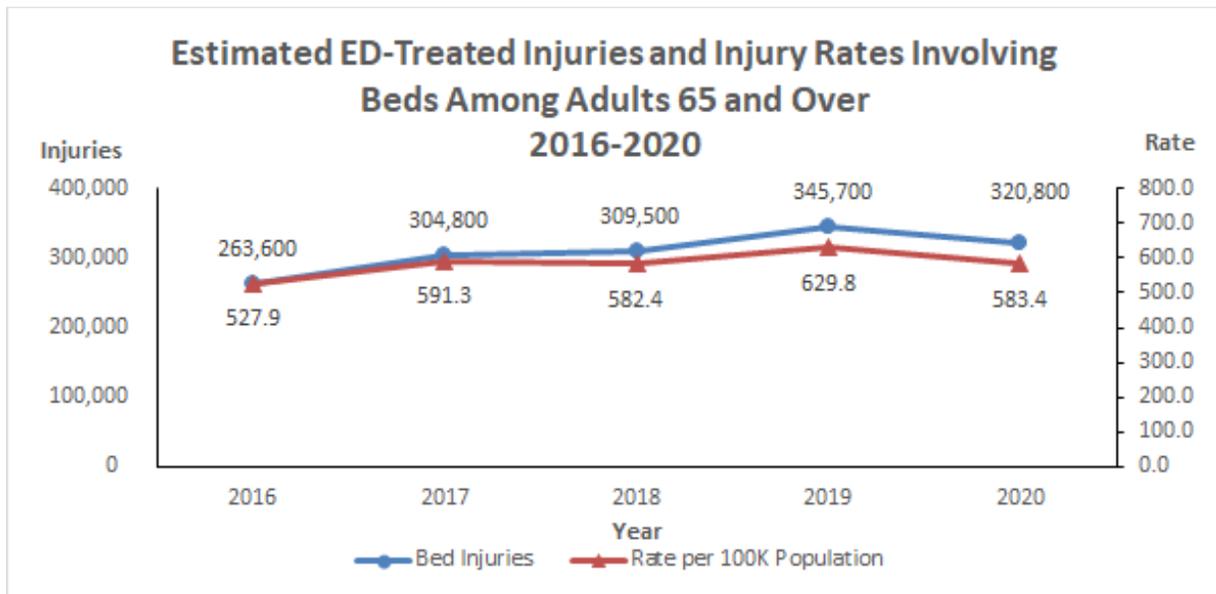
Distribution of Race Among Estimated Injuries (with Race Information Available) and U.S. Population (Adults 65 and Older)

<i>Race</i>	<i>Injured Population</i>	<i>U.S. Population</i>
White	86.3%	84.1%
Black/African American	9.6%	9.5%
Asian	1.5%	4.6%
American Indian/Alaska Native	0.3%	0.7%
Native Hawaiian/Pacific Islander	0.1%	0.1%
Other	2.2%	1.0%

Note: **Race/Ethnicity data are captured in NEISS starting in 2018.** Race is “Not Stated” for 33 percent of the injuries. ‘Other’ includes bi/multi/interracial, as well as races not already listed. Ethnicity was unknown or not stated in 69 percent of the injuries, and hence, not presented.

Beds

During 2016 – 2020, adults 65 and older sustained an estimated 1,544,400 bed-related fall injuries (an annual average of 308,900 injuries).



(Fall Injuries – Beds)

There were no statistically significant linear trends detected in ED-treated bed-related fall injuries between 2016 and 2020.

Injury Rate (per 100,000 Population) Comparisons: 2016 – 2020

25-64 years old: 81.4
 65 years and older: 579.9
 Rate Ratio: 7.1 times higher for older adults, aged 65 and over.
 Rate Ratio for serious injuries: 13.7 times higher for older adults, if *only* hospitalized and treated/transferred (to another hospital) injuries are considered.

Details of Estimated ED-Treated Fall Injuries Involving Beds: 2016–2020 Total

Estimated Injuries by Age Group

<i>Age Group</i>	<i>Estimated Number of ED-Treated Injuries</i>
25-64	694,000
65-74	427,400
75-84	513,600
85 and older	603,300

Disposition of Estimated Injuries by Age Group

<i>Age Group</i>	<i>Disposition of ED-Treated Injuries</i>				
	<i>Treated & Released</i>	<i>Hospitalized</i>	<i>Fatality</i>	<i>Treated & Transferred</i>	<i>Other</i>
25–64	79.6%	15.8%	0.1%	1.4%	3.1%
65 and Older	64.2%	31.0%	0.1%	2.2%	2.5%

Note: Percentages may not add to 100 due to rounding.

Estimated Injuries by Gender Among Adults 65 and Older

<i>Gender</i>	<i>Estimated Total Number of ED-Treated Injuries</i>	<i>Percent of Estimated ED-Treated Injuries</i>	<i>Percent of Estimated Population</i>
Male	549,000	36%	44.5%
Female	995,400	64%	55.5%

Most Common Diagnoses for Injuries Among Adults 65 and Older: 2016 – 2020

Other/Not Stated (code 71): 23 percent,
 Fracture (Code 57): 21 percent,
 Internal Organ Injury (Code 62): 20 percent,
 Contusions/Abrasions (Code 53): 16 percent.

(Fall Injuries – Beds)

Most Common Body Parts Injured Among Adults 65 and Older: 2016 – 2020

Head (code 75): 28 percent,

Lower Trunk (code 79): 19 percent,

Face (code 76): 10 percent,

Upper Trunk Excl Shoulder (code 31): 8 percent.

Distribution of Race Among Estimated Injuries (with Race Information Available) and U.S. Population (Adults 65 and Older)

<i>Race</i>	<i>Injured Population</i>	<i>U.S. Population</i>
White	85.3%	84.1%
Black/African American	10.8%	9.5%
Asian	1.4%	4.6%
American Indian/Alaska Native	0.2%	0.7%
Native Hawaiian/Pacific Islander	0.2%	0.1%
Other	2.1%	1.0%

Note: **Race/Ethnicity data are captured in NEISS starting in 2018.** Race is “Not Stated” for 41 percent of the injuries. ‘Other’ includes bi/multi/interracial, as well as races not already listed. Ethnicity was unknown or not stated in 73 percent of the injuries, and hence, not presented.

Other Fall Injuries

Although the top three fall-related products were selected for an in-depth analysis, many other consumer products that were associated with a large volume of ED-treated fall injuries sustained by older adults are worth mentioning. During 2016–2020, adults aged 65 and over sustained:

- An estimated total of 700,400 ED-treated fall injuries associated with ***Chairs***, with an annual average of 140,100 estimated injuries. This equates to an injury rate of 263.3 injuries per 100,000 older adults in the United States.
- An estimated total of total of 485,400 ED-treated fall injuries associated with ***Bathtubs***, with an annual average of 97,100 injuries. This equates to an injury rate of 182.5 injuries per 100,000 older adults in the United States.
- An estimated total of 423,200 ED-treated fall injuries associated with ***Toilets***, with an annual average of 84,600 injuries. This equates to an injury rate of 159.1 injuries per 100,000 older adults in the United States.
- An estimated total of 182,600 ED-treated fall injuries associated with ***Ladders***, with an annual average of 36,520 injuries. This equates to an injury rate of 68.7 injuries per 100,000 adults over 64 in the United States.

(Fall Injuries – Other)

Several products that did not have a large volume of estimated injuries for older adults showed a large discrepancy in injury rates when compared to the younger-than-65 years group; these products posed a greater risk of injury to adults 65 and older. Table 2 below provides some examples with details.

Table 2: Largest Rate Discrepancies Between Adults 65 and Over and Under 65 for Products Involved in Fall-Related Injuries: 2016–2020

<i>Age Group</i>	<i>Recliner Chair Injury Rate (per 100,000 population)</i>	<i>Rocking Chair Injury Rate (per 100,000 population)</i>	<i>Toilet Injury Rate (per 100,000 population)</i>
25-64 years old	2.6	0.4	21.1
65 years and older	32.6	4.9	162.2
Rate Ratio (times higher for older adults)	12.3	11.6	7.7

Note: The rate ratio was calculated utilizing the unrounded values. As such, the rate ratio is not the same as the displayed (older adult group injury rate) divided by younger adult group injury rate).

Adults 65 and older are 12.3 times more likely to be involved in a recliner chair-related fall injury, 11.6 times more likely to be involved in a rocking chair-related fall injury, and 7.7 times more likely to be involved in a toilet-related fall injury when compared to the 25-64 years age group.

Falls

As the above analyses show, falls are a major hazard to adults 65 and over. This hazard is not a new one, but one that is not easily addressable. In 2011, staff carefully reviewed some 2,000 cases, based on a random subsample of 2011 NEISS injuries among adults aged 65 and over. Seventy-five percent of the sampled injuries were falls that translated to an estimated 1.5 million consumer product-related falls by older adults who were seen in emergency departments.

With input from CPSC Human Factors staff of the Directorate for Engineering Sciences, the consumer product-related falls for 2011 were classified into seven categories. The categories included loss of balance (12% of fall injuries), slips (11%), trips due to a change in elevation (11%), trips over an obstacle (10%), missteps (5%), other falls (29%), and unknown (23%).

The *loss of balance* category included cases that explicitly mentioned a loss of balance, cited alcohol impairment, or syncope (the medical term for fainting). Forty-six percent of cases in the loss-of-balance category mentioned syncope, which is known to occur with adults 65 and older. More than half of these cases were associated with flooring or stairs. These cases were coded along with a consumer product, but it bears repeating here that all the CPSC estimates of injuries and fatalities in this report are associated with, and not necessarily caused by, consumer products.

The *slip* category included cases that explicitly mention a slip. A consumer product was not necessarily identified as a causal factor in slipping. Flooring was often listed as the product associated with these injuries. However, that may simply mean that it was a fall onto the floor. Only 5 percent of cases in the slip category seemed to indicate that a slippery product was associated with the fall. The true proportion could be higher, however, given that the case narratives extracted from hospital records provided limited detail.

The *trip due to a change in elevation* category included cases involving stairs 92 percent of the time. Other cases in this category included uneven pavement, curbs, or a threshold between rooms. Cases in the *trip over an obstacle* category usually included a consumer product, but the obstacle may also have been a pet (5% of trips over obstacles, not including trips over leashes or pet toys). Twenty-six percent of trips over obstacles involved carpets or rugs, and 9 percent involved footwear.

The *misstep* category included trips where neither a change in elevation, nor an obstacle was indicated; the category also captured people who fell while walking and hit a consumer product. Forty-two percent of the misstep cases indicated flooring as the consumer product. Many of the other products in cases of missteps were those that the victim fell against after the misstep.

The *other falls* category is large, in part, because of what it captures. It includes cases that were not captured by any of the aforementioned categories. In other words, it contains any other kind of fall where the hazard scenario can be considered known. Thirty-two percent of cases in the other falls category involved falls out of bed or falls getting into or out of bed; this accounts for 9

percent of all the sampled fall injuries to older adults. Twenty percent of cases in the other falls category involved falls out of chairs, or off sofas, or falls that otherwise involved chairs or sofas. Seven percent of falls were off toilets or falls that otherwise involved toilets. Five percent of falls in the other falls category were falls off bicycles.

The *unknown* category is large, in part, because the hazard scenarios captured in emergency departments can lack detail, but also because the victim may not remember falling, or the fall was not witnessed by another party. Ten percent of the victims in the unknown category were found after what was presumed to be a fall. Sixty-two percent of cases (including many in the found category) were coded with flooring as the only product. A typical narrative might read simply that the victim “fell on the floor” or “fell to the floor.” This can also include cases where a person fell against a product, but too little information was captured to determine which of the other six categories would best describe the fall.

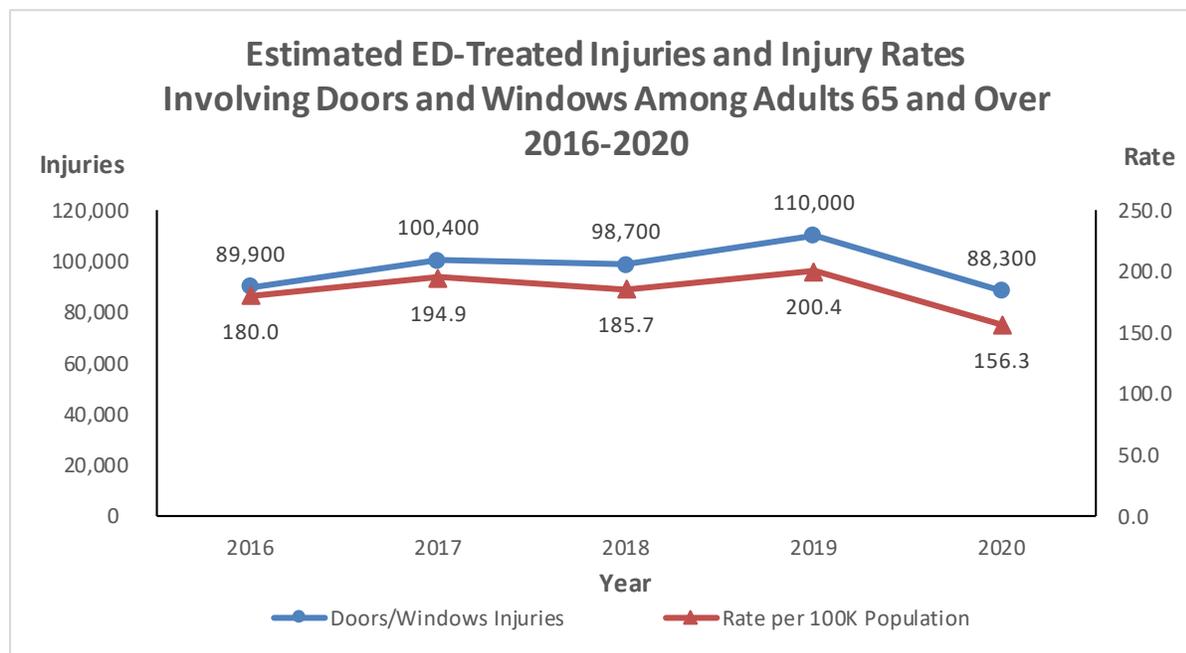
As the 2011 data review illustrates, classifying fall injury cases from NEISS into categories like “slipped on floor” or “tripped on floor,” require a more resource-intensive effort that is beyond the scope of this annual report. Although the challenge of reviewing the massive volume of data can be circumvented somewhat, using a subsampling approach, a substantial portion of the data will still be missing information, as seen in the “unknown” category above. Given the nature of NEISS data, where the focus is on the injury, rather than the scenario, it will be a challenge to glean information on *how* the fall occurred or *what* the product and consumer interaction was that led to the fall. However, challenges notwithstanding, staff recognizes that such an effort can be helpful in identifying the addressable components of this major hazard facing older adults and can assist CPSC in targeting its public safety outreach efforts.

II. Struck-By/Struck-Against Injuries

Doors/Windows

(All doors and windows – including panes, sills, frames)

During 2016–2020, adults 65 and older sustained an estimated total of 487,200 ED-injuries (an annual average of 97,500) on doors and windows.



There were no statistically significant linear trends detected in injuries between 2016 and 2020.

Injury Rate (per 100,000 Population) Comparisons: 2016 – 2020

25–64 years old: 104.8
 65 years and older: 183.2
 Rate Ratio: 1.7 times higher for adults, aged 65 and over.
 Rate Ratio for serious injuries: 226.0 times higher for older adults, if *only* hospitalized and treated/transferred (to another hospital) injuries are considered.

Details of Estimated ED-Treated Injuries Involving Doors/Windows: 2016–2020 Total

Estimated Injuries by Age Group

<i>Age Group</i>	<i>Estimated Number of ED-Treated Injuries</i>
25–64	893,700
65–74	173,500
75–84	171,300
85 and older	142,400

(Struck-By Injuries – Doors/Windows)

Disposition of Estimated Injuries by Age Group

<i>Age Group</i>	<i>Disposition of ED-Treated Injuries</i>				
	<i>Treated & Released</i>	<i>Hospitalized</i>	<i>Fatality</i>	<i>Treated & Transferred</i>	<i>Other</i>
25–64	90.0%	5.8%	<0.1%	0.9%	3.3%
65 and Older	77.8%	18.5%	0.1%	1.9%	1.8%

Note: Percentages may not add to 100 due to rounding.

Estimated Injuries by Gender Among Adults 65 and Older

<i>Gender</i>	<i>Estimated Total Number of ED-Treated Injuries</i>	<i>Percent of Estimated ED-Treated Injuries</i>	<i>Percent of Estimated Population</i>
Male	161,200	33.1%	44.5%
Female	326,000	66.9%	55.5%

Estimated Injuries by Product Type Among Adults 65 and Older

<i>Product Type</i>	<i>Estimated Total Number of ED-Treated Injuries</i>
Doors (Panels/Sills/Frames) – Includes Automatic/Garage Doors	437,000
Windows (Panels/Sills/Frames)	50,200

Note: Since multiple product codes can be used for a given case, a single incident may be counted in multiple product code estimates.

Most Common Diagnoses for Injuries Among Adults 65 and Older: 2016 – 2020

Fracture (code 57): 21 percent,
 Lacerations (code 59): 20 percent,
 Internal Organ Injury (code 62): 18 percent,
 Contusions/Abrasions (code 53): 16 percent,
 Other/Not Stated (code 71): 11 percent.

Most Common Body Parts Injured Among Adults 65 and Older: 2016 – 2020

Head (code 75): 30 percent,
 Lower Trunk (code 79): 12 percent,
 Face (code 76): 9 percent,
 Finger (code 92): 7 percent,
 Upper Trunk Excluding Shoulders (code 31): 6 percent.

(Struck-By Injuries – Doors/Windows)

Distribution of Race Among Estimated Injuries (with Race Information Available) and U.S. Population (Adults 65 and Older)

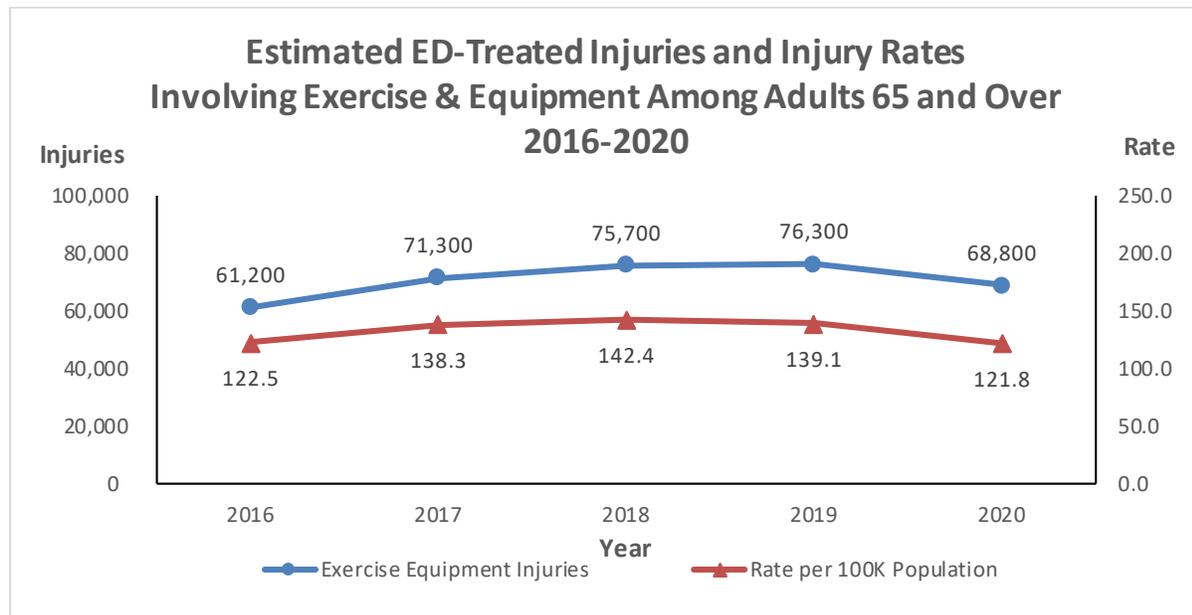
<i>Race</i>	<i>Injured Population</i>	<i>U.S. Population</i>
White	88.9%	84.1%
Black/African American	7.4%	9.5%
Asian	1.4%	4.6%
Other	1.6%	1.0%
American Indian/Alaska Native	0.5%	0.7%
Native Hawaiian/Pacific Islander	0.2%	0.1%

Note: **Race/Ethnicity data are captured in NEISS starting in 2018.** Race is “Not Stated” for 38 percent of the injuries. ‘Other’ includes bi/multi/interracial, as well as races not already listed. Ethnicity was unknown or not stated in 72 percent of the injuries, and hence, not presented.

Exercise and Equipment

(Activity, Equipment, Apparel)

During 2016–2020, adults 65 and older sustained an estimated total of 353,300 ED-injuries (an annual average of 70,700) on exercise and equipment.



There were no statistically significant linear trends detected in injuries between 2016 and 2020.

(Struck-By Injuries – Exercise Equipment)

Injury Rate (per 100,000 Population) Comparisons: 2016 – 2020

25–64 years old: 148.5
 65 years and older: 132.8
 Rate Ratio: 1.1 times higher for the younger group, aged 25-64 years old.
 Rate Ratio for serious injuries: 2.9 times higher for older adults, if *only* hospitalized and treated/transferred (to another hospital) injuries are considered.

**Details of Estimated ED-Treated Injuries Involving Exercise and Equipment:
 2016–2020 Total**

Estimated Injuries by Age Group

<i>Age Group</i>	<i>Estimated Number of ED-Treated Injuries</i>
25–64	1,266,500
65–74	198,700
75–84	108,900
85 and older	45,700

Disposition of Estimated Injuries by Age Group

<i>Age Group</i>	<i>Disposition of ED-Treated Injuries</i>				
	<i>Treated & Released</i>	<i>Hospitalized</i>	<i>Fatality</i>	<i>Treated & Transferred</i>	<i>Other</i>
25–64	90.2%	6.8%	0.1%	0.6%	2.3%
65 and Older	72.7%	23.0%	0.3%	1.2%	2.9%

Note: Percentages may not add to 100 due to rounding.

Estimated Injuries by Gender Among Adults 65 and Older

<i>Gender</i>	<i>Estimated Total Number of ED-Treated Injuries</i>	<i>Percent of Estimated ED-Treated Injuries</i>	<i>Percent of Estimated Population</i>
Male	176,100	49.9%	44.5%
Female	177,200	50.2%	55.5%

Most Common Diagnoses for Injuries Among Adults 65 and Older: 2016 – 2020

Other/Not Stated (code 71): 47 percent,
 Sprains/Strains (code 64): 15 percent,
 Fracture (code 57): 13 percent.

(Struck-By Injuries – Exercise and Equipment)

Most Common Body Parts Injured Among Adults 65 and Older: 2016 – 2020

Upper Trunk Excl Shoulder (code 31): 21 percent,
Lower Trunk (code 79): 14 percent,
All Parts of Body (code 85): 10 percent,
Head (code 75): 9 percent,
Shoulder (code 30), Lower Leg Excl Knee/Ankle (code 36), Face (code 76): 5 percent each.

Distribution of Race Among Estimated Injuries (with Race Information Available) and U.S. Population (Adults 65 and Older)

<i>Race</i>	<i>Injured Population</i>	<i>U.S. Population</i>
White	86.0%	84.1%
Black/African American	8.3%	9.5%
Asian	2.7%	4.6%
Other	2.7%	1.0%
American Indian/Alaska Native	0.2%	0.7%
Native Hawaiian/Pacific Islander	0.2%	0.1%

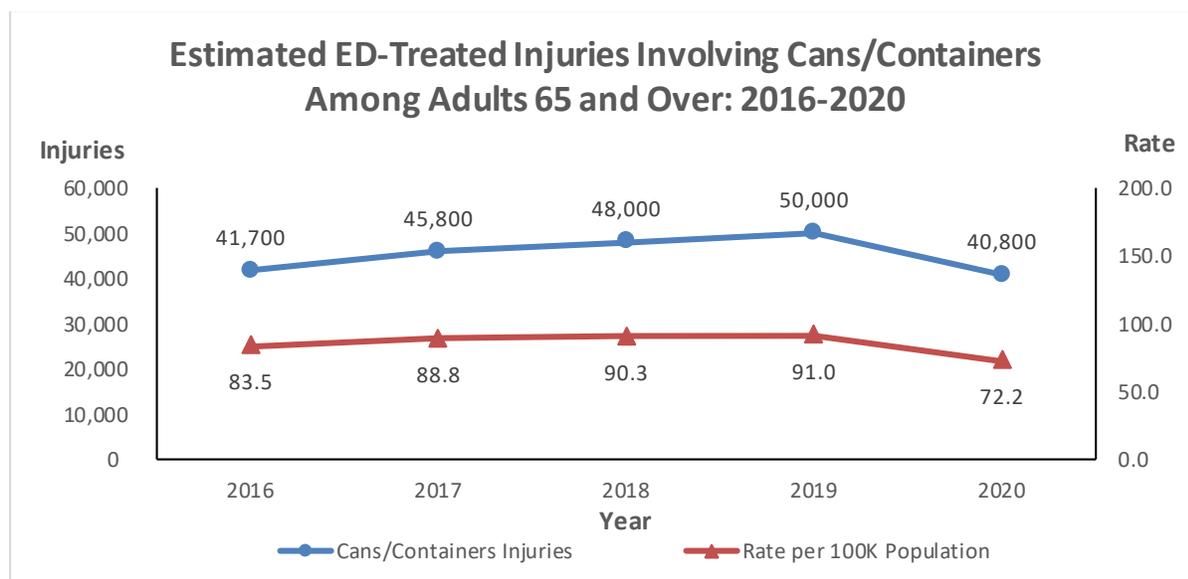
Note: **Race/Ethnicity data are captured in NEISS starting in 2018.** Race is “Not Stated” for 45 percent of the injuries. ‘Other’ includes bi/multi/interracial, as well as races not already listed. Ethnicity was unknown or not stated in 74 percent of the injuries, and hence, not presented.

Cans/Containers

(Fuel Storage Tanks, Metal/Plastic/Wooden/Glass Containers, Aerosol/Non-Aerosol Containers, and Others)

During 2016 – 2020, adults 65 and older sustained an estimated total of 226,200 ED-injuries (an annual average of 45,200) on cans/containers.

(Struck-By Injuries – Cans/Containers)



There were no statistically significant linear trends detected in injuries between 2016 and 2020.

Injury Rate (per 100,000 Population) Comparisons: 2016 – 2020

25–64 years old: 86.9
 65 years and older: 85.0
 Rate Ratio: 1.02 times higher for younger group, aged 25-64 years old.
 Rate Ratio for serious injuries: 3.7 times higher for older adults, if *only* hospitalized and treated/transferred (to another hospital) injuries are considered.

Details of Estimated ED-Treated Injuries Involving Cans/Containers: 2016–2020 Total

Estimated Injuries by Age Group

<i>Age Group</i>	<i>Estimated Number of ED-Treated Injuries</i>
25–64	741,000
65–74	118,000
75–84	73,900
85 and older	34,300

Disposition of Estimated Injuries by Age Group

<i>Age Group</i>	<i>Disposition of ED-Treated Injuries</i>				
	<i>Treated & Released</i>	<i>Hospitalized</i>	<i>Fatality</i>	<i>Treated & Transferred</i>	<i>Other</i>
25–64	93.1%	3.8%	0.1%	0.7%	2.4%
65 and Older	85.1%	11.8%	0.1%	1.3%	1.7%

Note: Percentages may not add to 100 due to rounding.

(Struck-By Injuries – Cans/Containers)

Estimated Injuries by Gender Among Adults 65 and Older

<i>Gender</i>	<i>Estimated Total Number of ED-Treated Injuries</i>	<i>Percent of Estimated ED-Treated Injuries</i>	<i>Percent of Estimated Population</i>
Male	85,100	37.6%	44.5%
Female	141,100	62.4%	55.5%

Most Common Diagnoses for Injuries Among Adults 65 and Older: 2016 – 2020

Other/Not Stated (code 71): 20 percent,
 Lacerations (code 59): 18 percent,
 Fracture (code 57): 15 percent,
 Sprains/Strains (code 64): 14 percent,
 Contusions/Abrasions (code 53): 13 percent.

Most Common Body Parts Injured Among Adults 65 and Older: 2016 – 2020

Lower Trunk (code 79): 20 percent,
 Upper Trunk Excl Shoulder (code 31): 11 percent,
 Head (code 75) and Finger (code 92): 10 percent each,
 Lower Leg Excl Knee /Ankle (code 36), Hand (code 82): 5 percent each.

Distribution of Race Among Estimated Injuries (with Race Information Available) and U.S. Population (Adults 65 and Older)

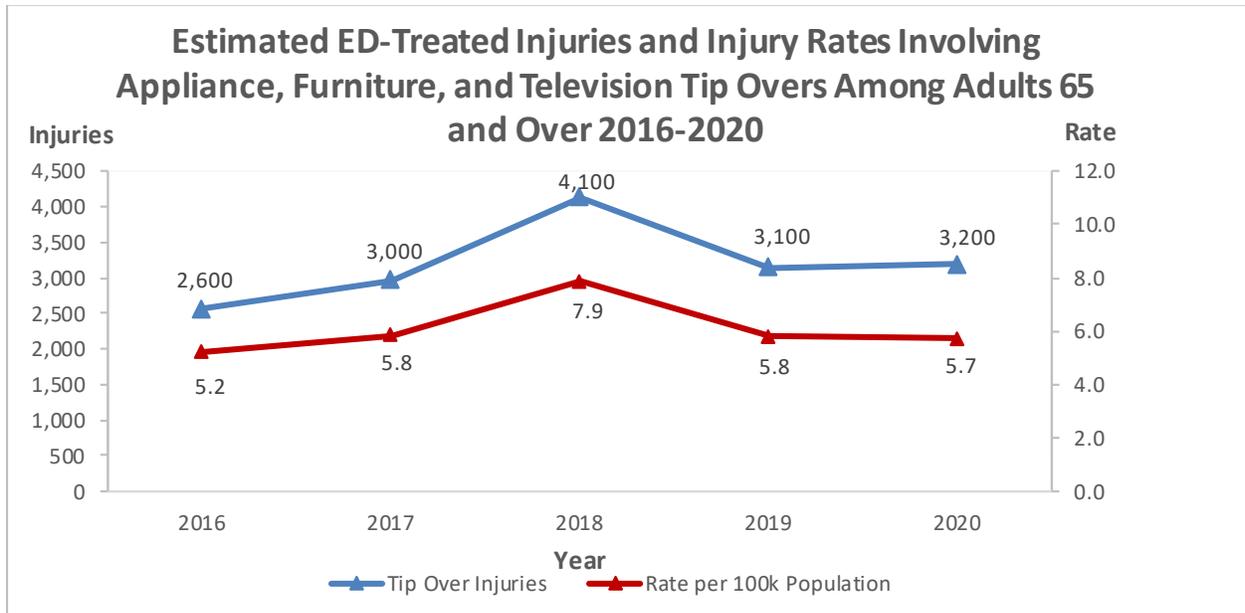
<i>Race</i>	<i>Injured Population</i>	<i>U.S. Population</i>
White	86.0%	84.1%
Black/African American	10.8%	9.5%
Asian	1.2%	4.6%
Other	1.7%	1.0%
American Indian/Alaska Native	<0.1%	0.7%
Native Hawaiian/Pacific Islander	<0.1%	0.1%

Note: **Race/Ethnicity data captured in NEISS starting in 2018.** Race is “Not Stated” for 38 percent of the injuries. ‘Other’ includes bi/multi/interracial, as well as races not already listed. Ethnicity was unknown or not stated in 73 percent of the injuries, and hence, not presented.

Tip Overs

(Appliances, Furniture, and Televisions)

During 2016–2020, adults 65 and older sustained an estimated total of 16,000 ED-injuries (an annual average of 3,200) on from tip overs of appliances, furniture, and/or televisions. This has been an ongoing, active area of work for CPSC in FY 2021.



There were no statistically significant linear trends detected in injuries between 2016 and 2020.

Injury Rate (per 100,000 Population) Comparisons: 2016 – 2020

25–64 years old: 5.1

65 years and older: 6.1

Rate Ratio: 1.2 times higher for older group, 65 years and older

Rate Ratio for

serious injuries: 8.0 times higher for older adults, if *only* hospitalized and treated/transferred (to another hospital) injuries are considered.

Details of Estimated ED-Treated Injuries Involving Appliance, Furniture, and Television Tip Overs: 2016–2020 Total

Estimated Injuries by Age Group

<i>Age Group</i>	<i>Estimated Number of ED-Treated Injuries</i>
25–64	43,100
65–74	5,800
75–84	5,000
85 and older	5,200

(Struck-By Injuries – Tip Overs)

Disposition of Estimated Injuries by Age Group

<i>Age Group</i>	<i>Disposition of ED-Treated Injuries</i>				
	<i>Treated & Released</i>	<i>Hospitalized</i>	<i>Fatality</i>	<i>Treated & Transferred</i>	<i>Other</i>
25–64	93.4%	2.9%	--	0.1%	3.6%
65 and Older	76.9%	17.6%	0.3%	2.1%	3.0%

Note: Percentages may not add to 100 due to rounding. ‘--’ indicates no injuries.

Estimated Injuries by Gender Among Adults 65 and Older

<i>Gender</i>	<i>Estimated Total Number of ED-Treated Injuries</i>	<i>Percent of Estimated ED -Treated Injuries</i>	<i>Percent of Estimated Population</i>
Male	6,200	38.8%	44.5%
Female	9,800	61.2%	55.5%

Estimated Injuries by Product Code Among Adults 65 and Older

<i>Product Code</i>	<i>Estimated Total Number of ED-Treated Injuries</i>
4057 Tables (excl. baby changing tables, billiard tables, or pool tables)	5,500
4056 Cabinets, racks, room dividers, and shelves	4,800
572 Televisions	2,600
604 Desks, chests, bureaus, or buffets	1,900

Note: Since multiple product codes can be used for a given case, a single incident may be counted in multiple product code estimates. All other product codes had an estimate of less than 1,200.

Most Common Diagnoses for Injuries Among Adults 65 and Older: 2016-2020

Contusions/Abrasions (code 53): 26 percent,
 Internal Organ Injury (code 62): 16 percent,
 Other/Not Stated (code 71): 15 percent,
 Fracture (code 57): 14 percent,
 Laceration (code 59): 13 percent.

Most Common Body Parts Injured Among Adults 65 and Older: 2016-2020

Head (code 75): 23 percent,
 Trunk, lower (code 79): 10 percent,
 Lower leg Excl Knee/Ankle (code 36): 9 percent,
 Trunk, upper (not including shoulders) (code 31): 9 percent.

(Struck-By Injuries – Tip Overs)

Distribution of Race Among Estimated Injuries (with Race Information Available) and U.S. Population (Adults 65 and Older)

Race	Injured Population	U.S. Population
White	85.9%	84.1%
Black/African American	9.9%	9.5%
Other	2.4%	1.0%
Asian	1.2%	4.6%
American Indian/Alaska Native	0.6%	0.7%
Native Hawaiian/Pacific Islander	0.0%	0.1%

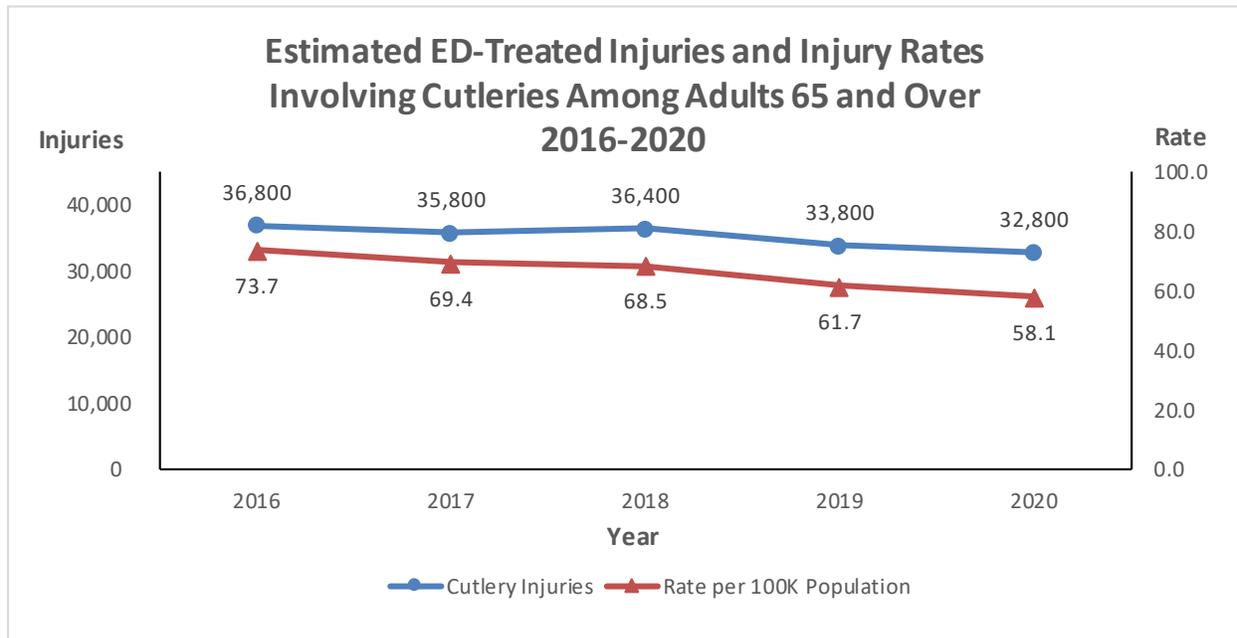
Note: **Race/Ethnicity data captured in NEISS starting in 2018.** Race is “Not Stated” for 0 percent of the injuries. ‘Other’ includes bi/multi/interracial, as well as other races not already listed. Ethnicity was unknown or not stated in 36 percent of the injuries, and hence, not presented.

III. Cut/Pierce Injuries

Cutlery

(Cutlery, Knives-Unpowered)

During 2016–2020, adults 65 and older sustained an estimated total of 175,600 ED-injuries (an annual average of 35,100) while using cutlery.



The apparent decreasing trend between 2016 and 2020 is not statistically significant.

Injury Rate (per 100,000 Population) Comparisons: 2016 – 2020

25–64 years old: 127.3
 65 years and older: 67.0
 Rate Ratio: 1.9 times higher for the younger adults aged 25 – 64 years.
 Rate Ratio for serious injuries: 2.6 times higher for the younger adults under 65 years, if *only* hospitalized and treated/transferred (to another hospital) injuries are considered.

Details of Estimated ED-Treated Injuries Involving Cutlery: 2016–2020 Total

Estimated Injuries by Age Group

<i>Age Group</i>	<i>Estimated Number of ED-Treated Injuries</i>
25–64	259,400
65–74	121,800
75–84	44,900
85 and older	8,900

(Cut Injuries – Cutleries)

Disposition of Estimated Injuries by Age Group

<i>Age Group</i>	<i>Disposition of ED-Treated Injuries</i>				
	<i>Treated & Released</i>	<i>Hospitalized</i>	<i>Fatality</i>	<i>Treated & Transferred</i>	<i>Other</i>
25–64	96.7%	1.2%	<0.1%	0.4%	1.7%
65 and Older	98.1%	1.0%	--	0.2%	0.7%

Note: Percentages may not add to 100 due to rounding. ‘--’ indicates no injuries.

Estimated Injuries by Gender Among Adults 65 and Older

<i>Gender</i>	<i>Estimated Total Number of ED-Treated Injuries</i>	<i>Percent of Estimated ED - Treated Injuries</i>	<i>Percent of Estimated Population</i>
Male	93,100	53.0%	44.5%
Female	82,600	47.0%	55.5%

Most Common Diagnoses for Injuries Among Adults 65 and Older: 2016 – 2020

Lacerations (code 59): 91 percent,
Puncture (code 63): 2 percent.

Most Common Body Parts Injured Among Adults 65 and Older: 2016 – 2020

Finger (code 92): 68 percent,
Hand (code 82): 18 percent.

Distribution of Race Among Estimated Injuries (with Race Information Available) and U.S. Population (Adults 65 and Older)

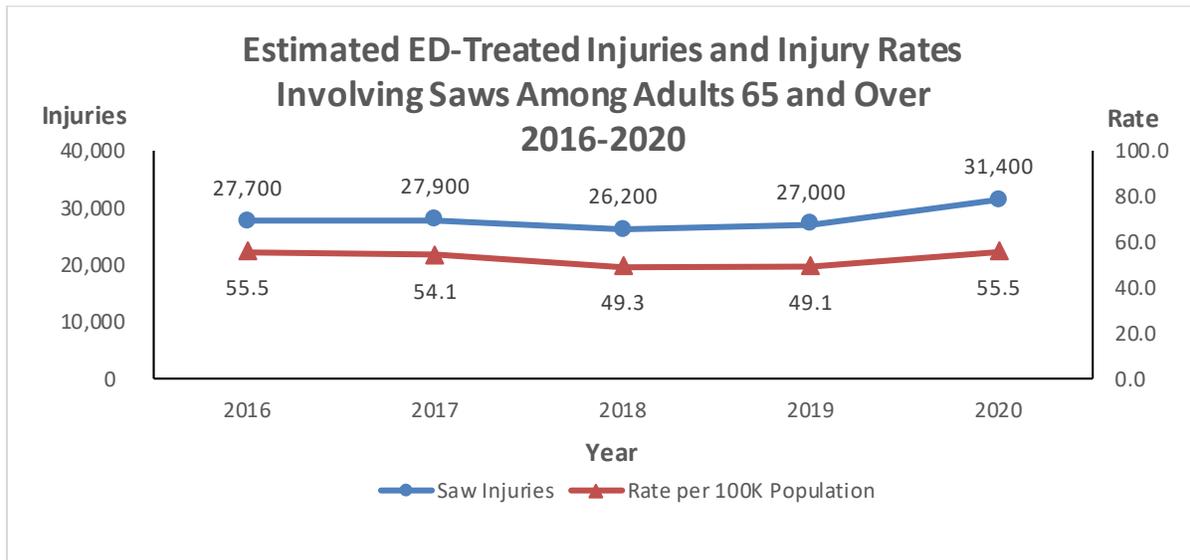
<i>Race</i>	<i>Injured Population</i>	<i>U.S. Population</i>
White	88.7%	84.1%
Black/African American	7.3%	9.5%
Asian	1.8%	4.6%
Other	1.8%	1.0%
American Indian/Alaska Native	0.3%	0.7%
Native Hawaiian/Pacific Islander	0.1%	0.1%

Note: **Race/Ethnicity data are captured in NEISS starting in 2018.** Race is “Not Stated” for 35 percent of the injuries. ‘Other’ includes bi/multi/interracial, as well as races not already listed. Ethnicity was unknown or not stated in 73 percent of the injuries, and hence, not presented.

Saws

(All Saws Including Chain, Circular, Radial Arm, Table, and Hack Saws)

During 2016 – 2020, adults 65 and older sustained an estimated total of 140,300 ED-injuries (an annual average of 28,100) using saws.



There were no statistically significant linear trends detected in injuries between 2016 and 2020.

Injury Rate (per 100,000 Population) Comparisons: 2016 – 2020

25–64 years old: 42.3
 65 years and older: 52.8
 Rate Ratio: 1.2 times higher for adults, aged 65 and over.
 Rate Ratio for serious injuries: 1.4 times higher for older adults, if *only* hospitalized and treated/transferred (to another hospital) injuries are considered.

Details of Estimated ED-Treated Injuries Involving Saws: 2016–2020 Total

Estimated Injuries by Age Group

Age Group	Estimated Number of ED-Treated Injuries
25–64	361,000
65–74	92,400
75–84	41,300
85 and older	6,600

(Cut Injuries – Saws)

Disposition of Estimated Injuries by Age Group

<i>Age Group</i>	<i>Disposition of ED-Treated Injuries</i>				
	<i>Treated & Released</i>	<i>Hospitalized</i>	<i>Fatality</i>	<i>Treated & Transferred</i>	<i>Other</i>
25–64	91.5%	4.7%	<0.1%	2.4%	1.4%
65 and Older	91.4%	5.1%	--	3.0%	0.5%

Note: Percentages may not add to 100 due to rounding. ‘--’ indicates no injuries.

Estimated Injuries by Gender Among Adults 65 and Older

<i>Gender</i>	<i>Estimated Total Number of ED-Treated Injuries</i>	<i>Percent of Estimated ED - Treated Injuries</i>	<i>Percent of Estimated Population</i>
Male	134,400	95.8%	44.5%
Female	6,000	4.4%	55.5%

Most Common Diagnoses for Injuries Among Adults 65 and Older: 2016 – 2020

Lacerations (code 59): 64 percent,
Fracture (code 57): 14 percent,
Amputation (code 50): 9 percent.

Most Common Body Parts Injured Among Adults 65 and Older: 2016 – 2020

Finger (code 92): 66 percent,
Hand (code 82): 11 percent.

Distribution of Race Among Estimated Injuries (with Race Information Available) and U.S. Population (Adults 65 and Older)

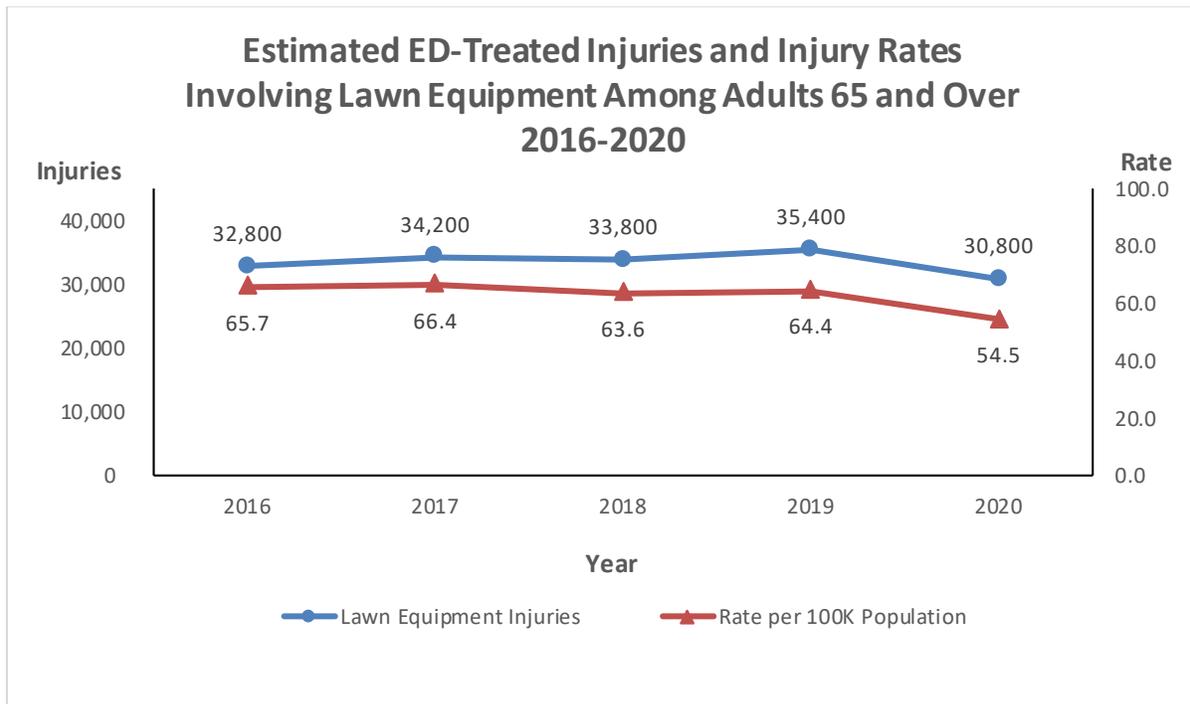
<i>Race</i>	<i>Injured Population</i>	<i>U.S. Population</i>
White	94.3%	84.1%
Black/African American	2.7%	9.5%
Asian	0.9%	4.6%
Other	1.9%	1.0%
American Indian/Alaska Native	0.2%	0.7%
Native Hawaiian/Pacific Islander	<0.1%	0.1%

Note: **Race/Ethnicity data are captured in NEISS starting in 2018.** Race is “Not Stated” for 28 percent of the injuries. ‘Other’ includes bi/multi/interracial, as well as races not already listed. Ethnicity was unknown or not stated in 68 percent of the injuries, and hence, not presented.

Other Lawn Equipment

(Pruning/Trimming Equipment, Wheelbarrows, Fertilizer/Seed Spreaders, Snowblowers, Hoses/Sprinklers, etc.)

During 2016–2020, adults 65 and older sustained an estimated total of 167,000 ED-injuries (an annual average of 33,400) while using various lawn equipment listed above.



There were no statistically significant linear trends detected in injuries between 2016 and 2020.

Injury Rate (per 100,000 Population) Comparisons: 2016 – 2020

25–64 years old:	23.0
65 years and older:	62.8
Rate Ratio:	2.7 times higher for adults, aged 65 and over.
Rate Ratio for serious injuries:	6.5 times higher for older adults, if <i>only</i> hospitalized and treated/transferred (to another hospital) injuries are considered.

Details of Estimated ED-Treated Injuries Involving Other Lawn Equipment: 2016–2020 Total

Estimated Injuries by Age Group

<i>Age Group</i>	<i>Estimated Number of ED-Treated Injuries</i>
25–64	195,800
65–74	76,300
75–84	61,400
85 and older	29,200

(Cut Injuries – Other Lawn Eqp)

Disposition of Estimated Injuries by Age Group

<i>Age Group</i>	<i>Disposition of ED-Treated Injuries</i>				
	<i>Treated & Released</i>	<i>Hospitalized</i>	<i>Fatality</i>	<i>Treated & Transferred</i>	<i>Other</i>
25–64	91.4%	6.4%	0.1%	0.7%	1.5%
65 and Older	81.5%	15.6%	0.2%	1.2%	1.4%

Note: Percentages may not add to 100 due to rounding.

Estimated Injuries by Gender Among Adults 65 and Older

<i>Gender</i>	<i>Estimated Total Number of ED-Treated Injuries</i>	<i>Percent of Estimated ED - Treated Injuries</i>	<i>Percent of Estimated Population</i>
Male	80,100	48.0%	44.5%
Female	86,900	52.0%	55.5%

Most Common Diagnoses for Injuries Among Adults 65 and Older: 2016 – 2020

Fracture (code 57): 23 percent,
 Lacerations (code 59): 20 percent,
 Contusions/Abrasions (code 53): 15 percent,
 Other/Not Stated (code 71): 14 percent,
 Puncture (code 62): 11 percent.

Most Common Body Parts Injured Among Adults 65 and Older: 2016 – 2020

Head (code 75): 17 percent,
 Lower Trunk (code 79): 13 percent,
 Upper Trunk Excl Shoulder (code 31): 10 percent,
 Face (code 76): 9 percent,
 Finger (code 92): 8 percent.

Distribution of Race Among Estimated Injuries (with Race Information Available) and U.S. Population (Adults 65 and Older)

<i>Race</i>	<i>Injured Population</i>	<i>U.S. Population</i>
White	93.1%	84.1%
Black/African American	3.3%	9.5%
Asian	1.4%	4.6%
Other	1.9%	1.0%
American Indian/Alaska Native	0.3%	0.7%
Native Hawaiian/Pacific Islander	<0.1%	0.1%

Note: **Race/Ethnicity data are captured in NEISS starting in 2018.** Race is “Not Stated” for 39 percent of the injuries. ‘Other’ includes bi/multi/interracial, as well as races not already listed. Ethnicity was unknown or not stated in 74 percent of the injuries, and hence, not presented.

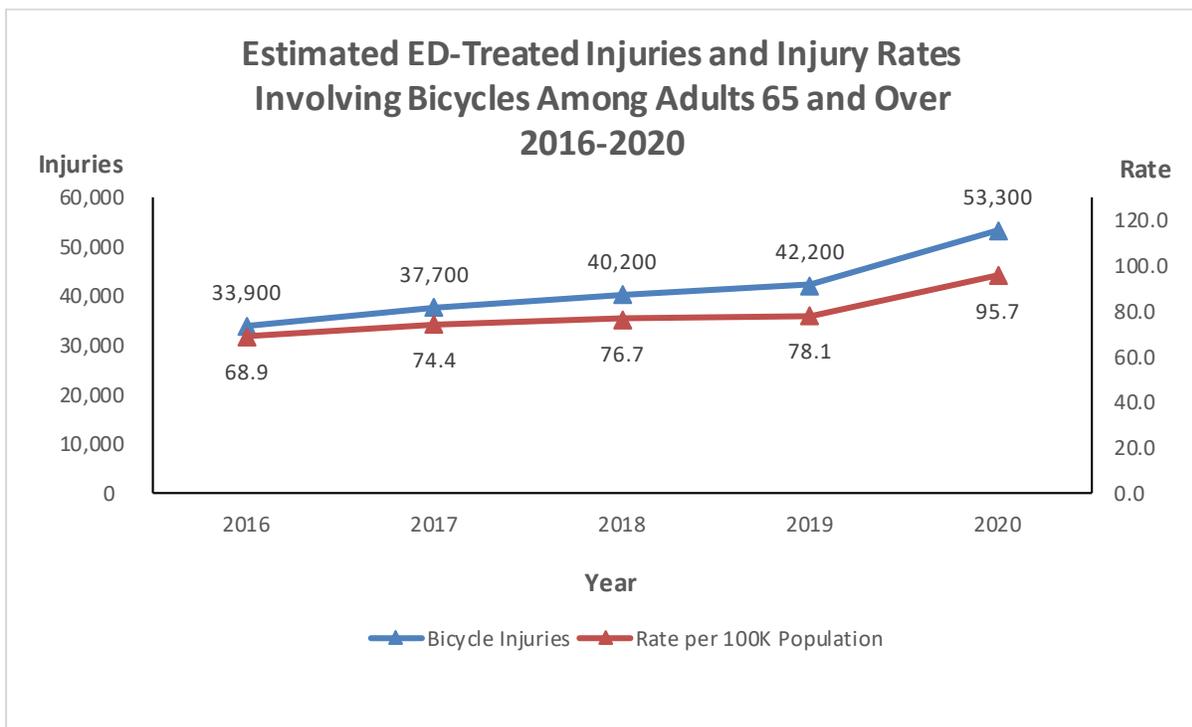
IV. Other Transportation Injuries

Most motor vehicle-related accidents on roads and highways are outside the jurisdiction of CPSC. However, there are a few products that are under the CPSC's purview, and some of them, collectively referred to as "other transportation" (to align with CDC WISQARS nomenclature), are discussed in this report.

Bicycles

(Bicycles and Accessories)

During 2016–2020, adults 65 and older sustained an estimated total of 207,300 ED-injuries (an annual average of 41,500) while using bicycles.



The increasing trend in injuries between 2016 and 2020 is on the borderline of statistical significance (p-value=0.051).

Injury Rate (per 100,000 Population) Comparisons: 2016 – 2020

25–64 years old:	113.8
65 years and older:	77.9
Rate Ratio:	1.5 times higher for younger group, 25-64 years old.

(Transportation Injuries – Bicycles)

Rate Ratio for serious injuries: 53.2 times higher for older adults, if *only* hospitalized and treated/transferred (to another hospital) injuries are considered.

Details of Estimated ED-Treated Injuries Involving Bicycles: 2016–2020 Total

Estimated Injuries by Age Group

<i>Age Group</i>	<i>Estimated Number of ED-Treated Injuries</i>
25–64	970,800
65–74	141,800
75–84	55,600
85 and older	9,900

Disposition of Estimated Injuries by Age Group

<i>Age Group</i>	<i>Disposition of ED-Treated Injuries</i>				
	<i>Treated & Released</i>	<i>Hospitalized</i>	<i>Fatality</i>	<i>Treated & Transferred</i>	<i>Other</i>
25–64	82.6%	12.8%	0.1%	0.9%	3.5%
65 and Older	71.4%	24.1%	0.3%	2.3%	1.9%

Note: Percentages may not add to 100 due to rounding.

Estimated Injuries by Gender Among Adults 65 and Older

<i>Gender</i>	<i>Estimated Total Number of ED-Treated Injuries</i>	<i>Percent of Estimated ED - Treated Injuries</i>	<i>Percent of Estimated Population</i>
Male	143,300	69.1%	44.5%
Female	64,000	30.9%	55.5%

Most Common Diagnoses for Injuries Among Adults 65 and Older: 2016 – 2020

Fracture (code 57): 30 percent,
 Contusions/Abrasions (code 53): 16 percent,
 Other/Not Stated (code 71): 16 percent,
 Internal Organ Injury (code 62):15 percent.

Most Common Body Parts Injured Among Adults 65 and Older: 2016 – 2020

Head (code 75): 19 percent,
 Upper Trunk Excl Shoulder (code 31): 15 percent,
 Lower Trunk (code 79): 11 percent,
 Lower Leg Excl Knee/Ankle (code 36): 7 percent,
 Knee (code 35), Face (code 76): 6 percent each.

(Transportation Injuries – Bicycles)

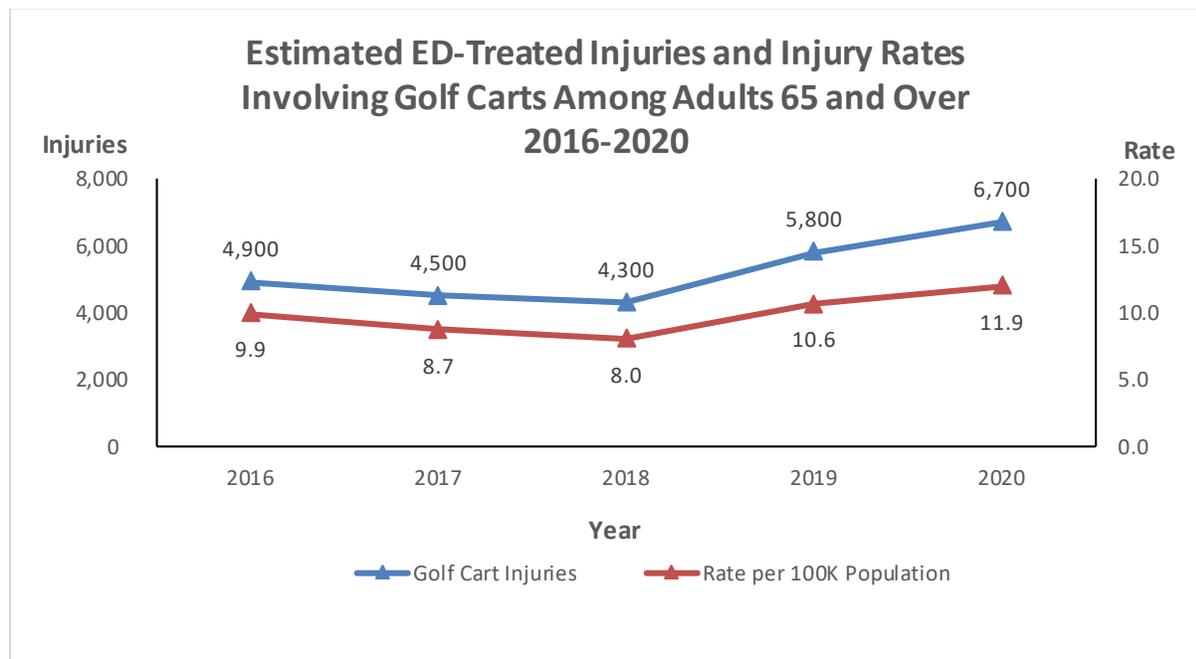
Distribution of Race Among Estimated Injuries (with Race Information Available) and U.S. Population (Adults 65 and Older)

<i>Race</i>	<i>Injured Population</i>	<i>U.S. Population</i>
White	88.3%	84.1%
Black/African American	7.5%	9.5%
Asian	1.8%	4.6%
Other	1.7%	1.0%
American Indian/Alaska Native	0.6%	0.7%
Native Hawaiian/Pacific Islander	<0.1%	0.1%

Note: **Race/Ethnicity data are captured in NEISS starting in 2018.** Race is “Not Stated” for 56 percent of the injuries. ‘Other’ includes bi/multi/interracial, as well as other races not already listed. Ethnicity was unknown or not stated in 80 percent of the injuries, and hence, not presented.

Golf Carts

During 2016 – 2020, adults 65 and older sustained an estimated total of 26,300 ED-injuries (an annual average of 5,300) while using golf carts.



There were no statistically significant linear trends detected in injuries between 2016 and 2020.

(Transportation Injuries – Golf Carts)

Injury Rate (per 100,000 Population) Comparisons: 2016 – 2020

25–64 years old: 3.6
 65 years and older: 9.9
 Rate Ratio: 2.8 times higher for adults, aged 65 and over.
 Rate Ratio for serious injuries: 5.5 times higher for older adults, if *only* hospitalized and treated/transferred (to another hospital) injuries are considered.

Details of Estimated ED-Treated Injuries Involving Golf Carts: 2016–2020 Total

Estimated Injuries by Age Group

<i>Age Group</i>	<i>Estimated Number of ED-Treated Injuries</i>
25–64	30,600
65–74	12,400
75–84	9,800
85 and older	4,100

Disposition of Estimated Injuries by Age Group

<i>Age Group</i>	<i>Disposition of ED-Treated Injuries</i>				
	<i>Treated & Released</i>	<i>Hospitalized</i>	<i>Fatality</i>	<i>Treated & Transferred</i>	<i>Other</i>
25–64	86.4%	11.4%	0.1%	0.7%	1.5%
65 and Older	73.4%	22.4%	0.4%	2.0%	1.9%

Note: Percentages may not add to 100 due to rounding.

Estimated Injuries by Gender Among Adults 65 and Older

<i>Gender</i>	<i>Estimated Total Number of ED-Treated Injuries</i>	<i>Percent of Estimated ED - Treated Injuries</i>	<i>Percent of Estimated Population</i>
Male	14,100	53.5%	44.5%
Female	12,200	46.5%	55.5%

Most Common Diagnoses for Injuries Among Adults 65 and Older: 2016 – 2020

Fracture (code 57): 23 percent,
 Laceration (code 59): 16 percent,
 Contusion/Abrasion (code 53): 15 percent,
 Internal Organ Injury (code 62): 14 percent.

Most Common Body Parts Injured Among Adults 65 and Older: 2016 – 2020

Head (code 75): 20 percent,
 Lower Leg Excl Knee/Ankle (code 36): 13 percent,
 Lower Trunk (code 79): 12 percent,
 Upper Trunk Excl Shoulder (code 31): 10 percent.

(Transportation Injuries – Golf Carts)

Distribution of Race Among Estimated Injuries (with Race Information Available) and U.S. Population (Adults 65 and Older)

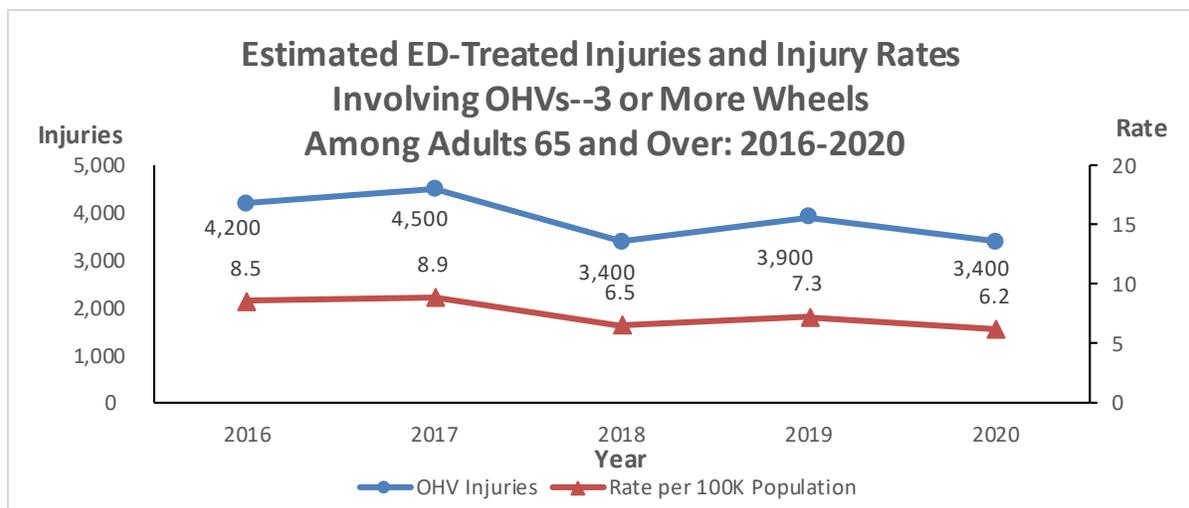
<i>Race</i>	<i>Injured Population</i>	<i>U.S. Population</i>
White	92.9%	84.1%
Black/African American	3.9%	9.5%
Asian	1.8%	4.6%
Other	1.3%	1.0%
American Indian/Alaska Native	0.2%	0.7%
Native Hawaiian/Pacific Islander	--	0.1%

Note: **Race/Ethnicity data are captured in NEISS starting in 2018.** Race is “Not Stated” for 56 percent of the injuries. ‘Other’ includes bi/multi/interracial, as well as races not already listed. ‘--’ indicates no injuries. Ethnicity was unknown or not stated in 79 percent of the injuries, and hence, not presented.

Other Vehicles

The product groups below are not associated with particularly high volume of estimated injuries or high injury rates among adults over 64. They are, however, ongoing project areas for CPSC in FY 2021.

- **E-Scooters or E-Bikes:** A total of 5,000 ED-treated injuries (an annual average of 1,300), among adults aged 65 and older from 2017–2020. No data is available for 2016.
- **Off-Highway Vehicles (OHVs) with 3 or More Wheels (ATVs, ROVs, and UTVs):** During 2016–2020, adults 65 and older sustained an estimated total of 19,500 ED-injuries (an annual average of 3,900) associated with the use of ATVs, ROVs, and UTVs. Additional information is provided below.



(Transportation Injuries – OHVs)

The apparent decreasing trend in injuries between 2016 and 2020 is *not* statistically significant.

Injury Rate (per 100,000 Population) Comparisons: 2016 – 2020

25–64 years old: 28.9
 65 years and older: 7.4
 Rate Ratio: 3.9 times higher for younger group, 25-64 years old.
 Rate Ratio for serious injuries: 3.3 times higher for younger age group, if *only* hospitalized and treated/transferred (to another hospital) injuries are considered.

Details of Estimated ED-Treated Injuries Involving OHVs (ATVs, ROVs, and UTVs): 2016–2020 Total

Estimated Injuries by Age Group

<i>Age Group</i>	<i>Estimated Number of ED-Treated Injuries</i>
25–64	246,400
65–74	12,000
75–84	5,700
85 and older	1,800

Disposition of Estimated Injuries by Age Group

<i>Age Group</i>	<i>Disposition of ED-Treated Injuries</i>				
	<i>Treated & Released</i>	<i>Hospitalized</i>	<i>Fatality</i>	<i>Treated & Transferred</i>	<i>Other</i>
25–64	79.4%	14.1%	0.1%	4.0%	2.4%
65 and Older	72.5%	17.4%	0.5%	6.9%	2.6%

Note: Percentages may not add to 100 due to rounding.

Estimated Injuries by Gender Among Adults 65 and Older

<i>Gender</i>	<i>Estimated Total Number of ED-Treated Injuries</i>	<i>Percent of Estimated ED - Treated Injuries</i>	<i>Percent of Estimated Population</i>
Male	16,200	83.0%	44.5%
Female	3,300	17.0%	55.5%

Most Common Diagnoses for Injuries Among Adults 65 and Older: 2016 – 2020

Fracture (code 57): 30 percent,
 Contusions/Abrasions (code 53): 14 percent,
 Other/Not Stated (code 71): 13 percent,
 Laceration (code 59): 12 percent.

(Transportation Injuries – OHVs)

Most Common Body Parts Injured Among Adults 65 and Older: 2016 – 2020

Upper Trunk Excl Shoulder (code 31): 22 percent,
Head (code 75): 17 percent,
Lower Trunk (code 79): 12 percent,
Lower Leg Excl Knee/Ankle (code 36): 8 percent,
Shoulder (code 30): 7 percent.

Estimated Injuries by Product Code Among Adults 65 and Older

<i>Product Code</i>	<i>Estimated Total Number of ED-Treated Injuries</i>
3286 All-terrain vehicles (four wheels, excluding dune buggies; exclusively off-road)	12,700
3287 All-terrain vehicles (number of wheels not specified; excluding dune buggies; exclusively off-road)	4,800
5044 Utility vehicles (UTVs) and Recreational Off-Road Vehicles (ROVs)	1,500

Note: Since multiple product codes can be used for a given case, a single incident may be counted in multiple product code estimates. All other product codes (3285 and 3296) had an estimate of less than 1,200

Distribution of Race Among Estimated Injuries (with Race Information Available) and U.S. Population (Adults 65 and Older)

<i>Race</i>	<i>Injured Population</i>	<i>U.S. Population</i>
White	97.1%	84.1%
Black/African American	2.2%	9.5%
Asian	-	4.6%
Other	0.7%	1.0%
American Indian/Alaska Native	-	0.7%
Native Hawaiian/Pacific Islander	-	0.1%

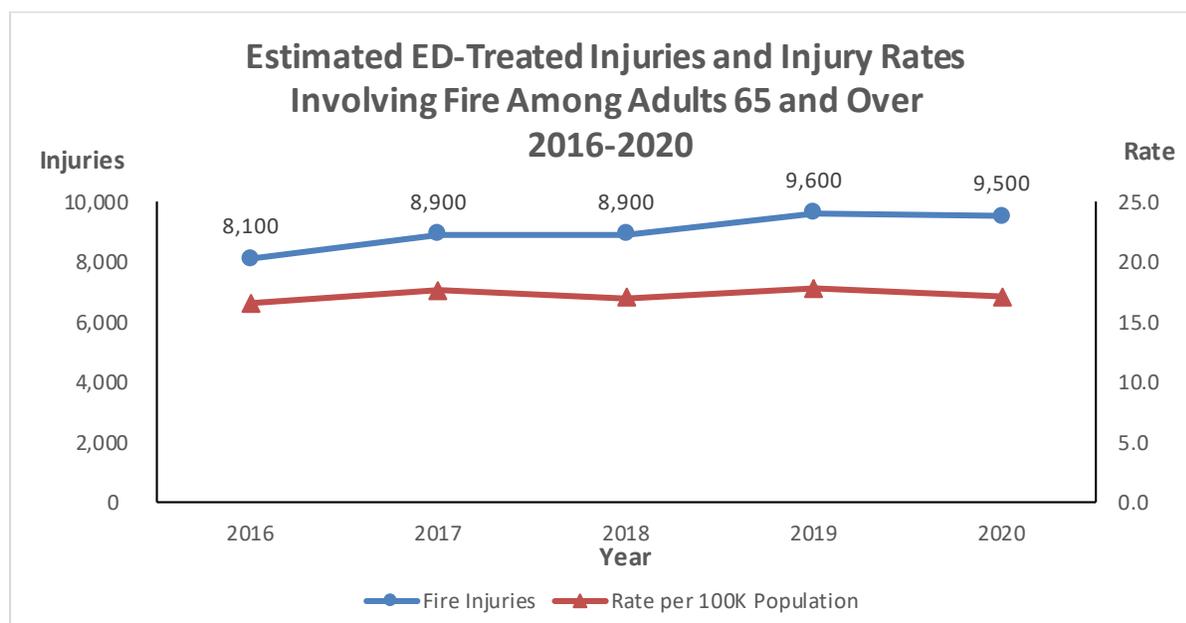
Note: **Race/Ethnicity data are captured in NEISS starting in 2018.** Race is “Not Stated” for 13 percent of the injuries. ‘Other’ includes bi/multi/interracial, as well as other races not already listed. ‘-’ indicates no injuries. Ethnicity was unknown or not stated in more than 99 percent of the injuries, and hence, not presented.

V. Other Causes

While there are other causes like **Fire** and **Poisoning** that are not associated with a particularly high volume of estimated injuries or high injury rates among older adults; there are, however, ongoing project areas at CPSC in FY 2021 that focus on these areas.

Fire

CPSC staff produced NEISS fire injury estimates by age using the NEISS FMV code (to identify fire involvement). During 2016–2020, adults 65 and older sustained an estimated total of 45,000 ED-injuries (an annual average of 9,000) from fire injuries. These estimates include fires that occurred in homes, as well as fires that occurred outside of homes. See table below for these NEISS fire injury estimates and rates (per 100,000 people).



Although the estimated injuries show an increasing trend, the estimated injury rates do not.

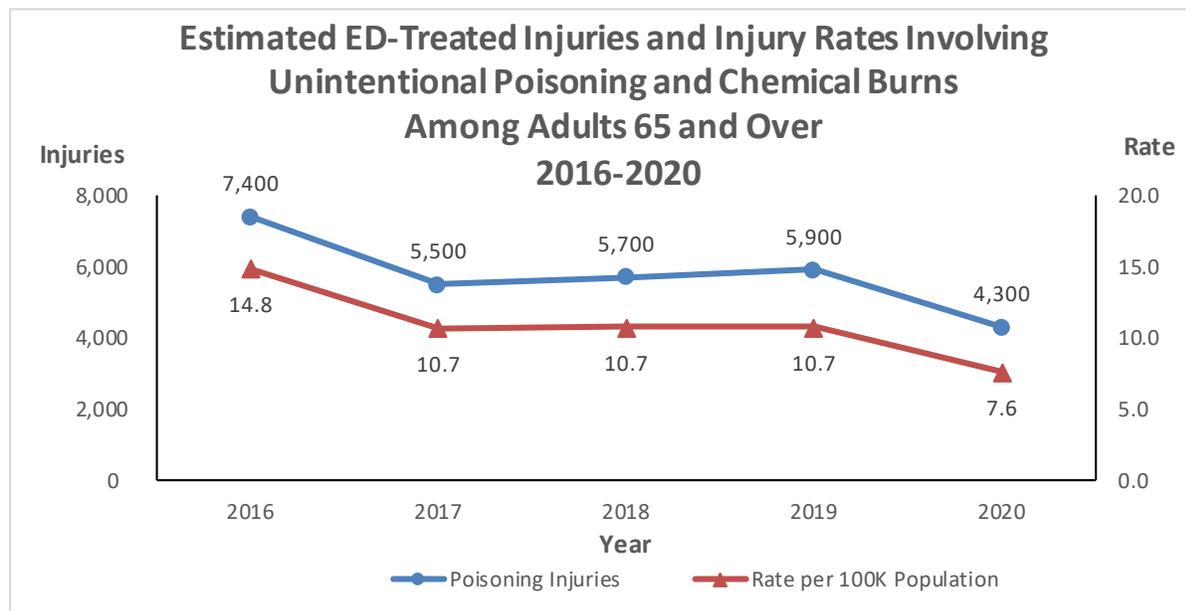
Fire Injury Estimates and Injury Rates per 100,000 Population by Year and Age Group

Year	65 Years and Older	65 – 74 Years	75 – 84 Years	85 Years and Older	All Ages
2016	8,100 (16.6)	4,800 (17.0)	2,100 (14.9)	1,100 (18.5)	64,900 (20.1)
2017	8,900 (17.6)	4,900 (16.6)	2,900 (19.5)	1,100 (17.5)	64,000 (19.7)
2018	8,900 (16.9)	4,900 (16.1)	2,800 (18.3)	1,200 (18.0)	65,900 (20.2)
2019	9,600 (17.8)	6,200 (19.7)	2,800 (17.5)	600 (9.3)	62,100 (18.9)
2020	9,500 (17.0)	5,800 (17.7)	2,500 (15.5)	1,200 (17.5)	62,900 (19.1)
Average.	9,000 (17.2)	5,300 (17.4)	2,600 (17.1)	1,100 (16.1)	63,600 (19.6)

Note that the older adult fire injury rate is lower than the fire injury rate for all ages.

Poisoning

During 2016–2020, adults 65 and older sustained an estimated total of 28,800 ED-injuries (an annual average of 5,800) from unintentional poisoning events.



There was a statistically significant decreasing trend detected in injuries between 2016 and 2020. Incidents involving intentional abuse were excluded.

The injury rate per 100,000 population of adults 65 and older is 10.8 for over 2016-2020 (lower than the 25-64 age group). Among the victims, 46.2 percent were males and 53.8 percent were females.

Estimated Injuries by Age Group

<i>Age Group</i>	<i>Estimated Number of ED-Treated Injuries</i>
65–74	18,300
75–84	7,800
85 and older	2,700

The disposition of the estimated injuries was:

- Treated and released: 80.5%
- Hospitalized: 13.6%
- Fatality: 0.3%
- Treated and transferred: 0.9%
- Other: 4.7%

The Most Common Diagnoses for Injuries Among Adults 65 and Older: 2016 – 2020

Poisoning (code 68): 60 percent,
Chemical Burn (code 49): 37 percent.

(Other Injury Causes – Poisoning)

Most Common Body Parts Injured Among Adults 65 and Older: 2016 – 2020

All Parts of Body (code 85): 60 percent,
Eyeball (code 77): 21 percent.

Estimated Injuries by Product Code Among Adults 65 and Older

<i>Product Code</i>	<i>Estimated Total Number of ED-Treated Injuries</i>
956 Bleach	7,500
954 General Purpose Household Cleaner	4,500
1931 Tablet or Capsule Drug	2,000
921 Chemical Not Elsewhere Classified	1,400

Note: Since multiple product codes can be used for a given case, a single incident may be counted in multiple product code estimates. All other product codes had an estimate of less than 1,200.

Distribution of Race Among Estimated Injuries (with Race Information Available) and U.S. Population (Adults 65 and Older)

<i>Race</i>	<i>Injured Population</i>	<i>U.S. Population</i>
White	67.2%	84.1%
Black/African American	28.0%	9.5%
Asian	2.4%	4.6%
Other	1.5%	1.0%
American Indian/Alaska Native	0.9%	0.7%
Native Hawaiian/Pacific Islander	--	0.1%

Note: **Race/Ethnicity data are captured in NEISS starting in 2018.** Race is “Not Stated” for 61 percent of the injuries. ‘Other’ includes bi/multi/interracial, as well as races not already listed. ‘-’ indicates no injuries. Ethnicity was unknown or not stated in 77 percent of the injuries, and hence, not presented.

Consumer Product-Related Fatalities Among Older Adults 2016 - 2018

The fatality reports in the Consumer Product Safety Risk Management System (CPSRMS) come from a variety of sources such as NEISS, death certificates, coroners and medical examiners, consumers, news clippings, manufacturers/retailers, and state/local agencies. Many of these reports are followed up through on-site or telephone investigations, and the resulting reports also reside in CPSRMS. Given the 2 to 3-year lag in death certificates reporting from the states, at the time of writing this report, 2016 through 2018 are considered the latest three years with nearly complete data. However, slight changes in the fatality statistics are possible in the future. These reports are not based on an inclusive probability survey, nor do they comprise a complete census of all fatal incidents associated with consumer products during 2016–2020. Attempts were made to identify duplicate reports; however, in some cases, the details provided in multiple reports of a single incident may have been too incomplete or contradictory to allow for all duplicate reports to be identified. Thus, these counts are to be considered minimums or near-minimums associated with these products for older adults during 2016–2018.

As identified by CDC (see Table B in Appendix), major specific causes of deaths during the 2016–2018 timeframe that are likely associated with a consumer product under CPSC’s jurisdiction are: Falls, Fires, Drownings, Other Transportation Accidents, and Poisonings, specifically Carbon Monoxide poisonings.

I. Reported Fall Deaths

Based on data from the CPSRMS from 2016 through 2018, staff identified a total of 5,449 fall-related fatalities associated with the use of a consumer product among adults 65 and over. The same selection process that was used for ED-treated injuries was utilized to select the top three products involved in the most fatalities. Coincidentally, but not unexpectedly, the same top three products that were identified in the injury section were also found to be the most fatal.

The top three products associated with the highest number of deaths are:

- **Floors**
- **Stairs/Steps**
- **Beds**

The way data are collected from the medical and coroner’s offices for **Floors** and **Stairs/Steps** fatalities changed halfway through the 2016–2018 timeframe. Hence, a breakout of the fatalities by year provides a lop-sided view which is more a function of the change in the data-collection process, rather than a change in actual number of older adult deaths. To avoid misleading the reader, staff presents information based on annual averages rather than by incident years.

(Fall Deaths)

Table 3 below presents the age distribution of decedents for all older adult fall-related fatalities that were reported to CPSC for the years spanning from 2016 through 2018. The 85 years and older category far outweighed the other categories, accounting for 51 percent of all fall-related fatalities among adults 65 and over.

Table 3: Reported Fall Deaths for All Products by Age Group, 2016 – 2018

	Total Reported Fatalities (Annual Average Fatalities)			
	65 to 74 Years	75 to 84 Years	85 Years and Older	65 Years and Older
All Products	920 (306.7)	1,752 (584.0)	2,777 (925.7)	5,449 (1,816.3)
Percentage of Total Fall Deaths	16.9%	32.2%	51.0%	100%

Source: CPSRMS, CPSC.

Table 4 below presents the percentages of fatal falls among the top three product categories by gender and age group. Distributions are relatively similar for fatalities involving floors and beds. However, for stairs/steps, the distribution flipped gender-wise, with more men than women suffering fatal falls on stairs and steps.

**Table 4: Distribution of Reported Fall Deaths Among Adults 65 and Older
By Top Product Types and Age
2016-2018**

Product	Gender	Percentage of Reported Fatalities			
		65 to 74 Years	75 to 84 Years	85 Years and Older	65 Years and Older
Floors	Male	57%	49%	40%	49%
	Female	43%	51%	60%	51%
Beds	Male	52%	43%	61%	52%
	Female	48%	57%	39%	48%
Stairs/ Steps	Male	61%	60%	49%	57%
	Female	39%	40%	51%	43%

Source: CPSRMS, CPSC

(Fall Deaths)

Table 5 below shows the total number of fatal falls among adults 65 and over among the top three product type and age categories. For Floor and Bed-related fatalities, over 50 percent of the victims were in the 85 years and older section. For stairs and steps-related fatalities the distribution within age groups appeared to be relatively even.

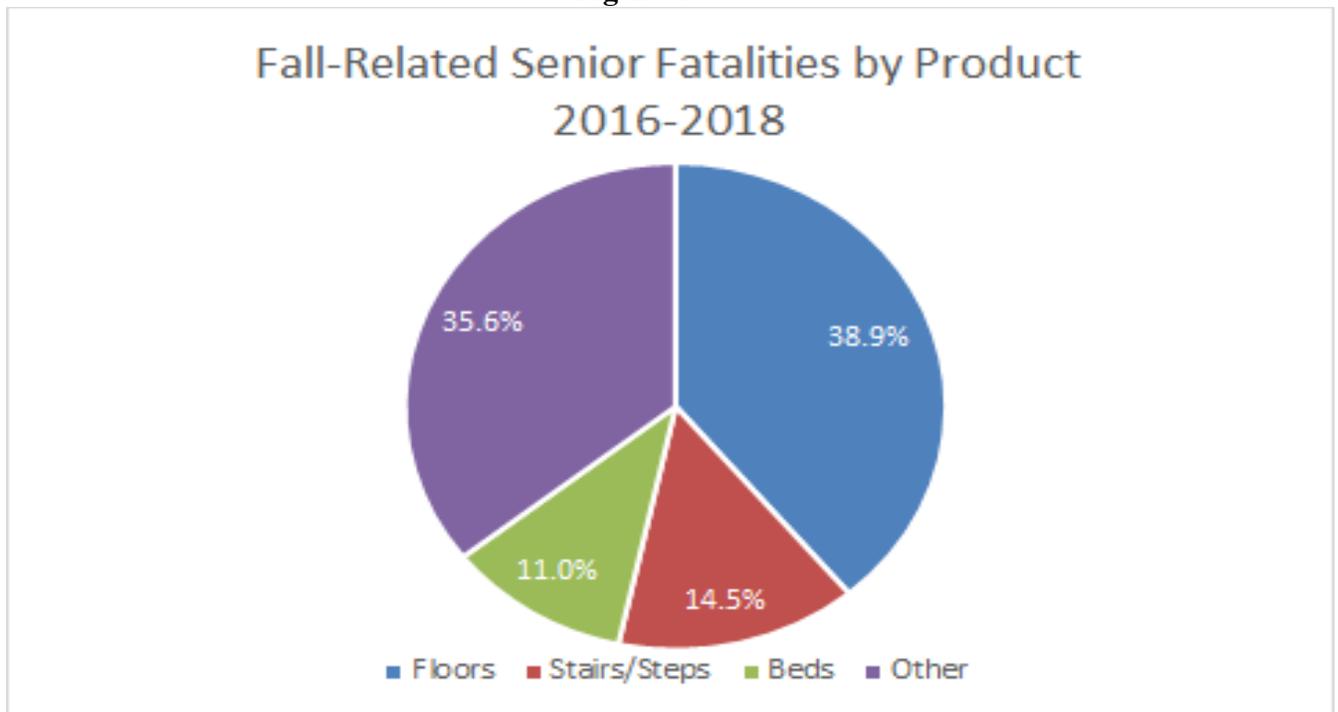
Table 5: Reported Fall Deaths by Product Type and Age Group, 2016 – 2018

Product	Reported Fatality Frequencies (Annual Average)			
	65 to 74 Years	75 to 84 Years	85 Years and Older	65 Years and Older
Floors	329 (109.7)	692 (230.7)	1,100 (366.7)	2,121 (707)
Beds	86 (22.7)	206 (68.7)	497 (165.7)	789 (263)
Stairs/Steps	165 (55)	226 (75.3)	208 (69.3)	599 (199.7)

Source: CPSRMS, CPSC.

Figure 1 below shows the percentage breakdown of fall deaths by product involved. Almost 39 percent of the deaths involved floors, 14.5 percent involved stairs/steps, and 11 percent involved beds. The remaining 35.6 percent of fall-related deaths involved many other products and are presented as the “Other” category.

Figure 1



Source: CPSRMS, CPSC.

(Fall Deaths)

Death Narrative Examples

With 5,449 fall deaths reported to CPSC, it is expected that there will be a wide variety in the sequence of events that led to the fatalities. Excerpts from some of the more common scenario descriptions, involving the top three products associated with fall fatalities among adults 65 and over, are presented below.

Floors

- A 76-year-old female decedent suffered a right femoral neck fracture secondary to fall to floor at home. She was treated with no surgery and did not recover.
- The 81-year-old female was residing at a nursing home when she fell to the tiled flooring in a hallway. She reportedly fell out of her wheelchair. She was transported to the hospital and diagnosed with a left hip fracture. Surgery was not performed, and she was enrolled in hospice. She died at the hospital a few days later. Her cause of death was certified as "Complications of left hip fracture; Other Significant Conditions: Atherosclerotic cardiovascular disease, chronic obstructive pulmonary disease, and dementia." The manner was "Accident."

Stairs/Steps

- An 80-year-old male decedent fell down the stairs striking his head. He was found at the bottom of the steps at home with apparent head trauma.
- The decedent was at home and carrying some items down the stairs. He fell and struck his head on the stairs. He was transported to a local hospital and then transferred to a trauma center. He later died of a depressed skull fracture and a subdural hematoma.

Beds

- An 88-year-old female decedent fell out of bed at home. She was diagnosed with comminuted intertrochanteric fracture of left hip. She was treated, but experienced complications.
- An 87-year-old male fell out of bed onto floor. While in the ED, she went into cardiac arrest and was pronounced. Scalp laceration, cardiac arrest.

II. Fire Death Estimates

Based on the data from the U.S. Fire Administration’s National Fire Incident Reporting System (NFIRS), estimates are calculated for 2016–2018 deaths associated with fires. There was an annual average of 930 residential structure fire deaths. The annual estimate increased from 850 in 2016, to 930 in 2017, to 1,010 in 2018. Older adults comprised 15.6 percent of the U.S. population during this period, but an estimated 39.4 percent of the fire deaths. The estimated fire death rate is 1.84 deaths per 100,000 people for adults over 64, but only 0.52 deaths per 100,000 people for those under age 65. The fire death rate is an estimated 1.51 for those aged between 65 and 74, 2.16 for those between 75 and 84, and 2.60 for those 85 and older. See table below for annual residential structure fire death estimates (and rates per 100,000 people) by year and by age.

Table 6: Older Adults Fire Death Estimates and Fire Death Rates per 100,000 Population

Year	65 Years and Older	65 – 74 Years	75 – 84 Years	85 Years and Older	All Ages
2016	850 ¹⁰ (1.73)	430 (1.51)	260 (1.85)	160 (2.46)	2,410 (0.75)
2017	930 (1.84)	410 (1.40)	310 (2.12)	210 (3.18)	2,230 (0.69)
2018	1010 (1.93)	490 (1.60)	380 (2.49)	140 (2.16)	2,460 (0.75)
2016 – 2018 Avg.	930 (1.84)	450 (1.51)	320 (2.16)	170 (2.60)	2,370 (0.73)

Source: NFIRS, USFA.

Ignition Sources:

Two major hazards, in terms of ignition sources for deadly fires for older adults, are **smoking materials**¹¹ and **cooking**. The NFIRS 2016–2018 annual average estimate of smoking material fire deaths is 250 among adults 65 and over. The annual average estimate for cooking fire deaths is 60 among that age group. See Table 7 and Table 8 for the annual fire death estimates (and rates per 100,000 people) for smoking materials and cooking by year by age. Estimates show that the fire death rates are high for smoking materials for all older adults, but cooking is a much bigger hazard for older adults 85 and older than for those younger than 85.

¹⁰ Detail may not add to totals due to rounding.

¹¹ The NFIRS Heat Source codes that comprise smoking materials are '61 – Cigarette,' '62 – Pipe or cigar,' and '63 – Heat from undetermined smoking material.'

(Fire Deaths)

Table 7: Smoking Material Fire Death Estimates and Fire Death Rates per 100,000 Population

Year	65 Years and Older	65 – 74 Years	75 – 84 Years	85 Years and Older	All Ages
2016	220 (0.45)	140 (0.49)	50 (0.34)	30 (0.52)	670 (0.21)
2017	230 (0.46)	150 (0.52)	60 (0.40)	20 (0.29)	550 (0.17)
2018	290 (0.56)	150 (0.50)	110 (0.70)	30 (0.47)	600 (0.18)
2016 – 2018 Avg.	250 (0.49)	150 (0.50)	70 (0.48)	30 (0.42)	610 (0.19)

Source: NFIRS, USFA.

Table 8: Cooking Fire Death Estimates and Fire Death Rates per 100,000 Population

Year	65 Years and Older	65 – 74 Years	75 – 84 Years	85 Years and Older	All Ages
2016	50 (0.09)	20 (0.06)	10 (0.07)	20 (0.29)	240 (0.07)
2017	70 (0.14)	40 (0.13)	0 (0.00)	30 (0.47)	250 (0.08)
2018	60 (0.12)	30 (0.09)	20 (0.11)	20 (0.24)	210 (0.07)
2016 – 2018 Avg.	60 (0.12)	30 (0.10)	10 (0.06)	20 (0.33)	230 (0.07)

Source: NFIRS, USFA.

Clothing Fire Deaths:

Clothing fire¹² deaths is a hazard that disproportionately affects older adults. Although they were 15.6 percent of the population in 2016–2018, they were an estimated 71.9 percent of the clothing fire deaths. The estimated clothing fire death rate for adults 65 and over is 14 times higher than the rate for people under 65.

It is important to note that while some consumer product involvement in fires is as an ignition source (e.g., cigarette or cooking stove), other products can be the item first ignited in a fire (e.g., mattress or clothing). A fire can count toward the estimates of both its ignition source as well as its item first ignited. For example, a fire can count as a cooking fire and a clothing fire.

Table 9 presents estimates of clothing fire deaths (and rates per 100,000 people) by year and age.

¹² NFIRS clothing fire death estimates are based on the NFIRS Item First Ignited code, '35 – Wearing apparel – on a person.'

(Fire Deaths)

**Table 9: Clothing (Worn) Fire Death Estimates and Fire Death Rates per 100,000
Population**

Year	65 Years and Older	65 – 74 Years	75 – 84 Years	85 Years and Older	All Ages
2016	60 (0.12)	20 (0.08)	30 (0.19)	10 (0.17)	90 (0.01)
2017	60 (0.12)	40 (0.13)	20 (0.12)	10 (0.10)	90 (0.01)
2018	70 (0.14)	30 (0.10)	30 (0.22)	10 (0.15)	90 (0.01)
2016 – 2018 Avg.	70 (0.13)	30 (0.10)	30 (0.18)	10 (0.14)	90 (0.01)

Source: NFIRS, USFA.

III. Reported Drowning Deaths

From 2016 to 2018, 915 (an annual average of 305) fatal drownings involving victims 65 years of age and older were reported to CPSC staff. Table 10 shows the total number of fatal drownings among older adults by year and age category. More than 48 percent of the fatal drownings involved victims between 65 and 74 years old. Conversely, victims between 75 and 84 years old made up less than 33 percent of all fatal drownings to adults over 64. Drowning victims who were 85 years of age and older comprised 19 percent of all fatal drownings to older adults.

- Although most fatal drownings take place on the same day of the submersion incident, the interval of time between the date of the incident and the date of death can vary greatly; in some cases, the lapse may be years.
- Overall, in 92 percent of all older-adult fatal drownings from 2016 to 2018, the date of death was either the same as the date of the incident, or 1 day later.
- For folder-adult fatal drownings where the date of death occurred two or more days later, most frequently the victims were between 65 and 74 years old (55 percent), followed by victims between 75 and 84 years old (33 percent), and victims who were 85 years of age and older (12 percent).

(Drowning Deaths)

**Table 10: Distribution of Reported Drowning Deaths Among Older Adults
by Year and Age Group, 2016 – 2018**

Year	Reported Fatality Frequencies			
	65 to 74 Years	75 to 84 Years	85 Years and Older	65 Years and Older
Average ¹³	147	100	58	305
2018	146	95	52	293
2017	142	103	59	304
2016	153	101	64	318
2016-2018 Totals	441	299	175	915

Source: CPSRMS, CPSC.

Table 11 shows the percentages of fatal drownings by gender and age category. In every age category, there were fewer reported male drowning victims than reported female drowning victims. Overall, 44 percent of older-adult drowning victims were male, and 56 percent were female. Similarly, for the 65 to 74 years age category, 45 percent of older-adult drowning victims were male, and 55 percent were female. The largest discrepancy by gender occurred in the 75 to 84 years age category – only 40 percent of older-adult drowning victims were male, while 60 percent of them were female.

**Table 11: Distribution of Reported Drowning Deaths Among Older Adults
by Gender and Age Group, 2016 – 2018**

Gender	Percentage of Reported Fatalities			
	65 to 74 Years	75 to 84 Years	85 Years and Older	65 Years and Older
Male	45%	40%	47%	44%
Female	55%	60%	53%	56%
Total	100%	100%	100%	100%

Source: CPSRMS, CPSC.

Table 12 shows the top three products involved in fatal older-adult drownings, while Figure 2 shows the same information as a percentage distribution. Most fatal drownings took place in swimming pools, followed by bathtubs, and then by spas. This was the case for all age categories.

¹³ Row averages may not add to total, due to rounding. Fatal drownings per year are determined by date of death.

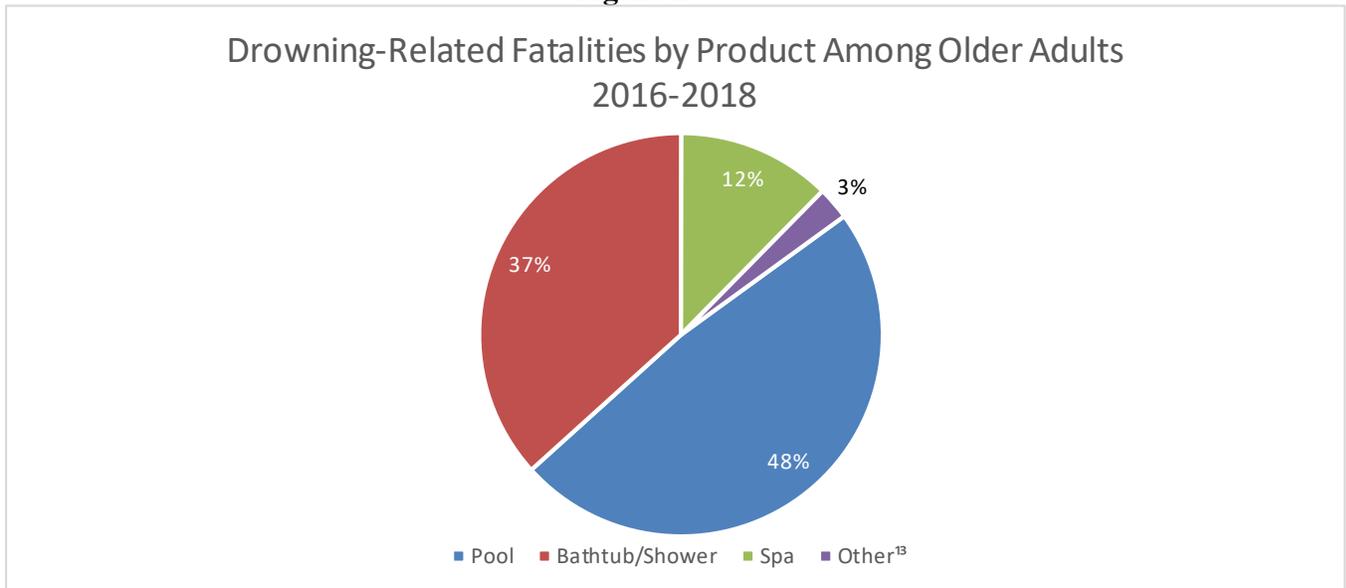
(Drowning Deaths)

**Table 12: Distribution of Drowning Deaths Among Older Adults
by Products Involved and Age Group, 2016 – 2018**

Product	Reported Fatality Frequencies			
	65 to 74 Years	75 to 84 Years	85 Years and Older	65 Years and Older
Pool	196	156	90	442
Bathtubs	166	103	67	336
Spa	63	32	18	113
Other¹⁴	16	8	0	24
Total	441	299	175	915

Source: CPRMS, CPSC.

Figure 2



Source: CPRMS, CPSC.

¹⁴ Includes buckets, fountains, tanks, and unknown/unspecified products.

IV. Reported Other Transportation Deaths

Bicycle Deaths

From 2016 to 2018, 357 (an annual average of 119) bicycle deaths involving victims 65 years of age and older were reported to CPSC staff. Table 13 presents the total number of bicycle deaths among adults 65 and over by year and age category. While 64 percent of the bicycle deaths involved victims between 65 and 74 years old, less than 30 percent of the bicycle deaths involved victims between 75 and 84 years old. Older adult victims who were 85 years of age and older comprised the remaining 6 percent of all bicycle deaths for that age group.

**Table 13: Distribution of Bicycle Deaths Among Older Adults
by Year and Age Group, 2016 – 2018**

Year	Reported Fatality Frequencies			
	65 to 74 Years	75 to 84 Years	85 Years and Older	65 Years and Older
Average ¹⁵	77	35	8	119
2018	65	37	5	107
2017	87	40	6	133
2016	78	27	12	117
2016-2018 Totals	230	104	23	357

Source: CPSRMS, CPSC

Table 14 shows the percentages of bicycle deaths among older by gender and age category. Female victims vastly outnumbered male victims in every age category. Overall, male victims comprised 11 percent of bicycle deaths among adults 65 and over, and female victims comprised 89 percent of bicycle deaths in that age group. For the 65 to 74 years age category, 9 percent of the victims were male, and 91 percent of the victims were female. In the 75 to 84 years age category, 14 percent of the victims were male, while 86 percent of the victims were female. For the 85 years and older age category, 13 percent of the victims were male, and 87 percent of the victims were female.

Table 14: Distribution of Older-Adult Bicycle Deaths by Gender and Age Group, 2016 – 2018

Gender	Percentage of Reported Deaths			
	65 to 74 Years	75 to 84 Years	85 Years and Older	65 Years and Older
Male	9%	14%	13%	11%
Female	91%	86%	87%	89%
Total	100%	100%	100%	100%

Source: CPSRMS, CPSC.

¹⁵ Row averages may not add to total, due to rounding.

(Transportation Deaths – Bicycles)

Table 15 provides a breakdown for bicycle deaths by hazard scenario among adults over 64. The greatest discrepancy between deaths in traffic accidents and deaths in isolated incidents took place among the 65 to 74 years age group, where 144 bicycle deaths occurred in traffic accidents, and 86 bicycle deaths occurred in isolated incidents. Conversely, the number of deaths in traffic accidents compared more closely to the number of deaths in isolated incidents for the 75 to 84 years age category and the 85 years and older age category. In total, for all victims 65 years and older, 213 bicycle deaths occurred in traffic accidents (60 percent), and 144 bicycle deaths occurred in isolated incidents (40 percent).

Table 15: Distribution of Bicycle Deaths Among Adults 65 and Over by Hazard Scenario and Age Group, 2016 – 2018

Hazard Scenario	Reported Fatality Frequencies			
	65 to 74 Years	75 to 84 Years	85 Years and Older	65 Years and Older
Traffic Accident	144	56	13	213
Isolated Incident	86	48	10	144
Total	230	104	23	357

Source: CPSRMS, CPSC.

Table 16 provides a breakdown for bicycle deaths among older adults by hazard types, such as collision with another vehicle, falls from the bicycle due to loss of balance, or unknown factors. Overall, for all victims 65 years and older, most (205 out of 357) of the deaths resulted from a collision; a fall from the bicycle, likely due to loss of balance brought on by unspecified factors was next (142 out of 357 deaths). Unknown hazards resulted in 10 out of the 357 deaths.

Table 16: Distribution of Bicycle Deaths Among Adults 65 and Over by Hazard Types and Age Group, 2016 – 2018

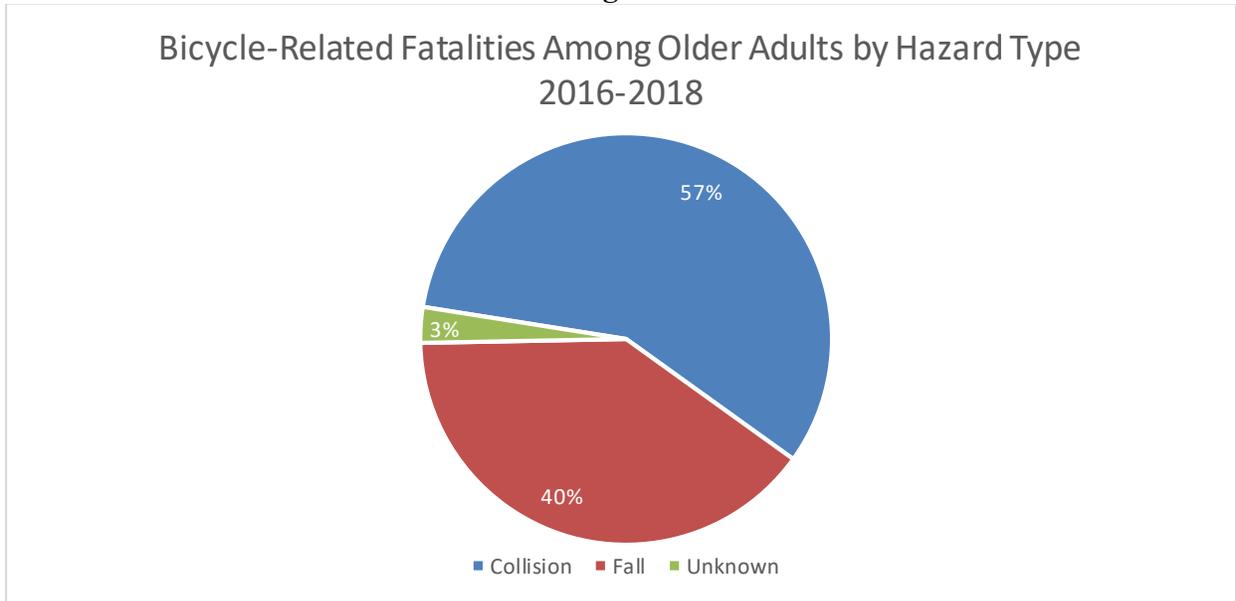
Hazard Type	Reported Fatality Frequencies			
	65 to 74 Years	75 to 84 Years	85 Years and Older	65 Years and Older
Collision	134	60	11	205
Fall	90	41	11	142
Unknown	6	3	1	10
Total	230	104	23	357

Source: CPSRMS, CPSC.

Figure 3 is a visual representation of table 16 above, showing the percentage breakdown of bicycle deaths among older adults by hazard type. Collisions made up 57 percent of bicycle deaths among older adults, and falls represented 40 percent of bicycle deaths among them. The remaining 3 percent of bicycle deaths among older adults consisted of unknown hazards.

(Transportation Deaths – Bicycles)

Figure 3



Source: CPSRMS, CPSC.

Off-Highway Vehicle (OHV) Deaths

From 2016 to 2018, 353 (an annual average of 118) reported deaths of victims 65 years of age or older involved in OHV-related incidents have been received by CPSC staff. The included OHVs correlate with one of three vehicle classifications: “All-terrain Vehicles” (ATVs), “Recreational Off-Highway Vehicles” (ROVs), and “Utility Terrain Vehicles” (UTVs). The end of this section describes the three vehicle classifications in additional detail.

Table 17 shows the total number of reported deaths by year and age category. About 52 percent of these decedents were age 65 to 74 years at the time of the OHV-related incident. About 35 percent were 75 to 84 years and 12 percent age 85 and older.

(Transportation Deaths – OHVs)

**Table 17: Distribution of OHV-Related Deaths Among Older Adults
by Year and Age Group, 2016 – 2018**

Year ¹⁶	Reported Fatality Frequencies			
	65 to 74 Years	75 to 84 Years	85 Years and Older	65 Years and Older
Average ¹⁷	62	41	15	118
2018	60	46	20	126
2017	62	41	10	113
2016	64	36	14	114
2016-2018 Totals	186	123	44	353

Source: CPSRMS, CPSC.

- Although many OHV related deaths occur on the same day of the OHV-related incident, the interval of time between the date of the incident and the date of death can vary greatly; in a small proportion of cases the lapse may be years.
- These statistics *exclude* decedents who may have survived long enough to reach an age of 65 or older before a delayed death, *if* they were initially under 65 years old at the time of the preceding OHV-related incident.
- These deaths are typically related to rollover, collision, or some combination of related factors.

Table 18 gives the percentages of OHV-fatalities by gender and age category. Males represent a substantial majority in every age category. Overall, 92 percent of the reported OHV older decedents were male, with only 8 percent female. The predominance of males among reported decedents appears further increased with age. The youngest age group (65-74 years) is already predominantly male (89% male, 11% female among reported incidents). The reported male percentage is even greater (95%) among victims from the 75-84 age group. The eldest victims ages 85 and over were reported 98 percent male and only 2 percent female, reflecting the largest gender discrepancy.

**Table 18: Distribution of OHV-Related Deaths Among Older Adults
by Gender and Age Group, 2016 – 2018**

Gender	Percentage of Reported Fatalities			
	65 to 74 Years	75 to 84 Years	85 Years and Older	65 Years and Older
Male	89%	95%	98%	92%
Female	11%	5%	2%	8%
Total	100%	100%	100%	100%

Source: CPSRMS, CPSC

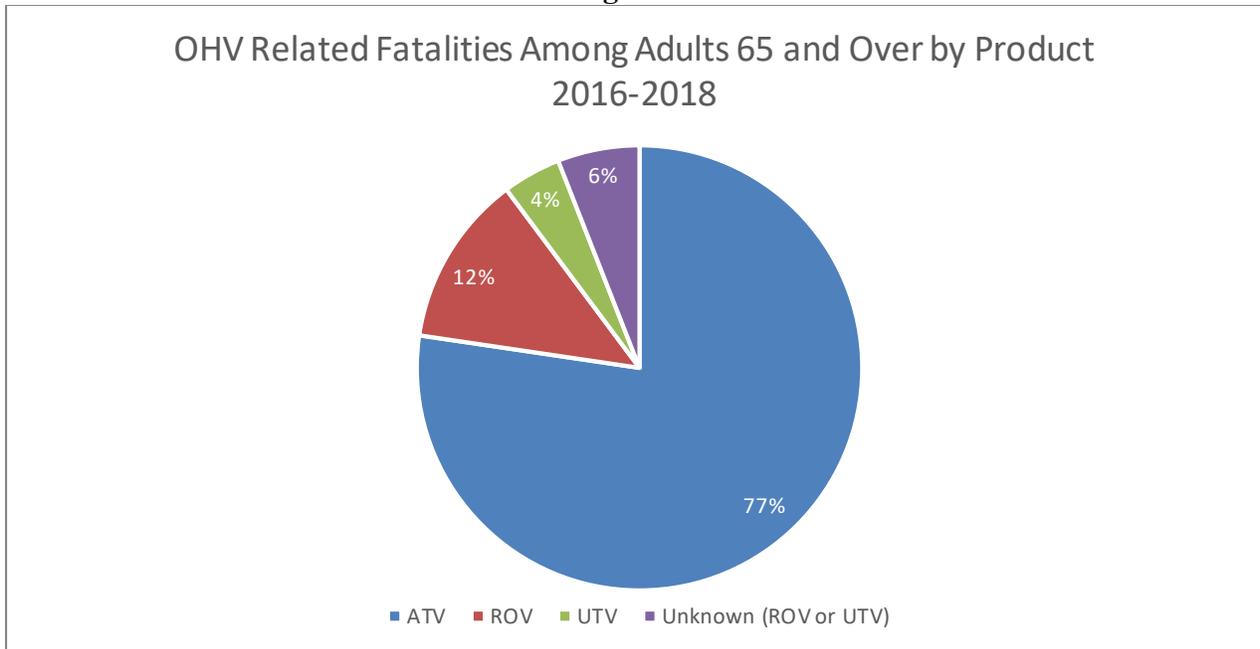
¹⁶ Although reporting is considered complete for this period, the number of reported fatalities may still change in the future.

¹⁷ Row averages may not add to total, due to rounding. Fatalities per year are determined by incident date (which precede the ultimate date of death). Victim age classification is based on age at the time of incident (which may be younger than age on the date of death).

(Transportation Deaths – OHVs)

Figure 4 shows the percentage breakdown of reported deaths among older adults by the type of OHV product involved. The product classifications (vehicles types) associated with these deaths included 77 percent ATVs, 12 percent ROVs, and 4 percent UTVs. Additionally, 6 percent are of unknown classification, but from the limited information available consistent with either an ROV or UTV.

Figure 4



Source: CPSRMS, CPSC.

Classifications are based on information reported to CPSC including follow-up investigations to the extent possible. ROVs and UTVs may be described by many sources as “ATVs” and for that reason the actual percentage of ROVs and UTVs may be higher than the reported distribution shown in the figure above.

For this report, CPSC staff defines an “ATV” as an off-road, motorized vehicle having three, four, or more low-pressure tires, a straddle seat for the operator, and handlebars for steering control.

ROVs and UTVs have many features in common, such as four or more tires designed for off-road vehicles. However, ROVs and UTVs have many features that distinguish them from ATVs, such as non-straddle or “side-by-side” seating, automotive-type controls for steering, throttle, and braking (e.g., steering wheel and pedals).¹⁸

¹⁸ Definition from ANSI/ROHVA 1 *American National Standard for Recreational Off-Highway Vehicles*.

(Transportation Deaths – OHVs)

For this report, CPSC staff defines “ROVs” as motorized vehicles designed for off-highway use with the following features: four or more pneumatic tires designed for off-highway use; bench or bucket seats for two or more occupants; automotive-type controls for steering, throttle, and braking; and a maximum

vehicle speed greater than 30 miles per hour (mph). ROVs are also equipped with rollover protective structures (ROPS), seat belts, and other restraints (such as doors, nets, and shoulder barriers) for the protection of occupants. (ROV NPR, 79 *Fed. Reg.* 68,964 November 19, 2014).

In this report, CPSC staff defines “UTVs” as motorized vehicles designed for off-highway use with the following features: four or more pneumatic tires designed for off-highway use; bench or bucket seats for two or more occupants; automotive-type controls for steering, throttle, and braking; and a maximum speed of 25 mph or less. UTVs are generally equipped with larger cargo beds and may be equipped with ROPS, seat belts, and other restraints.

In the late 1980s, the major ATV distributors agreed to stop distributing three-wheel ATVs (U.S. CPSC, 2006). A very small proportion of ATVs, ROVs, and UTVs are sold with more than four wheels (5 or 6) and have never held more than a very small market share. As such, nearly all ATVs, ROVs, and UTVs in use today are four-wheeled vehicles.

V. Poisoning Deaths

Carbon Monoxide (CO) Death Estimates

From 2016 to 2018, CPSC staff estimated a total of 134 fatal CO poisonings nationwide involving victims 65 years of age and older. Table 19 below compares the estimated CO fatalities for individuals 65 years and older and those for the entire resident population. Although 2016 estimates match well with U.S. Census population estimates for individuals 65 years and older, the percentage of death estimates for both 2017 and 2018 appear to be substantially greater than the resident population.

Table 19: Comparison of Proportions of CO Poisoning Deaths Estimates with U.S. Population 2016-2018

Year	Fatality Estimates 65 Years and Older	CO Fatalities – All Ages	Percentage of CO Fatalities 65 Years and Older	Percentage of U.S. Population 65 Years and Older
Average	45	192	23%	16%
2018	54	210	26%	16%
2017	51	188	27%	16%
2016	29	178	16%	15%
Total	134	576	23%	16%

Source: CPSC and NCHS

Table 20 below presents the CO fatalities estimates by age groups among adults 65 and older. Although there is some indication that older adults are more likely to die from CO poisoning (see table above), there does not appear to be much indication that the older group among adults 65 and over are any more likely to die from CO poisoning than the younger group.

Table 20: Distribution of CO Poisoning Death Estimates Among Older Adults by Year and Age Group 2016 – 2018

Year	Fatality Estimates			
	65 to 74 Years	75 to 84 Years	85 Years and Older	65 Years and Older
Average	26	11	8	45
2018	37	12	5	54
2017	28	15	9	51
2016	13	6	10	29
Totals 2016-2018	78	33	24	134
CO Fatalities Percentage	58%	25%	18%	100%
U.S. Population Percentage	58%	29%	13%	100%

Source: CPSC and NCHS.

(Poisoning Deaths – CO)

Table 21 below presents the CO fatality estimates among adults 65 and over broken out by gender. Although the gender percentages are nearly equal in the U.S., it can be seen from the estimates that twice as many older adult males are dying from CO poisoning than females. But it also should be noted that it is estimated that four times as many males under the age of 65 died from CO poisoning than did females.

Table 21: Distribution of CO Poisoning Death Estimates Among Older Adults by Gender and Age Group, 2016 – 2018

Gender	65 Years and Older	65 Years and Older Percent	Under 65 Years Percent	U.S. Population
Male	90	67%	80%	49%
Female	44	33%	20%	51%
Totals 2016-2018	134	100%	100%	100%

Source: CPSC and NCHS.

Table 22 below presents the estimates based on race/ethnicity as defined by the U.S. Census Bureau. This combination of race/ethnicity values follows the method used by the U.S. Census Bureau exactly and differs from the race *only* distributions presented earlier for injury data. Although the estimated CO poisoning fatalities for those under 65 years old is not too dissimilar to the national U.S. population figures, there does appear to be some variations in the older adult segment. Most notably, disproportionately more older adults categorized as White are dying of CO poisoning. Conversely, disproportionately fewer Hispanic and Asian/Pacific adults over 64 are suffering CO poisoning deaths.

Table 22: Distribution of CO Poisoning Death Estimates Among Adults 65 and Over by Race/Ethnicity and Age Group, 2016 – 2018

Race / Ethnicity	65 Years and Older	65 Years and Older Percent	Under 65 Years Percent	U.S. Population
White	95	71%	67%	61%
Black or African American	22	16%	12%	12%
Hispanic (All races) ¹	3	2%	13%	18%
Asian / Pacific ²	2	1%	4%	6%
American Indian ³	3	2%	2%	1%
Unknown / Other / Mixed ³	7	5%	3%	2%
Totals 2016-2018	134	100%	100%	100%

Source: CPSC and NCHS.

¹ Hispanic category includes all races. Other Races/Ethnicities do include those of Hispanic origins.

² Includes Asian, Pacific Islander, and Native Hawaiian.

³ Includes American Indian, Native American, and Native Alaskan.

⁴ Includes non-Hispanic Unknown races, Other races, and Multiple races.

(Poisoning Deaths – CO)

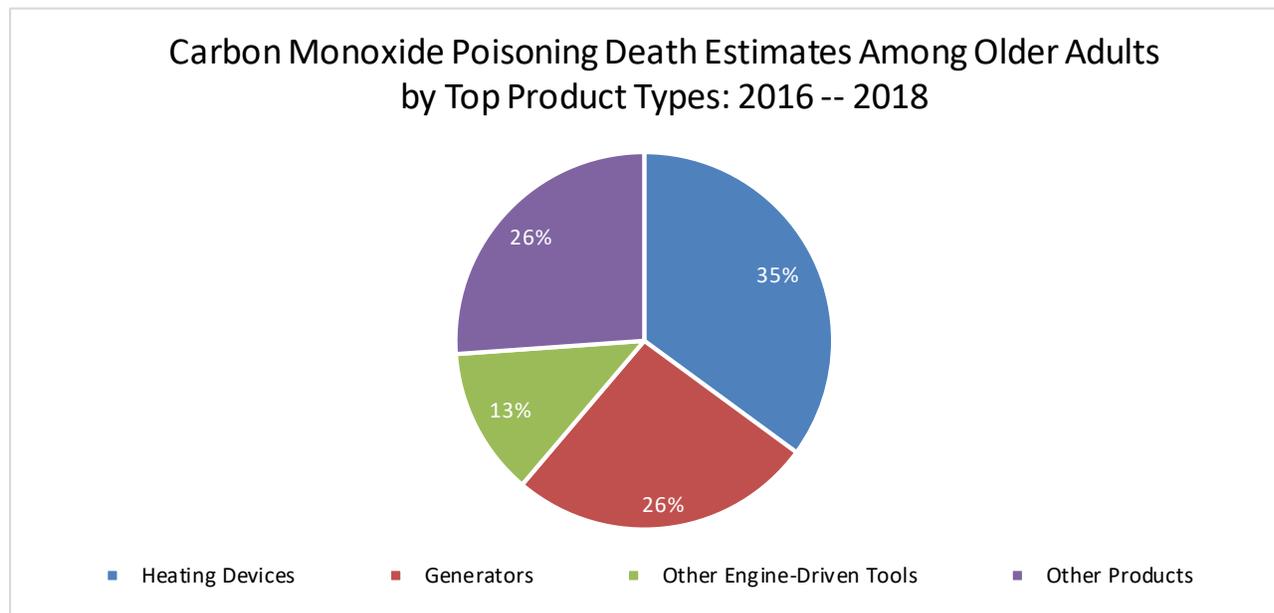
Table 23/Figure 5 below shows a breakout of the three products/product categories associated with the highest estimated percentages of fatal CO poisoning to older adults as well as the matching estimates of CO poisoning affecting the under 65 years group. It appears that older adults are significantly more likely to die due to CO poisoning associated with heating devices (furnaces, space heaters, portable LP heaters, etc.) than adults under 65. Also, more than double the rate for non-generator engine driven tools (mostly lawnmowers, but also power washers, snow blowers, etc.) occurred to adults 65 and over than did to adults under 65. Conversely, though generators represent the second highest CO poisoning category for older adults, the rate of fatalities for that age group was nearly half of that for those under age 65. For the other products not specifically highlighted, the rates between adults 65 and over and those under 65 years are roughly equal.

Table 23: Distribution of CO Poisoning Death Estimates Among Older Adults by Product Type and Age Group, 2016-2018

Product	65 Years and Older	65 Years and Older Percent	Under 65 Years Percent
Heating Devices	47	35%	24%
Generators	35	26%	48%
Other Engine-Driven Tools	17	13%	5%
Other Products	35	26%	23%
Totals 2016-2018	134	100%	100%

Source: CPSC and NCHS.

Figure 5



Source: CPSC and NCHS.

Reported Poisoning Deaths – Household Cleaners/Laundry Pods

Based on CPSC databases, staff identified 27 reported deaths related to poisonings from household cleaners and laundry pods that occurred between 2016 and 2018 among older adults. The incident characteristics were as follows:

- Most (18 of 27) victims were male;
- Seven decedents were between 65-74 years, six were between 75-84 years, and 14 were 85 years or older.
- Twenty of the 27 incidents occurred at home;
- Fifteen of the deaths involved household cleaners, 4 deaths involved laundry pods, and the remaining 8 deaths involved a variety of other products (such as kerosene, antifreeze, and pool chlorine). No drug overdose fatal incidents were reported.

VI. Other Causes of Reported Deaths

Reported Adult Portable Bed Rails Deaths

From 2016 to 2018, a total of 48 fatal adult portable bed rail-related incidents involving victims 65 years of age and older were reported to CPSC staff. The characteristics of these fatalities are as follows:

- 54 percent of the decedents were 85 years of age and older; 33 percent were between 75 and 84 years, and 13 percent were between 65 and 74 years.
- 12 deaths were reported in 2016, 25 in 2017, and 11 in 2018.
- 23 percent of decedents were males and 77 percent females; as age increased, more and more decedents were female.
- *Rail entrapment*: 44 incidents were related to rail entrapment. Decedents were caught, stuck, wedged, or trapped between mattress/bed and the bed rail, between bed rail bars, or between a dresser and bed rail, around the neck and/or head.
- *Falls*: 3 incidents, related to falls, included incidents where the victim fell and hit the bed rail or hit/fell near bed rail, and fell after climbing over the bed rail.
- *Miscellaneous*: 1 incident resulted from the victim hanging on the bed rail after garment got caught.

Appendix

Table A

CDC WISQARS Data
Year Range: 2016 – 2019 (2020 unavailable)
Unintentional (Includes undetermined) All Causes Injuries
Disposition: All Dispositions
Sex: Both Sexes
Age Range: 65 to 69 - 85+

19,224,517 Estimated Number of Injuries	206,383,077 Population	9,314.97 Crude Rate	9,500.75 Age-Adjusted Rate	262,048 Number of Cases (Samples)
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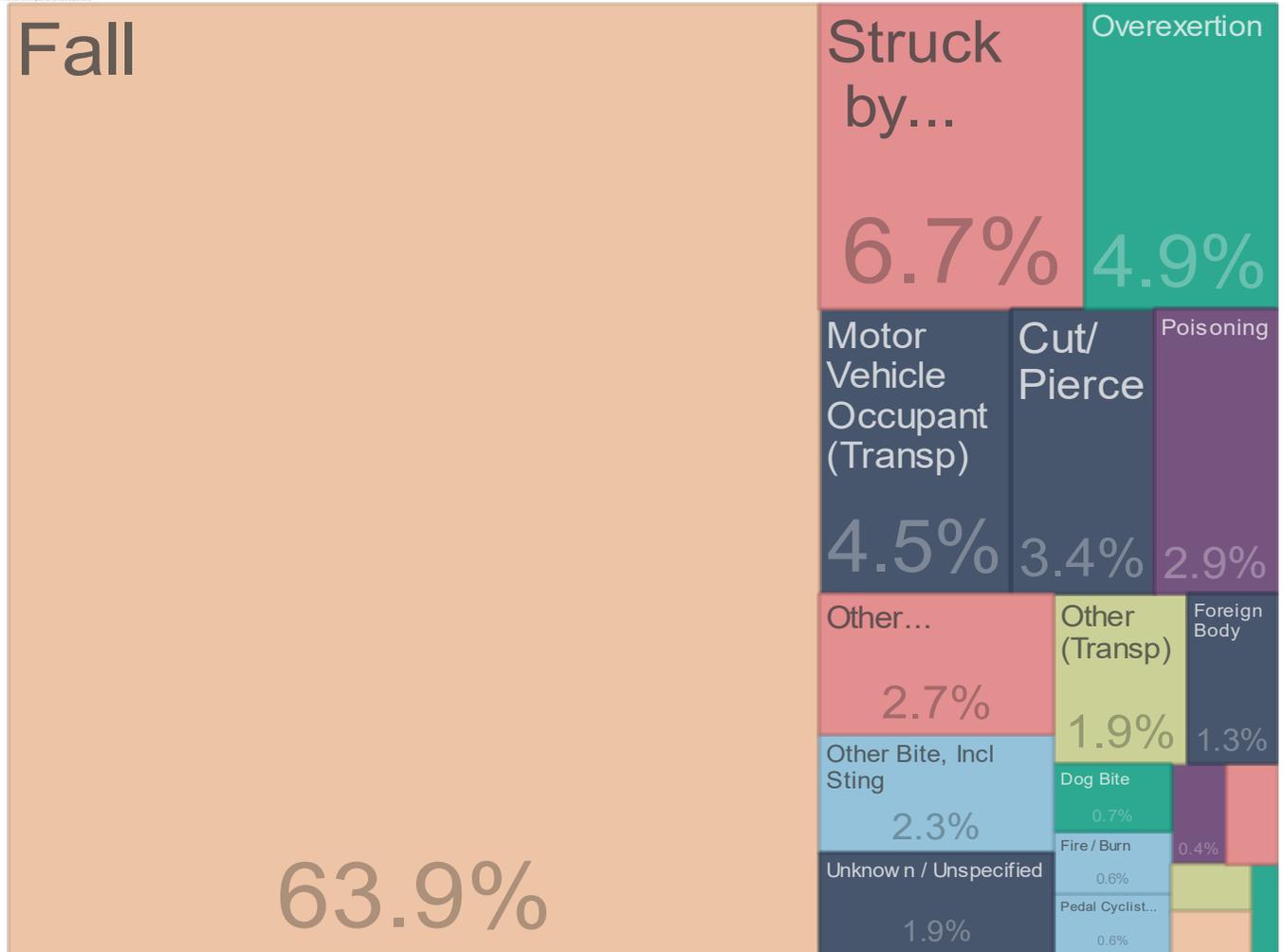
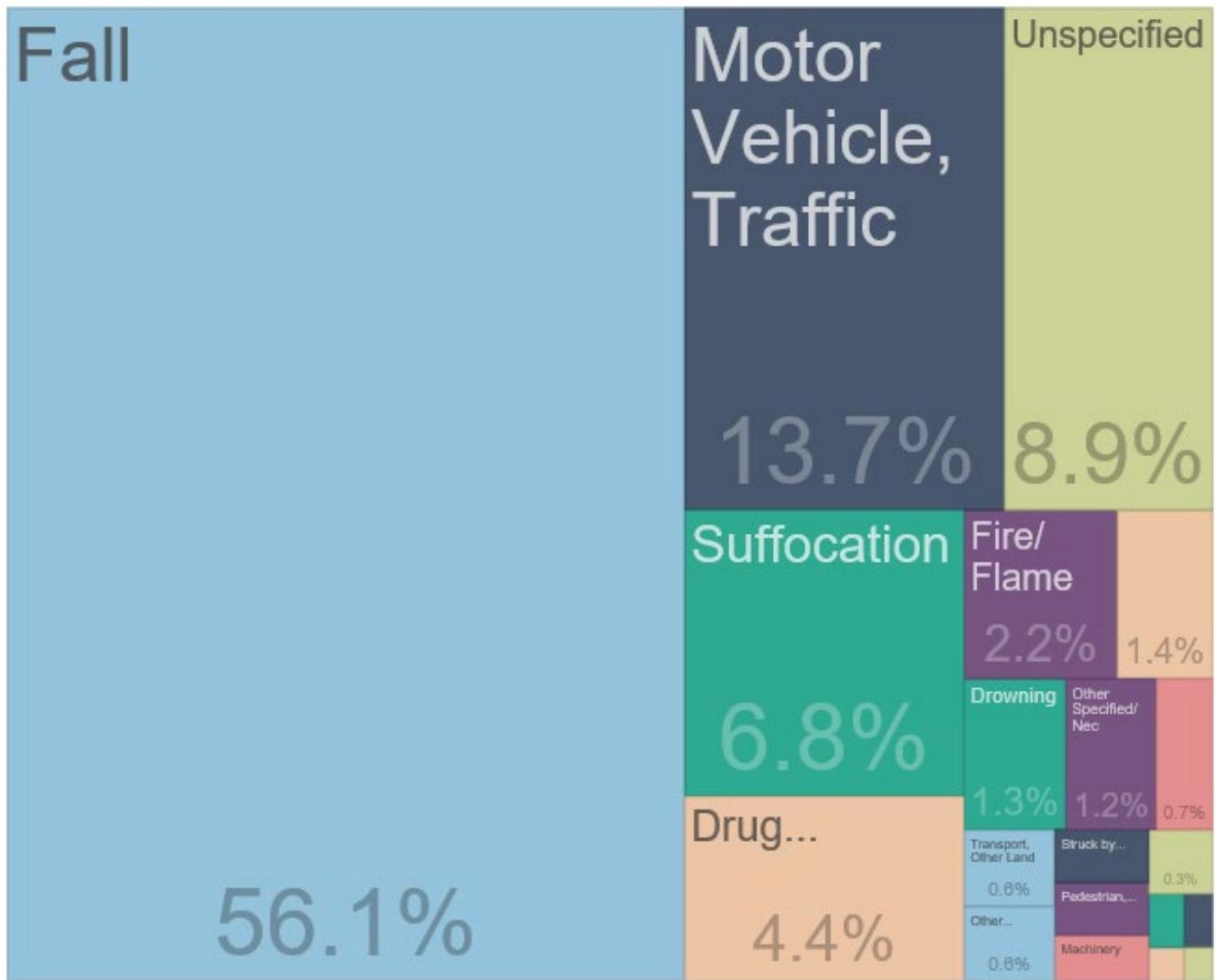


Table B

CDC WISQARS Data
 Year Range: 2016 - 2018
 Unintentional (Includes undetermined) All Causes Fatal Injuries
 Disposition: All Dispositions
 Sex: Both Sexes
 Age Range: 65 to 69 - 85+

166,305 Number of Deaths	152,324,814 Population	109.18 Crude Rate	111.67 Age-Adjusted Rate
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See <https://paa2010.princeton.edu/papers/101269> for a discussion on older-adult **suffocation** deaths.