



National Floor Safety Institute
1845 Precinct Line Road, Suite 212
Hurst, TX 76054
Phone: (817) 749-1700
info@nfsi.org

April 11, 2023

Ms. Alberta E. Mills
Secretary of the Commission
U.S. Consumer Product Safety Commission
4330 East-West Highway
Bethesda, MD 20814

Petition to Mandate the Testing and Labeling of the Slip Resistance (Traction) of Commercial and Residential Grade Floor Coverings, Floor Coatings, Treatments, Residential and Commercial Floor Cleaning Agents, and Consumer Footwear.

Scope

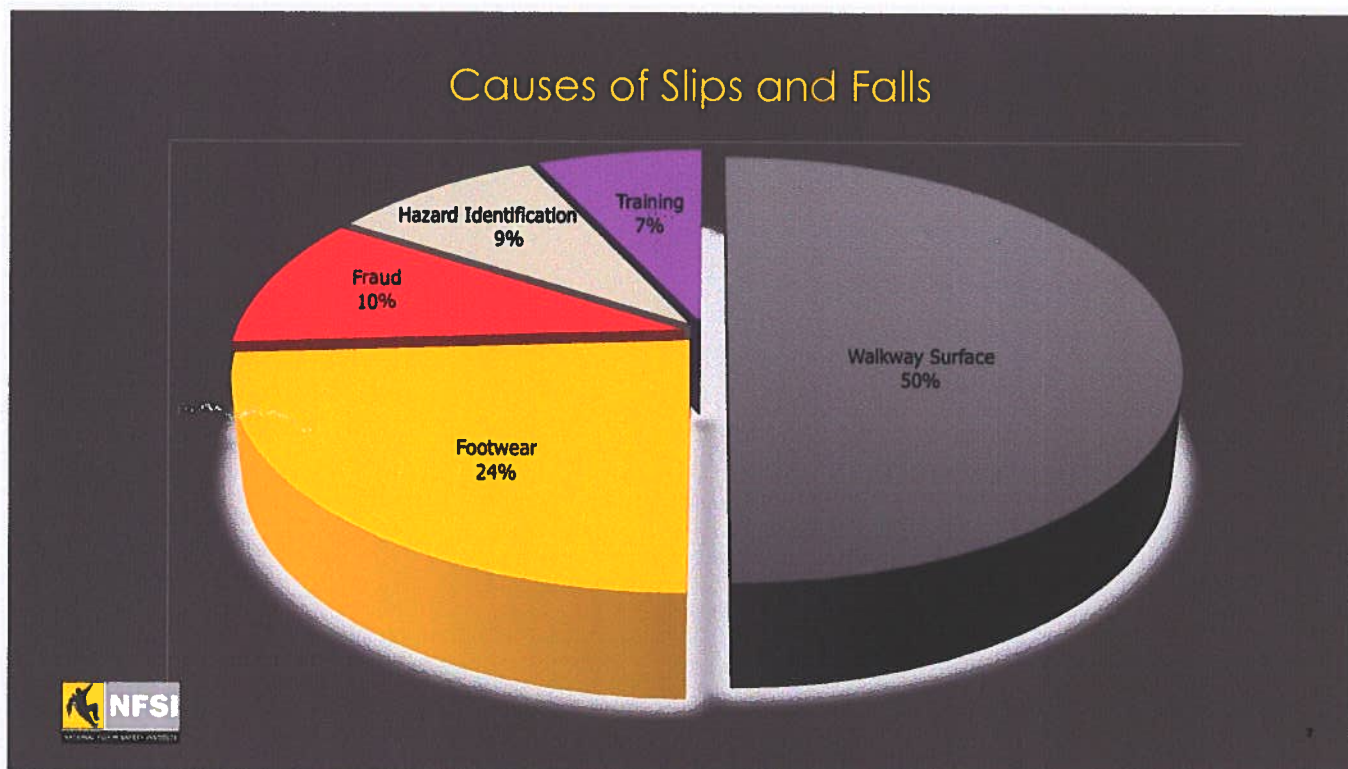
This petition requests that the U.S. Consumer Product Safety Commission mandate that manufacturers of:

1. Commercial and residential grade floor coverings and coatings uniformly test their products' slip-resistance (Traction level) per the NFSI B101.3 (most current version) Test Method for Measuring the Wet Dynamic Coefficient of Friction of Hard-Surface Walkways and label them per the NFSI B101.5 (most current version) Standard Guide for Uniform Labeling Method for Identifying the Wet Dynamic Coefficient of Friction (Traction) of Floor Coverings, Floor Coatings, Treatments, Commercial and Residential Floor Chemical Agents, and Consumer Footwear.
2. Commercial and residential grade chemical floor cleaners and treatments uniformly test their products' slip-resistance (Traction level) per the NFSI B101.2 (most current version) Test Method for Determining the Impact on Wet Coefficients of Friction of Various Chemical or Physical Walkway Surface Cleaners and Treatments on Common Hard-Surface Flooring Materials and label their products per the NFSI B101.5 (most current version) Standard Guide for Uniform Labeling Method for Identifying the Wet Dynamic Coefficient of Friction (Traction) of Floor Coverings, Floor Coatings, Treatments, Commercial and Residential Floor Chemical Agents, and Consumer Footwear.
3. Footwear uniformly test their products' outsoles slip-resistance (Traction level) per the NFSI B101.7 (most current version) Standard Test Method for Lab Measurement of Footwear Heel Outsole Material Coefficient of Friction on Liquid-Contaminated Floor Surfaces and label them per the NFSI B101.5 (most current version) Standard Guide for Uniform Labeling Method for Identifying the Wet Dynamic Coefficient of Friction (Traction) of Floor Coverings, Floor Coatings, Treatments, Commercial and Residential Floor Chemical Agents, and Consumer Footwear.

Requirements for Petitions:

Indicate the product (or products) regulated under the Consumer Product Safety Act or other statute the Commission administers for which a rule is sought. We request that the manufacturers of hard surface flooring materials and floor coatings, commercial and residential chemical floor cleaners and treatments, and all types of footwear be mandated to label their products to provide point-of-sale information about the product's level of slip-resistance (Traction level) in accordance with the consumer labeling set out in the above-named nationally recognized industry consensus standards (attached).

NFSI research finds that 50% of all same-level slips and falls, occur as the result of a hazardous (slippery) walkway which contributes to half of all same level falls, which take place in the home. It is also estimated that approximately 24% of accidental slips and falls are the result of improper or unsafe footwear.



Floor Coverings and Coatings, Floor Cleaning Agents and Treatments, Consumer Footwear

1. Floor Coverings and Coatings:

Currently manufacturers of floor coverings are not compelled to provide consumers any information as to the slip resistance of their products. In fact, with the exception of the ceramic tile industry, no other floor covering manufacturers test their products slip resistance (Coefficient of Friction) or even have adopted a test method for testing the slip resistance of their products. This is not by accident but by design.

Floorcovering manufacturers intentionally do not want consumers to have such information because they are consciously aware that many of their products possess a low level of slip resistance which would negatively impact the sale of their products.

And although the ceramic tile industry does have a test method, ANSI A326.3, which outlines the method for testing the wet Dynamic Coefficient of Friction (DCOF) of ceramic tile, the A326.3 standard specifically states via its "Notice of Disclaimer" that:

"THIS INFORMATION DOES NOT PURPORT TO ADDRESS SAFETY ISSUES OR APPLICABLE REGULATORY REQUIREMENTS ASSOCIATED WITH ITS USE. IT IS THE RESPONSIBILITY OF THE USER OF THIS INFORMATION TO REVIEW ANY APPLICABLE CODES AND OTHER REGULATIONS AND ANY SITE SPECIFIC CONDITIONS IN CONNECTION WITH THE USE OF THIS INFORMATION. PUBLISHER EXPRESSLY MAKES NO REPRESENTATIONS OR WARRANTIES REGARDING USE OF THIS INFORMATION AND COMPLIANCE WITH ANY APPLICABLE STATUTE, RULE OR REGULATION."

Given that the A326.3 standard is not a safety standard but rather a quality control test method the only nationally recognized consensus testing standard for measuring the wet DCOF of hard surface flooring is the NFSI B101.3 standard. Furthermore, none of the manufacturers of floor coverings label the level slip resistance (Traction) of their products as to provide the consumer with relevant information about the products level of safety.

In the absence of slip resistance data via a uniform product label the consumer is on their own when it comes to selecting an appropriately safe floor for their individual use and often times assume that all floors are safe. Different types of floor coverings have wide-ranging differences in slip resistance, which the materials have widely differing COF levels, many of which may be inappropriate for specific use. However, the consumer, specifically the elderly, only finds out that they made the wrong choice after they have fallen and injured themselves. The failure by the floor covering industry to consciously not inform the consumer as to their products safety (ie: slip resistance) is one of the leading factors as to why so many elderly Americans slip and fall.

2. Floor Cleaning Agents and Treatments:

Manufacturers of chemical floor cleaning agents are not required to test or warn as to the effects their products have on the slip resistance of the floors they are applied to. NFSI research has shown that when used per the manufacturer's instructions, many commercial and residential floor cleaners will leave a slippery film which decreases the COF of the underlying floor and in-turn increases the risk of a slip and fall event. Without a uniform testing and labeling procedure consumers are unaware of the safety risks associated with the cleaning agents they use to clean their floors which directly contributes to slip and fall events. Currently the only nationally recognized consensus test method of for measuring the slip resistance (Traction) performance of floor cleaners is the NFSI B101.2 standard.

1. Footwear:

Manufacturers of consumer footwear are not compelled to test or label the slip resistance level of their products outsoles. Consumers are uninformed as to the inherent slip risk associated with shoes and boots worn both in and outside of the workplace. Although some manufacturers label their products as "Slip Resistant", the term is undefined in the footwear industry and is not based on any scientific testing method or criteria. NFSI research has revealed that many types of footwear, including those labeled as Slip Resistant, often possess a low level of slip resistance (Traction) which increases the risk of a slip and fall

event. Without a uniform testing and labeling procedure consumers are unaware of the safety risks associated with the shoes they purchase and often are the victim of an otherwise preventable injury.

Currently the only nationally recognized consensus test method of for measuring the slip resistance (Traction) performance of footwear outsoles is the NFSI B101.7 standard

Set forth facts, which establish the claim that the issuance of the rule is necessary (for example, such facts may include personal experience: medical, engineering or injury data, or a research study). The primary focus of our petition is aimed at protecting those most vulnerable from the risk of a slip and fall event, mainly our countries elderly population.

Historical Background:

On October 4, 2015 the NFSI submitted a similar petition to the CPSC calling for the mandatory testing and labeling of floorcoverings which identified the following statistical data. According to the U.S. Census Bureau approximately ten thousand (10,000) baby-boomers are retiring each day and according to the Harvard University Health Letter ¹ the baby-boomer generation will have an average life expectancy of 81.6 years of which many may live to age 90. According to the National Safety Council's Injury Facts (2014 edition) of the 38,300,000 individuals who sought medical attention due to an unintentional injury, 1,930,000 took place in the home. Sixty-three thousand (63,000) Americans died in their home as a result of an unintentional injury. Of the estimated \$793.8 billion cost for unintentional injuries (2012) \$220.3 billion was spent on injuries which occurred in the home.

In 2005, 20,200 Americans lost their life as a result of an accidental fall that number has risen to 27,800 in 2014 a 38% increase of those who are most impacted are the nation's elderly age 65+. In 2005, elderly 16,400 Americans lost their life as a result of an accidental fall that number has risen to 23,100 in 2014. Since 2005, accidental falls have increased by an average of 4% a year.

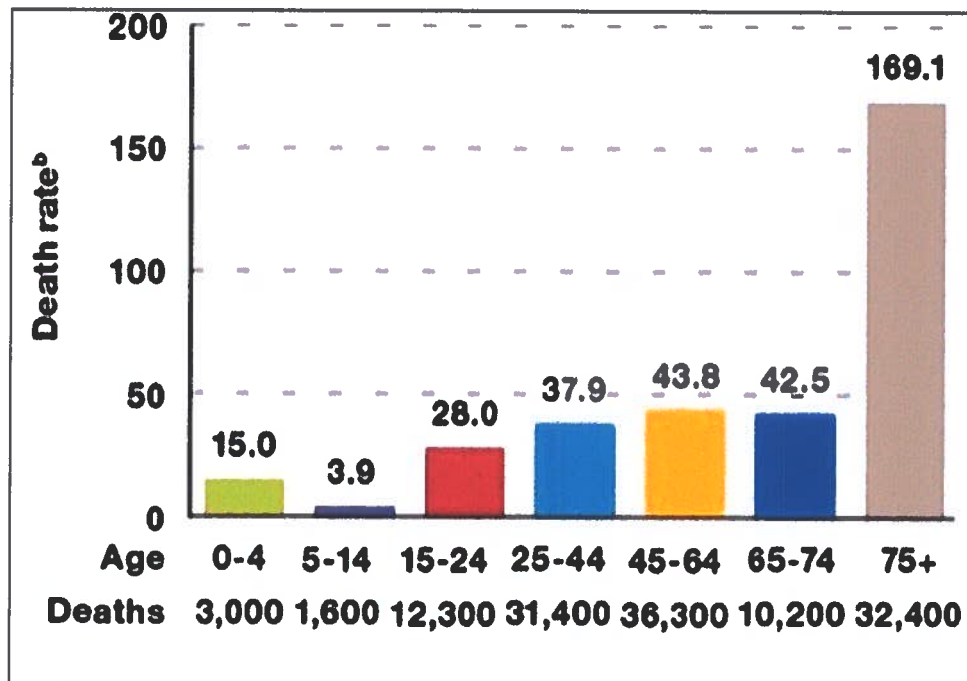
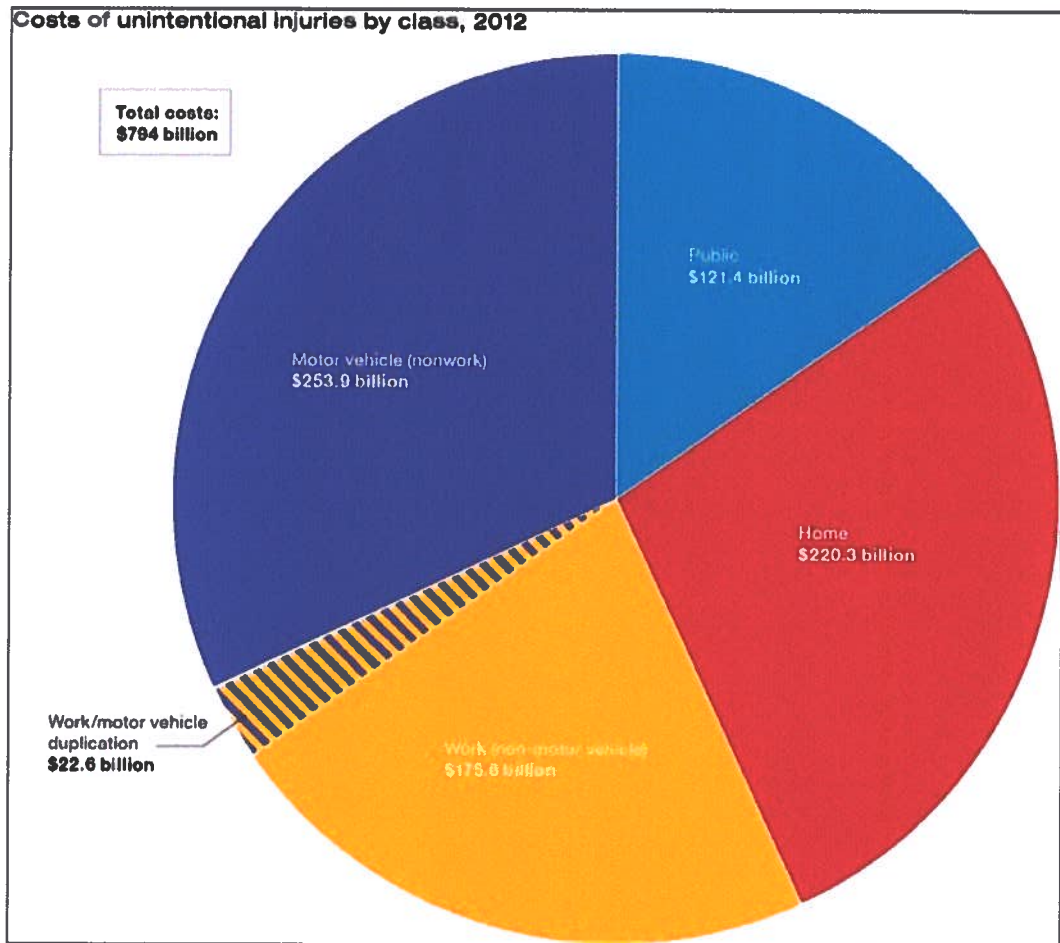
Accidental falls disproportionally affects the elderly more than any other demographic segment of our society. According to the NSC, "Falls were the third leading cause of unintentional-injury related death in the United States in 2010. leading cause of unintentional-injury-related death for people age 70 or older and the second leading cause for ages 64-69 for each year of age; deaths resulting from falls peaked at 1,178 for individuals age 87."

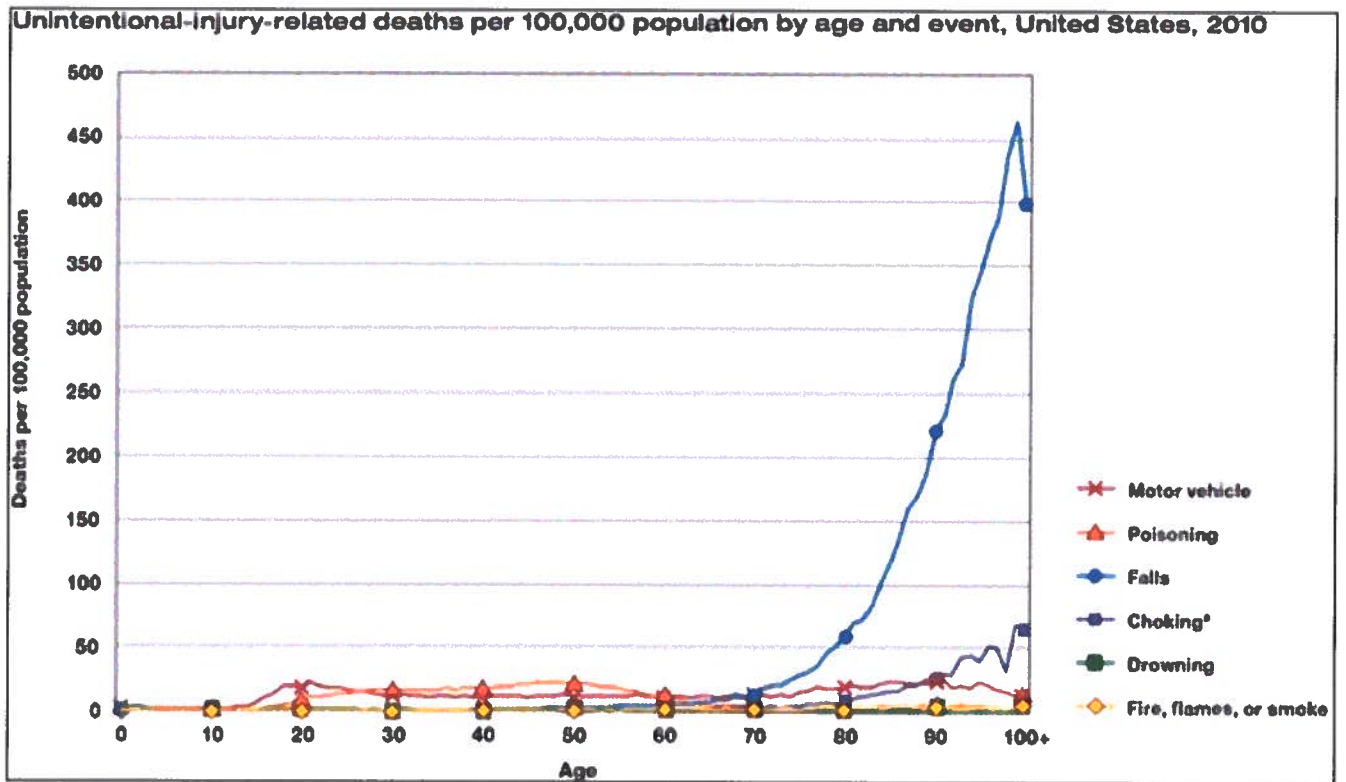
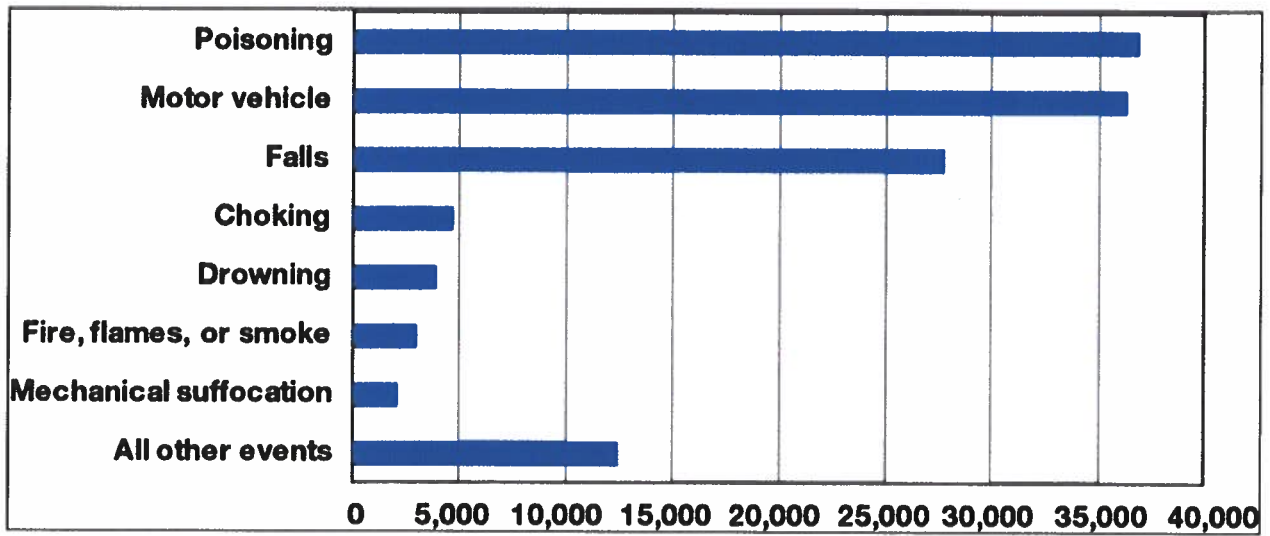
Between the years 2004 and 2012 the economic impact of nonfatal unintentional injuries rose by 38% from \$574.8 billion in 2004 to \$793.8 Billion in 2012.

According to the National Health Interview Survey, 2011, 42.9% of females and 27.7% of males will fall and seek medical attention. Of the 37,872,000 injury episodes, 12,343,000 occurred in the home and 6,941,000 occurred outside of the home. The study revealed, "Falls and motor vehicle incidents were the leading causes of injury-related emergency department visits, accounting for 26% and 11% of the total, respectively. In total, about 10.5 million visits to emergency departments in 2010 were due to unintentional falls and nearly 4.5 million were due to motor vehicle incidents." Of the 29,310,000 unintentional injuries as identified via the E-code system, 10,512,000 were the result of a fall (E880.0-E886.9, E888).

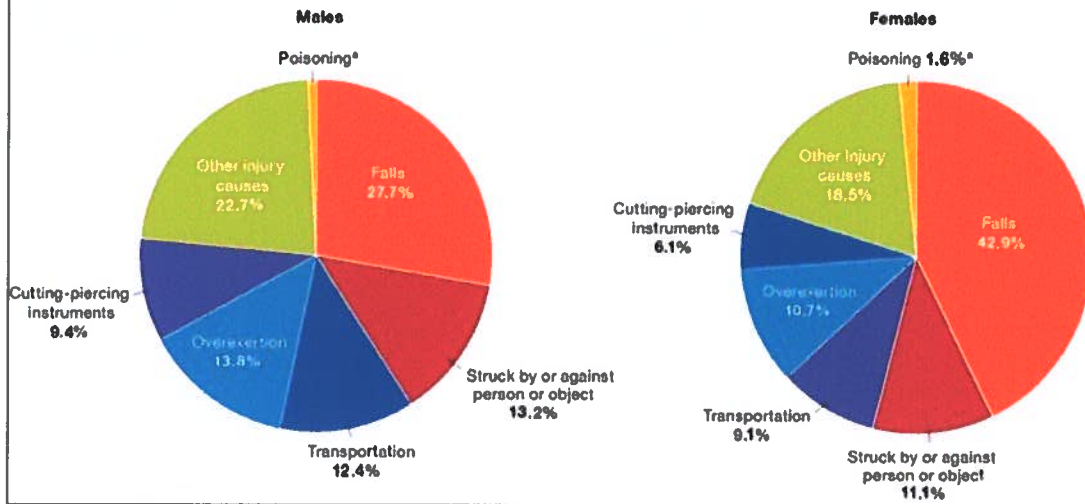
In 2011, falls represented the leading cause of non-fatal injuries, which required emergency room treatment for all age groups.

1.- Harvard Health Publications, Harvard Medical School: "Average Life Expectancy: Measuring yours."





Leading external causes of injury and poisoning episodes by sex, United States, 2011



Lifetime odds of death for selected causes, United States, 2010*

Total, any cause
1 in 1

Heart disease and cancer 1 in 7

Chronic lower respiratory disease 1 in 20

Intentional self-harm 1 in 103

Motor vehicle incidents 1 in 112

Unintentional poisoning by and exposure to noxious substances 1 in 119

Falls 1 in 152

Assault by firearm 1 in 358

Car occupant 1 in 492

Pedestrian 1 in 723

Motorcycle rider 1 in 922

Unintentional drowning and submersion 1 in 1,043

Exposure to fire, flames, or smoke 1 in 1,418

Choking from inhalation and ingestion of food 1 in 3,649

Pedalcyclist 1 in 4,974

Firearms discharge 1 in 6,609

Exposure to excessive natural heat 1 in 8,321

Air and space transport incidents 1 in 8,357

Exposure to electric current, radiation, temperature, and pressure 1 in 12,174

Contact with sharp objects 1 in 37,566

Contact with heat and hot substances 1 in 62,608

Contact with hornets, wasps, and bees 1 in 75,652

Cataclysmic storm 1 in 63,922

Legal execution 1 in 96,203

Bitten or struck by dog 1 in 103,798

Lightning 1 in 136,011

According to the CDC, "In 2013, the direct medical costs of older adult falls, adjusted for inflation, were \$34 billion. With the population aging, both the number of falls and the costs to treat fall injuries are likely to increase."

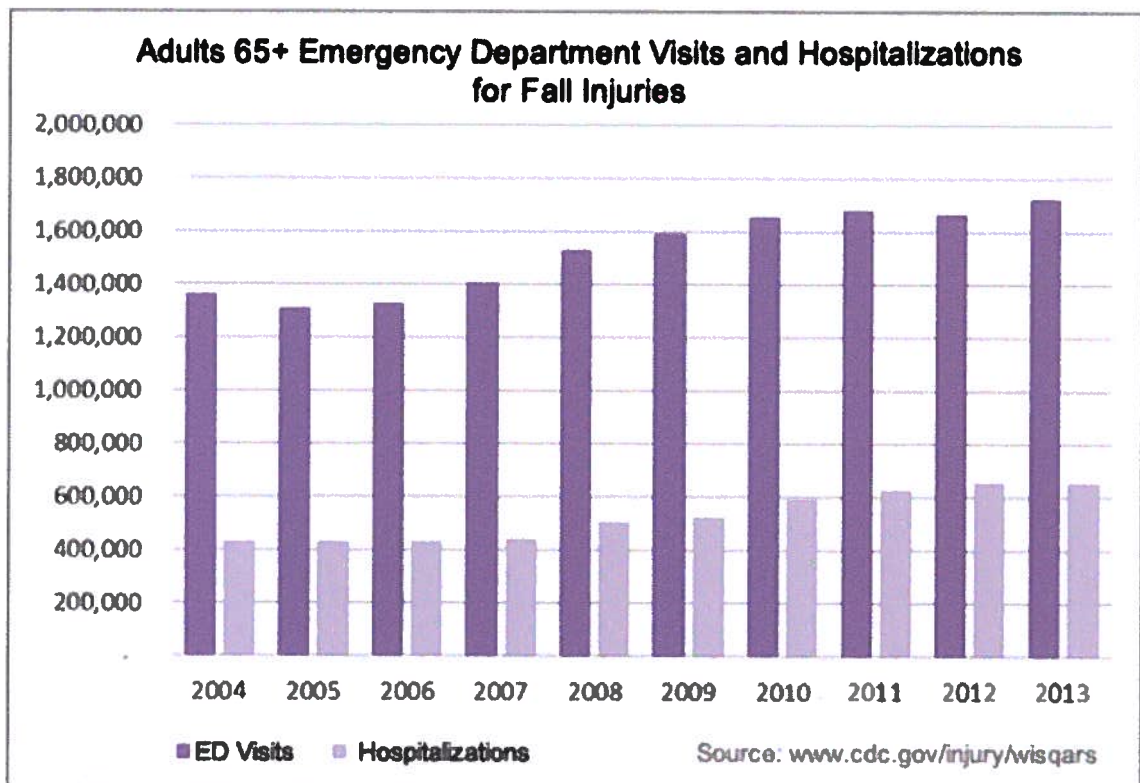
How big is the problem?

- One in three adults aged 65 and older falls each year.² Of those who fall, 20% to 30% suffer moderate to severe injuries that make it hard for them to get around or live independently, and increase their risk of early death.³
- Older adults are hospitalized for fall-related injuries five times more often than they are for injuries from other causes.⁴
- Annually, emergency departments treat about 2.5 million nonfatal fall injuries among older adults; more than 30%, or about 734,000 of these patients have to be hospitalized.⁵

How are costs calculated?

The costs of fall-related injuries are often shown in terms of direct costs.

- Direct costs are what patients and insurance companies pay for treating fall-related injuries. These costs include fees for hospital and nursing home care, doctors and other professional services, rehabilitation, community-based services, use of medical equipment, prescription drugs, changes made to the home, and insurance processing.
- Direct costs do not account for the long-term effects of these injuries such as disability, dependence on others, lost time from work and household duties, and reduced quality of life.



How costly are fall-related injuries among older adults?

- In 2013, the total direct medical costs of fall injuries for people 65 and older, adjusted for inflation, was \$34 billion.¹
- Among community-dwelling older adults, fall-related injury is one of the 20 most expensive medical conditions.⁷
- In 2002, about 22% of community-dwelling seniors reported having fallen in the previous year. Medicare costs per fall averaged between \$14,306 and \$21,270 (in 2013 dollars).⁸
- Among community-dwelling seniors treated for fall injuries, 65% of direct medical costs were for inpatient hospitalizations; 10% each for medical office visits and home health care, 8% for hospital outpatient visits, 7% for emergency room visits, and 1% each for prescription drugs and dental visits. About 78% of these costs were reimbursed by Medicare.⁹

How do these costs break down?

Age and sex

- The costs of fall injuries increase rapidly with age.¹
- Costs of both fatal and nonfatal falls are higher for women than for men.¹
- Medical costs for women, who comprised about 60% of older adults, are two to three times higher than the costs for men.¹

Type of injury and treatment setting

- Approximately three-fourths of fall deaths, and three-fourths of total costs, are due to traumatic brain injuries (TBI) and injuries to the lower extremities.¹
- Injuries to internal organs are responsible for about 28% of fall deaths and account for about 29% of costs.⁶
- Fractures are both the most common and most costly nonfatal injuries. Just over one-third of nonfatal injuries are fractures, but these account for about 61% of total nonfatal costs.¹
- Hospitalizations account for nearly two-thirds of the costs of nonfatal fall injuries and emergency department treatment accounts for about 20%.¹
- On average, the hospitalization cost for a fall injury is over \$35,000.¹⁰
- Hip fractures are the most serious and costly fall-related fracture. Hospitalization costs account for about 44% of the direct medical costs for hip fractures.¹⁰

Nursing home residents fall frequently. About 1,800 older adults living in nursing homes die each year from fall-related injuries and those who survive frequently sustain injuries that result in permanent disability and reduced quality of life.¹

How big is the problem?

- More than 1.4 million people 65 and older live in nursing homes.² If current rates continue, by 2030 this number will rise to about 3 million.³
- About 5% of adults 65 and older live in nursing homes, but nursing home residents account for about 20% of deaths from falls in this age group.⁴

- Each year, a typical nursing home with 100 beds reports 100 to 200 falls. Many falls go unreported.⁴
- Between half and three-quarters of nursing home residents fall each year.⁵ That is twice the rate of falls among older adults living in the community.
- Patients often fall more than once. The average is 2.6 falls per person per year.⁶
- About 35% of fall injuries occur among residents who cannot walk.⁷

How serious are these falls?

- About 1,800 people living in nursing homes die from falls each year.¹
- About 10% to 20% of nursing home falls cause serious injuries; 2% to 6% cause fractures.¹
- Falls result in disability, functional decline and reduced quality of life. Fear of falling can cause further loss of function, depression, feelings of helplessness, and social isolation.⁵

Why do falls occur more often in nursing homes?

Falling can be a sign of other health problems. People in nursing homes are generally frailer than older adults living in the community. They are usually older, have more chronic conditions, and have more difficulty walking. They also tend to have thought or memory problems, to have difficulty with activities of daily living, and to need help getting around or taking care of themselves.⁸ All of these factors are linked to falling.⁹

What are the most common causes of nursing home falls?

- Muscle weakness and walking or gait problems are the most common causes of falls among nursing home residents. These problems account for about 24% of the falls in nursing homes.⁵
- Environmental hazards in nursing homes cause 16% to 27% of falls among residents.^{1,5}
- Such hazards include wet floors, poor lighting, incorrect bed height, and improperly fitted or maintained wheelchairs.^{5, 10}

The National Council on Aging (NCOA) Falls Free 2015 National Falls Prevention Action Plan (NFPA) addresses the immediate need to reduce elder falls and outlines specific goals and strategies. The NFPA Home Safety Goal A. states that “All older adults will have knowledge of and access to effective home safety measures (including information, assessments, and home modifications) that reduce home hazards, improve independent functioning, and lower the risk of falls.”

The NFPA strategy to accomplish Goal A. is to “Raise awareness and disseminate information about home safety practices and options for caregivers and older adults to reduce falls.” The action plan further seeks to: “Develop and promote standards related to product safety, service quality, skill level of home modification providers, and expected outcomes to assist consumers in making informed decisions about home safety.” The National Floor Safety Institute was a participant at the 2015 Whitehouse Conference on Aging, which established the plan whereby our proposed mandatory labeling requirement, is in direct support of the NFPA goals and strategies.

Where Are We Today:

2020 NEISS Data:

2020 NEISS Data reveals that elder falls have raised to an all-time level of epidemic proportions with no end in sight. Our nation's most vulnerable, the elderly, are the most impacted and are the leading cost driver for this form of injury.

NSC Data 1994-2020: All Deaths Due to Falls (Unintentional Injury Deaths)

1994	13,300 (3% decrease from 1993)
1995	12,600 (1% decrease from 1994)
1996	14,110 (4% increase from 1995)
2000	16,200 (1% increase from 1999)
2003	16,200 (6% increase from 2002)
2004	20,200 (2% increase from 2003)
2005	17,700 (1% increase from 2004)
2006	21,200 (2% increase from 2005)
2009	26,100 (7% increase from 2008)
2012	27,800 (4% increase from 2011)
2013	30,300 (5% increase from 2012)
2019	36,200 (14% increase from 2018)
2020	42,114 (14% increase from 2019)

In 2007 the odds of dying as a result of a fall was 1 out of 171 in 2017 it was 1 out of 114, today the rate has climbed to 1 out of 102, nearly identical to automobile fatalities.

In 2001 Falls accounted for half of all unintentional injury deaths for those aged 80 and older.

According to the CDC The total cost of all injuries in the year 2000 was \$512.4 billion today the cost has risen to \$4.2 trillion. In 2020 there were 42,114 Unintentional Number of Fall Injuries (WISQARS Cost of Injury) which had a total cost of \$1.54 billion and an average cost of \$36,671

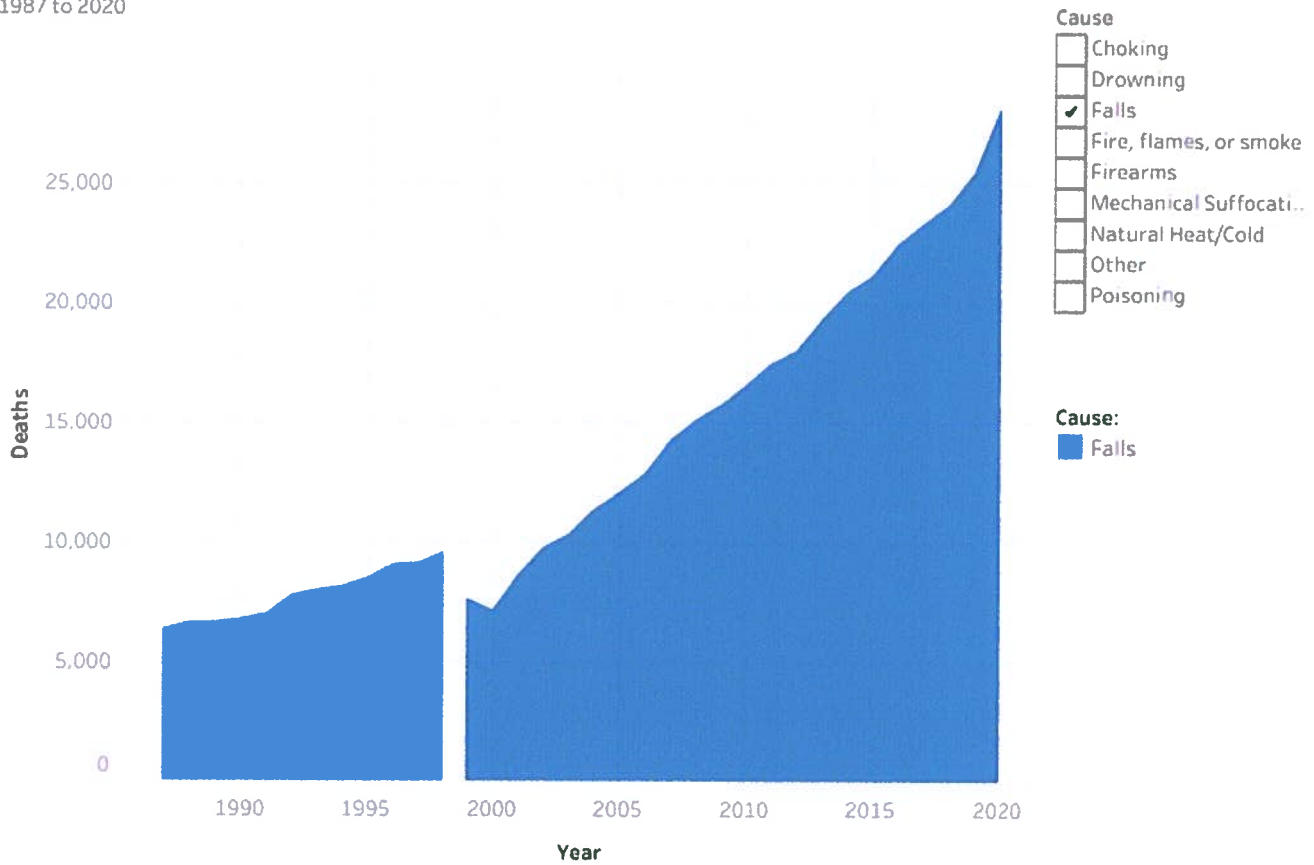
From 2001 and 2020 Fall Related Deaths Have Risen by 14.3% (CDC WISQARS) third behind firearms and poisonings. And in the decade spanning from 2010-2020, fall related deaths have risen by 15.8%

Stairs, Ramps, Landings and Floors rank as the leading cause of hospital emergency room visits and again impacts the nations elderly the most. (See attached) 2,662,147 people sought emergency room treatment for injuries related to common walking surfaces of which the majority were over the age of 55.

Home preventable-injury-related deaths by leading cause, United States

2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
8,500	55,200	55,800	57,900	62,400	62,800	65,700	69,600	74,600	85,100	90,200	89,300	93,700

1987 to 2020



Changes were made in 1999 to the International Classification of Diseases. Data comparisons across 1999 should be made with caution. Please see technical appendix.

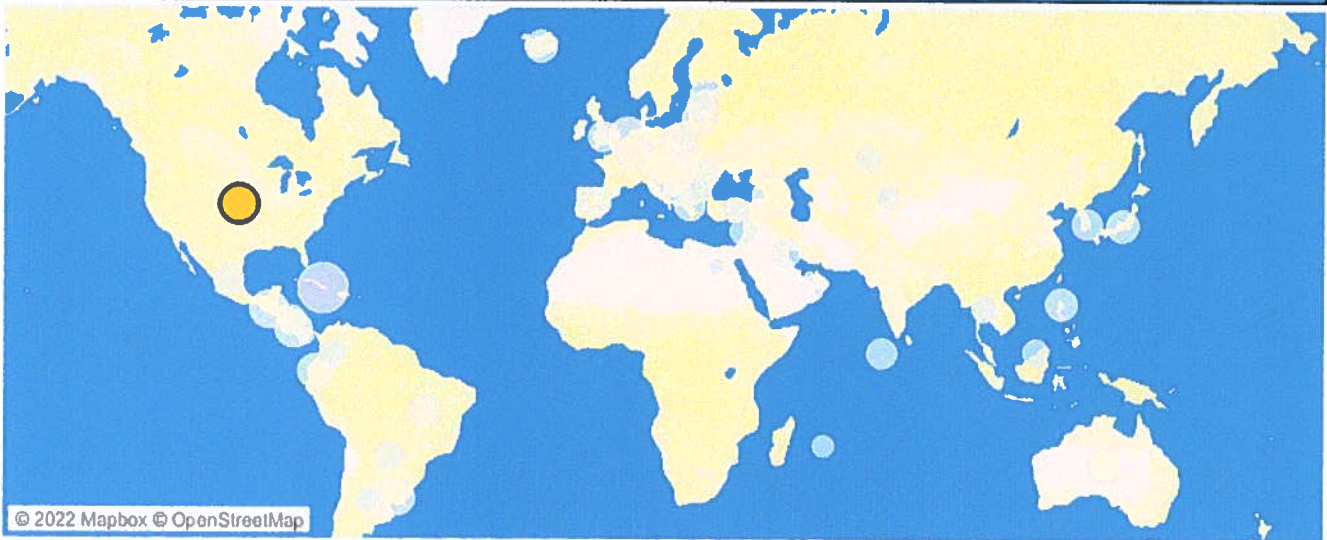
Preventable-injury-related deaths and death rates by age group and event

Select Measure:
Death rate per 100,000 population

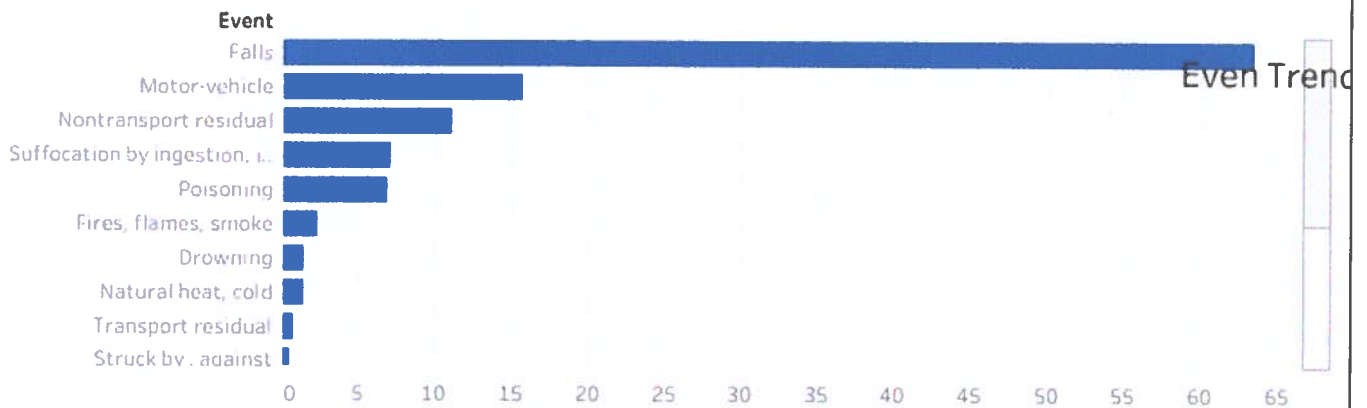
Select injury event:
All

Select age group:
65 plus

Select year:
2019



Click on map to select country and see details: United States of America, 2019



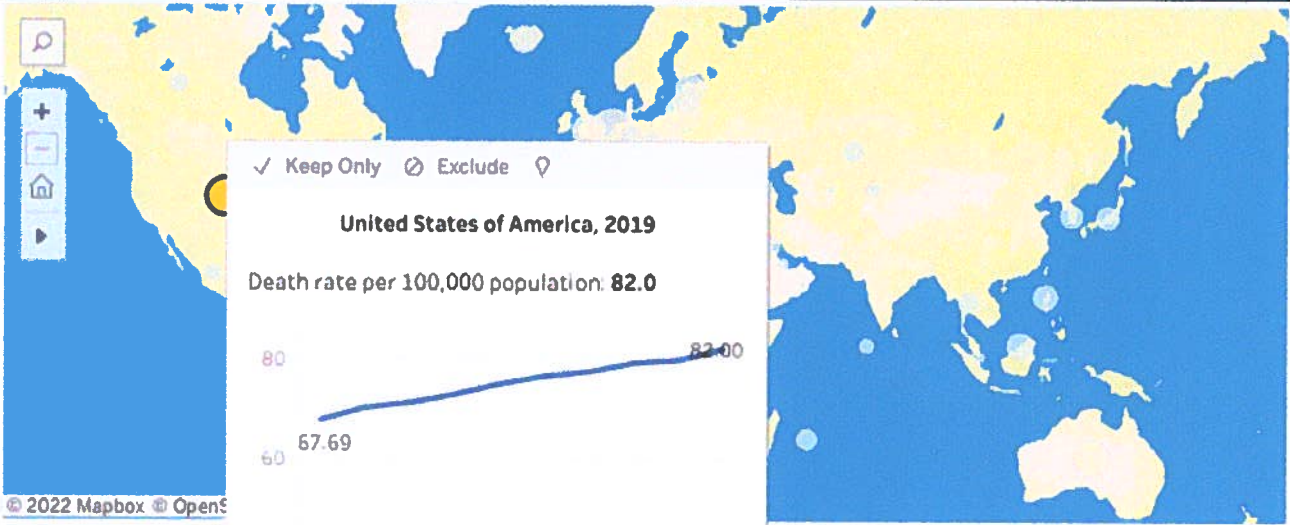
injuryfacts.nsc.org

© 2022 National Safety Council. All rights reserved.

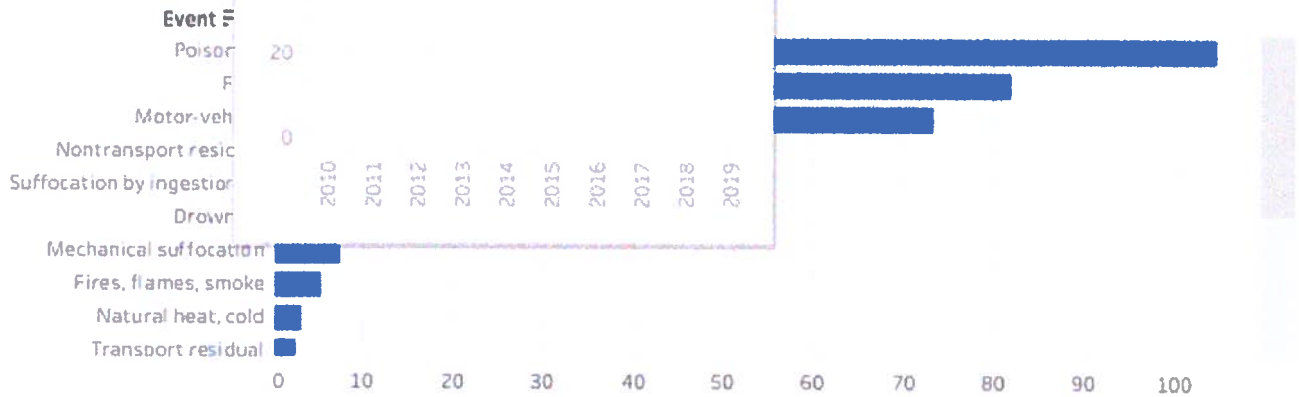
nsc

Preventable-injury-related deaths and death rates by age group and event

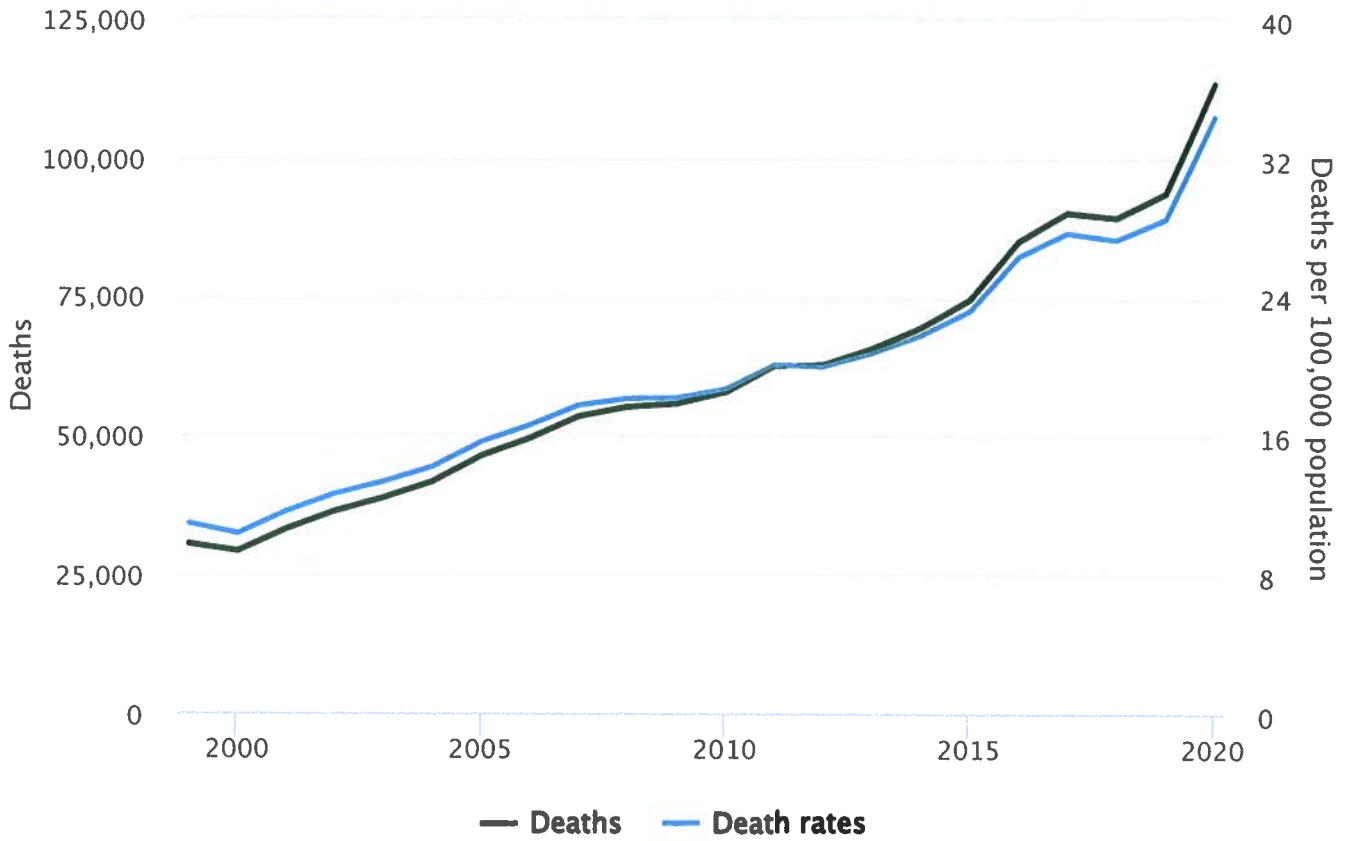
Select Measure: **Death rate per 100,000 population** | Select injury event: **Falls** | Select age group: **(All)** | Select year: **2019**



Click on map to



Home deaths and death rates, United States, 1978-2020

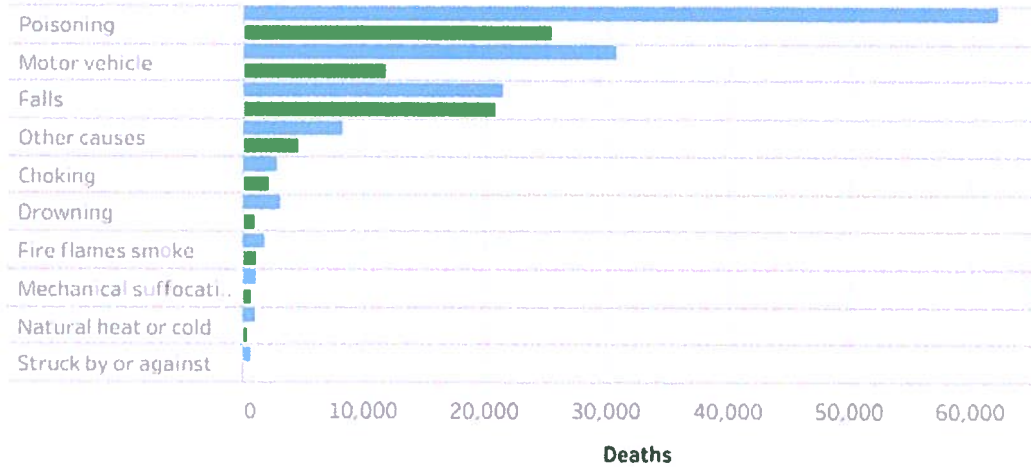


© 2022 National Safety Council. All rights reserved.

Preventable-injury-related deaths by sex, age and cause, United States, 1999-2020

Year 2020

Current display year: 2020



Data

- Death
- Rate

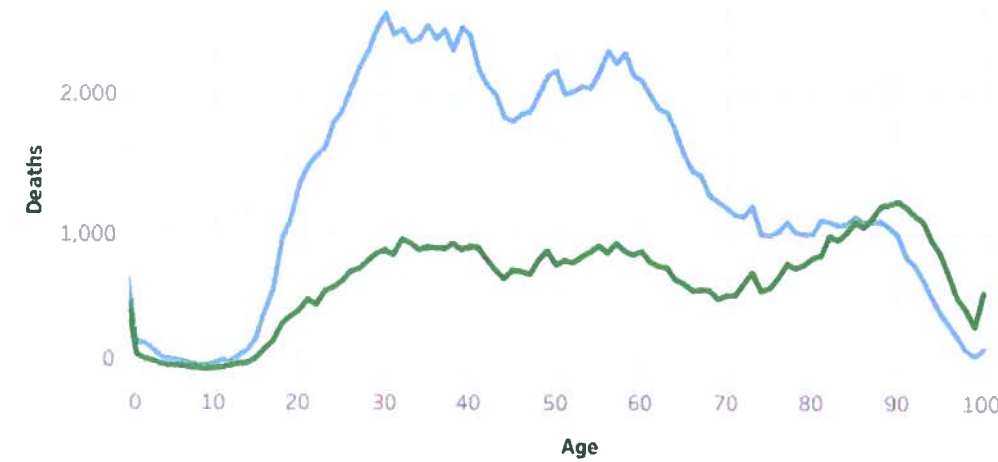
Cause

All

Age Group

All

(Click on line chart to see deaths by single year of age)



Total

Male

133,205

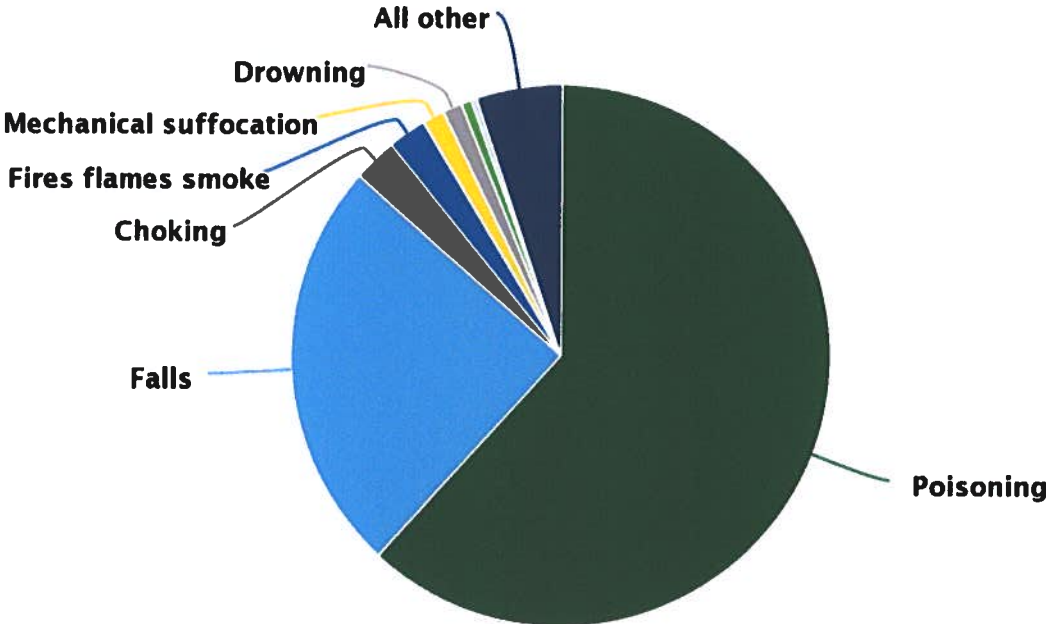
Female

67,750

Source: National Center for Health Statistics-Mortality Data for 1999-2020, as compiled from data provided by the 57 vital statistics jurisdictions through the Vital Statistics Cooperative Program.

Cause of preventable injury-related deaths in the home, United States, 2020

Total: 113,500



© 2022 National Safety Council. All rights reserved.

Preventable-injury-related deaths by age and cause, United States, 1999-2020

Year 2020

Current display year: 2020

(select cause to see detail) Cause All

Select chart

- Deaths by age
- Rate by age
- Deaths by age group
- Rate by age group

Poisoning

Motor vehicle

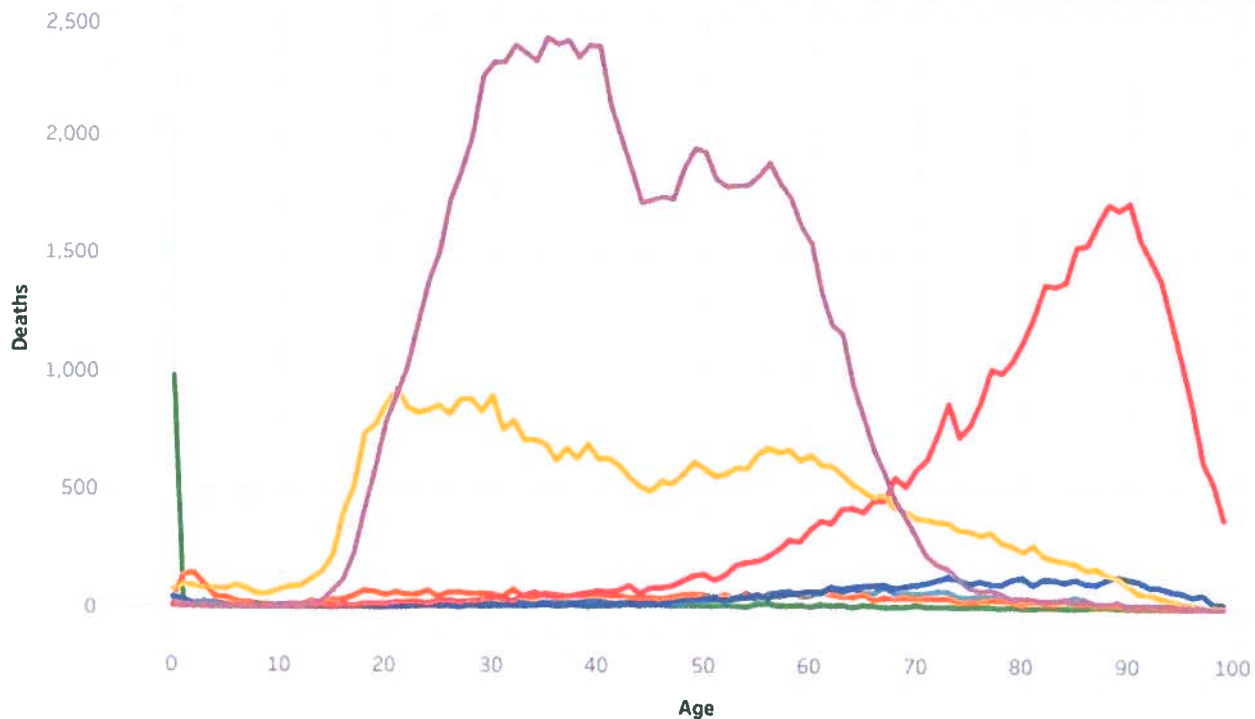
Falls

Choking*

Drowning

Fires, flames,
smoke

Mechanical
suffocation



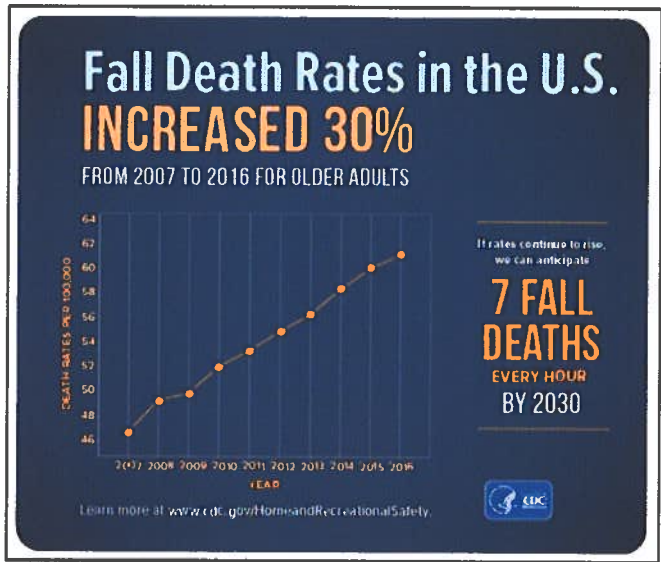
injuryfacts.nsc.org

© 2021 National Safety Council. All rights reserved.

nsc

CDC Data (2020) Reveals that “Falls Are Serious and Costly”

- One out of five falls causes a serious injury such as broken bones or a head injury
- Each year, 3 million older people are treated in emergency departments for fall injuries.
- Over 800,000 patients a year are hospitalized because of a fall injury, most often because of a head injury or hip fracture.
- Each year at least 300,000 older people are hospitalized for hip fractures.
- More than 95% of hip fractures are caused by falling, usually by falling sideways.
- Falls are the most common cause of traumatic brain injuries (TBI).
- In 2015, the total medical costs for falls totaled more than \$50 billion. Medicare and Medicaid shouldered 75% of these costs.



And most fall related fatalities occur in the home.



Lifetime odds of death for selected causes, United States, 2020

Cause of Death	Odds of Dying
Heart disease	1 in 6
Cancer	1 in 7
COVID-19	1 in 12
All preventable causes of death	1 in 21
Chronic lower respiratory disease	1 in 28
Opioid overdose	1 in 67
Suicide	1 in 93
Motor-vehicle crash	1 in 101
Fall	1 in 102
Gun assault	1 in 221
Pedestrian incident	1 in 541
Motorcyclist	1 in 799
Drowning	1 in 1,024
Fire or smoke	1 in 1,450
Choking on food	1 in 2,745
Bicyclist	1 in 3,396
Sunstroke	1 in 6,368
Accidental gun discharge	1 in 7,998
Electrocution, radiation, extreme temperatures, and pressure	1 in 14,705
Sharp objects	1 in 26,744
Cataclysmic storm	1 in 35,074
Hot surfaces and substances	1 in 50,341
Hornet, wasp, and bee stings	1 in 57,825
Dog attack	1 in 69,016
Lightning	Too few deaths in 2020 to calculate odds
Railway passenger	Too few deaths in 2020 to calculate odds
Passenger on an airplane	Too few deaths in 2020 to calculate odds



SAFETY TOPICS

Falls – Same Level

Brief

Data Details

Following **exposure to harmful substances or environments** and **overexertion injuries**, falls on the same level is the third leading preventable workplace injury or illness event resulting in cases with days away from work. In 2020, 136 workers died and 127,680 were injured.

This category applies to injuries when all of the following factors are true:

- The injury was produced by impact between the injured person and the source of injury without elevation
- The injured person's movement produced the injury
- The motion of the person was generated by gravity following the individual's loss of equilibrium
- The point of contact with the source of the injury was at the same level or above the surface supporting the person at the inception of the fall

This infographic provides an overview of the nonfatal trends involving days away from work, including nature of injury, part of body injured, and industry. Explore the data details tab for information on fatal injuries, injury rates, and historic trends.

Falls - same level, nonfatal injuries and illnesses involving days away from work

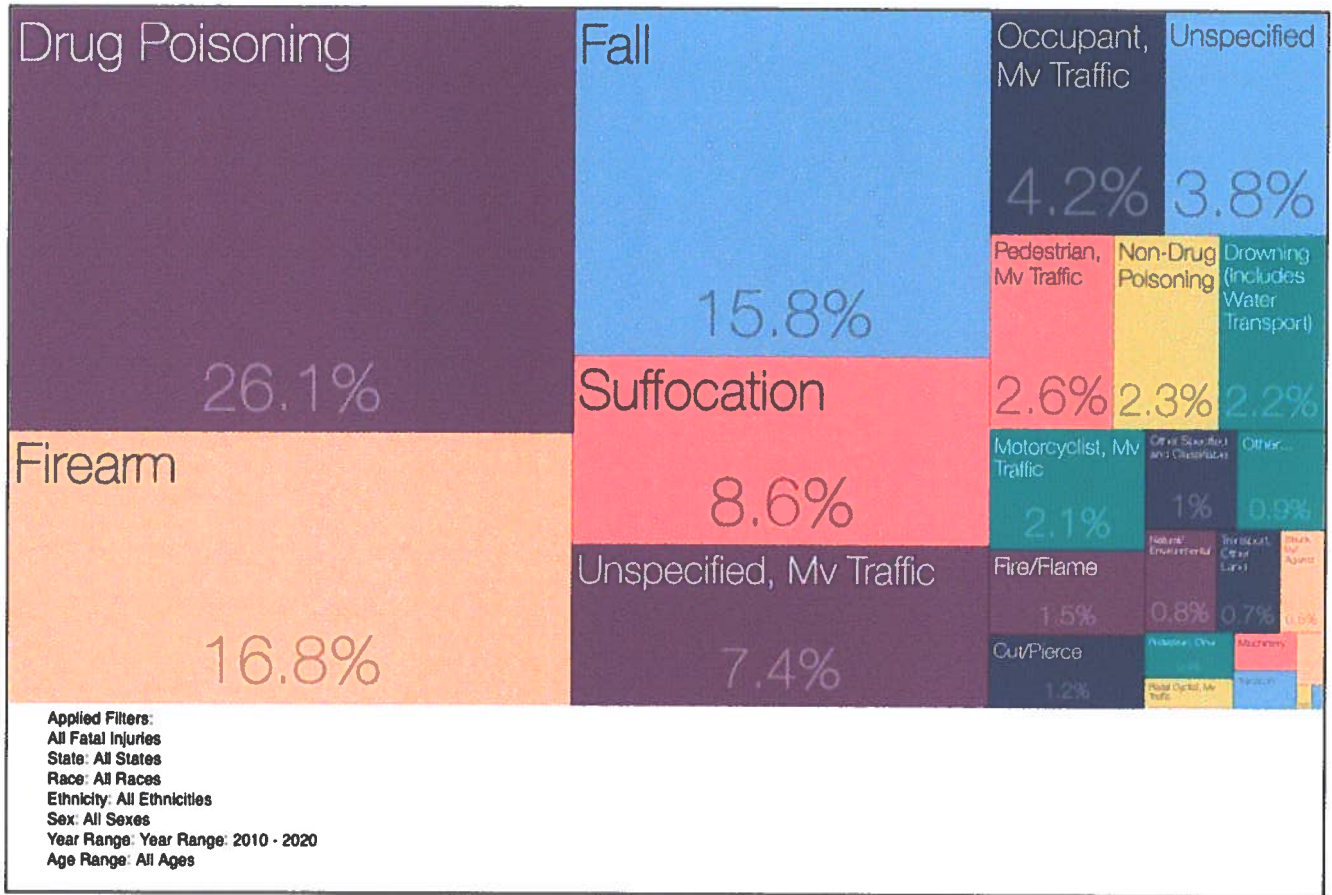
**2020
TOTAL**

All events or exposures: **1,176,340**
Falls - same level: **127,680**



**MEDIAN
DAYS
AWAY**

All events or exposures: **12 days**
Falls - same level: **12 days**



Home Injuries Cost
\$396.9 Billion

Lifetime odds of dying for selected injury causes, United States, 2015-2020

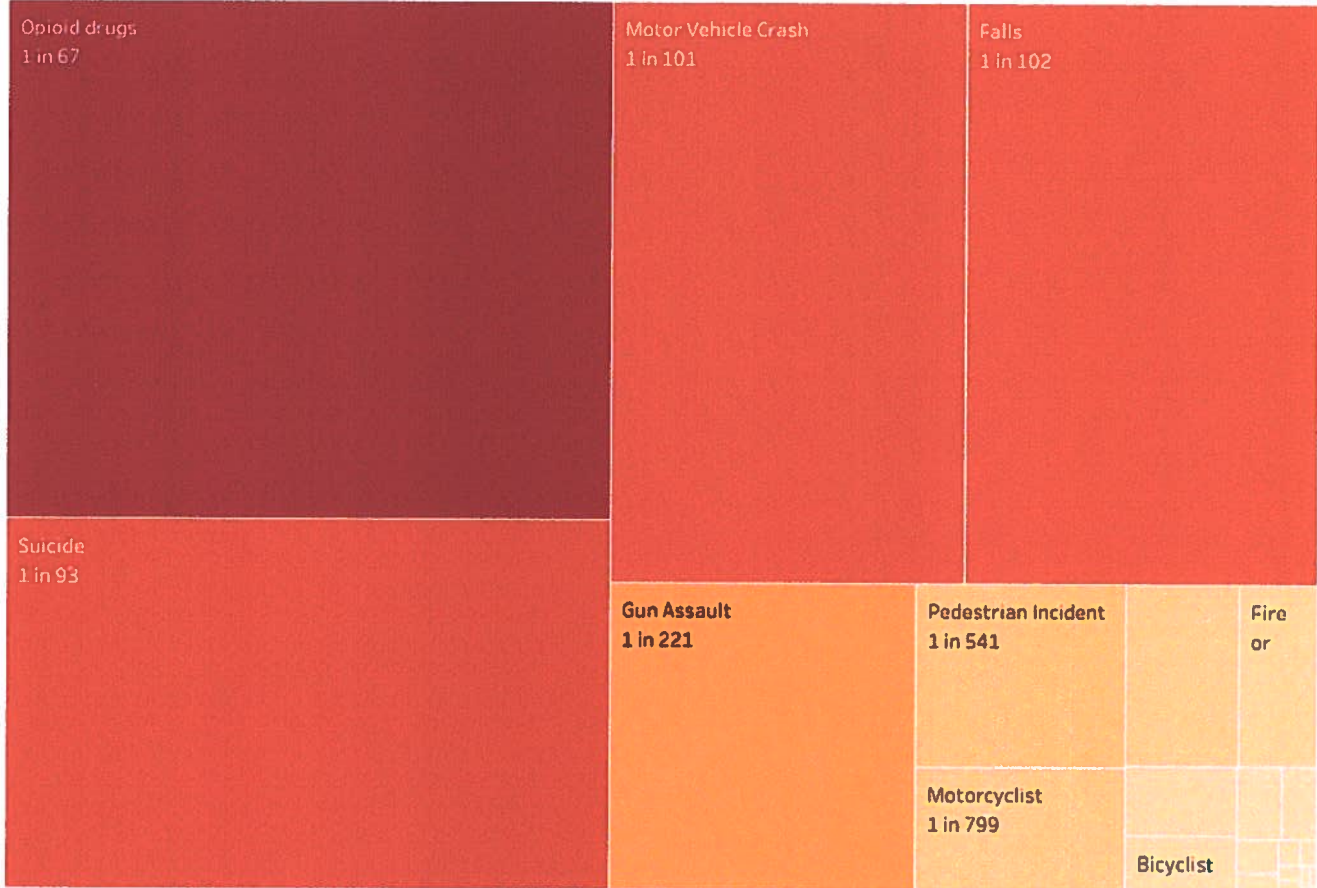
Year
2020

Deaths

17

64,183

Year: 2020



Source: National Center for Health Statistics—Mortality Data for 2015-2020 as compiled from data provided by the 57 vital statistics jurisdictions through the Vital Statistics Cooperative Program. Deaths are classified on the basis of the Tenth Revision of "The International Classification of Diseases" (ICD-10), which became effective in 1999.

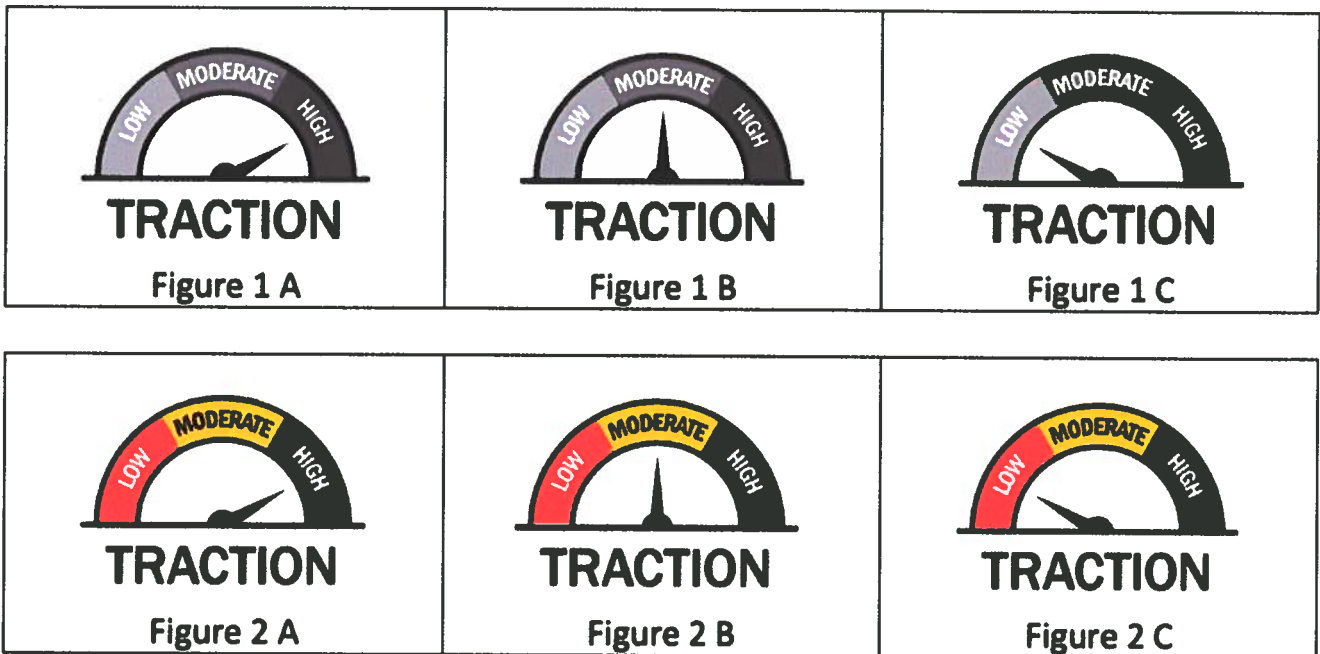
Floor Coverings and Coatings:

Contain an explicit request to initiate Commission rulemaking and set forth a brief description of the substance of the proposed rule thereof, which it is claimed should be issued by the Commission. (A general request for regulatory action which does not reasonably specify the type of action requested shall not be sufficient.)

We ask the Commission to mandate the labeling of the categories of the consumer products named above per the NFSI B101.5 (most current version), which provides a clear and easy-to-understand graphic which is based on the COF test data provided by the manufacturer per nationally recognized industry consensus standards (see images below).

4.5 Exemplars of Figures

4.5.1



The point-of-purchase label would provide a graphic of the traction scale with an arrow pointing to the approximate COF value as presented as one of three Traction Ranges. For example, if a particular product is tested as to have a wet COF value of 0.35, based on Table 1. of the B101.3 standard (see below) that product would rank as Moderate-Traction and be labeled as such.

Note: Since our last petition the Society for Protective Coatings (SSPC) now known as NACE has adopted all of the NFSI B101 walkway safety standards in their most recent revision (May 4, 2015) of the SSPC Technology Guide No. 21 entitled: "Guide to Evaluation of Slip and Fall Resistance of Flooring Surfaces" which cites the NFSI B101 standard as the recommended slip resistance test method for protective floor coatings

Table 1.

Wet DCOF Value (μ)	Available Traction	Action
≥ 0.50 (ramp) ≥ 0.45 (level surfaces)	High	None required. Monitor and test DCOF regularly.
0.30 – 0.44	Moderate	Monitor and test DCOF regularly. Consider using traction enhancing products and practices where applicable for intended use and maintain walking surface in dry condition.
< 0.30	Low	Seek professional intervention. Consider replacing flooring or treating with traction enhancing products.

Product manufacturers and retailers would provide a point-of-purchase informational display explaining the new label. The NFSI will support such effort via an informational page on its website which includes detailed information, education on fall prevention, and a short-animated video.

Floor Cleaning Agents and Treatments:

We ask the Commission to mandate that manufactures of floor cleaning agents test their products per the NFSI B101.2 (most current version) and provide an informational label indicating the slip-resistance (COF) for all residential and commercial floor cleaners and treatments on testing performed by the manufacturer described in Section 7. of the NFSI B101.2 standard (see image below).

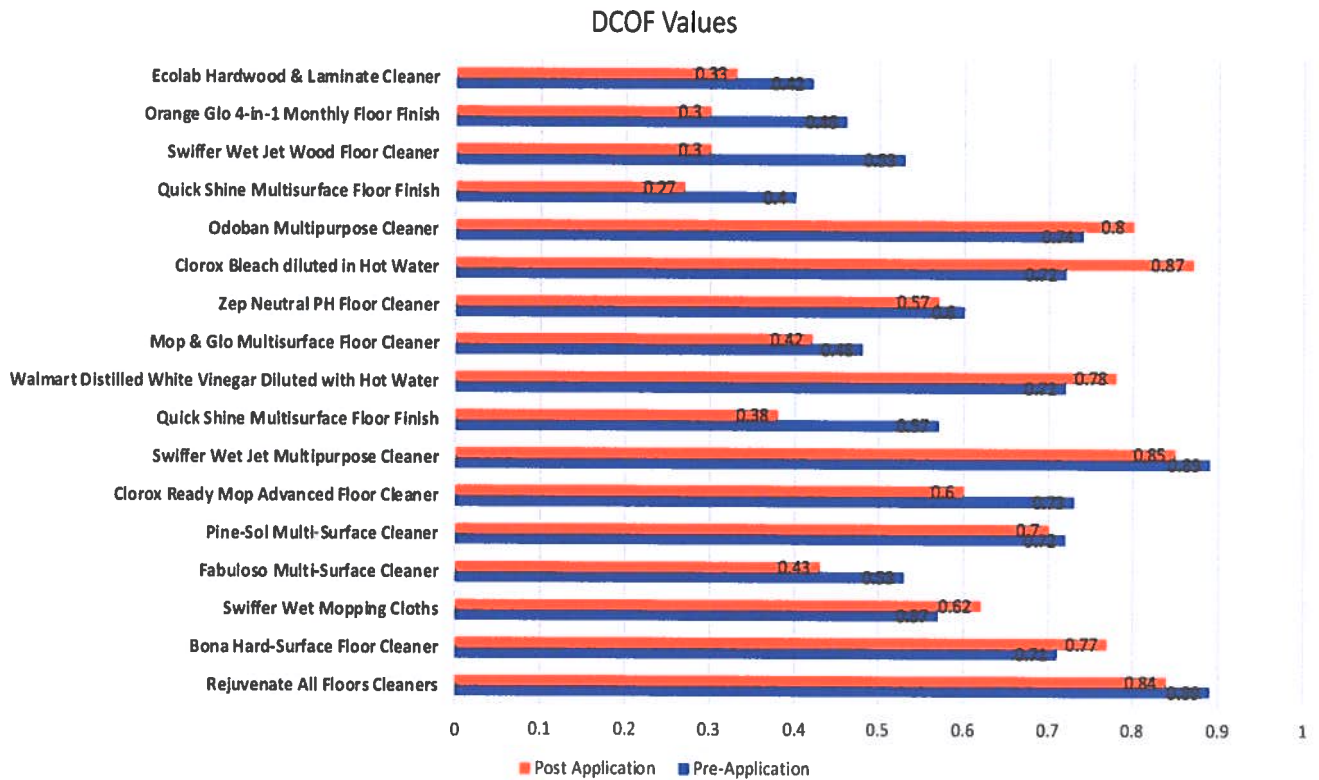
Percentage Change in wet DCOF	Definition
$\geq 20\%$	Traction Enhancing
$\geq 0\%$ and 20%	Traction Neutral
< 0%	Traction Reducing

For example, if a particular product is tested and has an average wet DCOF value decrease of 3% based on the table as listed in Section 7. of the B101.2 standard that product would be considered Traction Reducing and be labeled as such.

January 2023 NFSI Household Floor Cleaner Study

In January 2023 the NFSI tested 17 of the most popular household floor cleaning products commonly available at retailers nationwide and found that when used in accordance with the manufacturer’s instructions, 12 of the 17 products reduced the slip resistance of the floor after application. (see data table below).

NFSI Floor Cleaner Study 2023



Consumer Footwear:

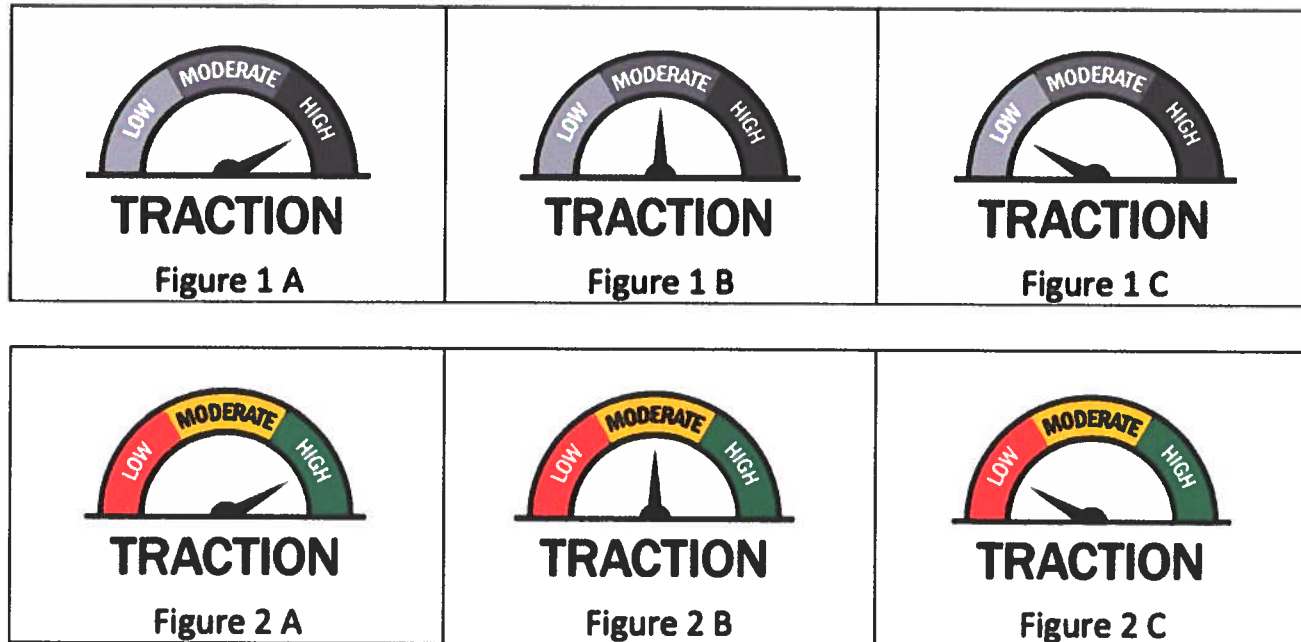
We ask the Commission to mandate that manufactures of footwear test their products outsoles per the NFSI B101.7 (most current version) and provide an informational label indicating the products slip-resistance as provided by the manufacturer as described in Table 1. In Section 7.3 of the NFSI B101.7 standard (see image below).

Table 1: List of footwear traction classifications

Classification	Slip Risk Range
Low footwear traction	COF ≤ 0.15
Moderate footwear traction	COF > 0.15 and COF ≤ 0.29
High footwear traction	COF > 0.29

4.5 Exemplars of Figures

4.5.1

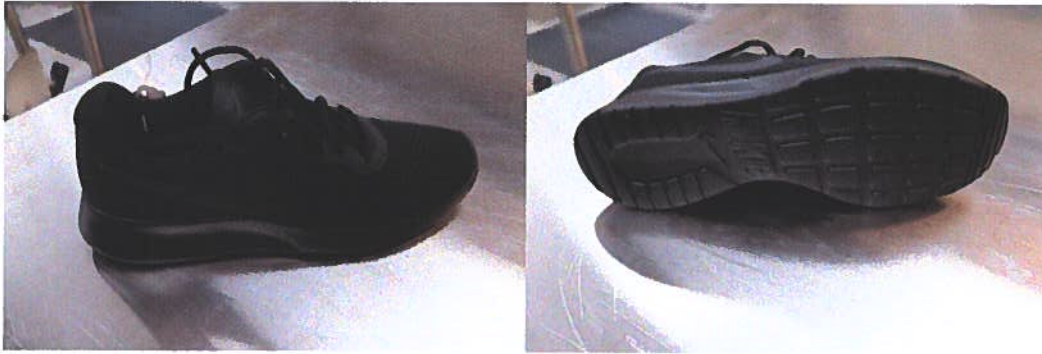


NFSI Footwear Research:

On March 17, 2022 the NFSI tested twelve (12) different styles of shoes commonly worn in commercial restaurants. Some of the shoes were labeled as Slip Resistant and others were not. Of the twelve (12) footwear products tested five (5) ranked as High-Traction per the NFSI B101.7 test standard and the remaining seven (7) products were either Moderate or Low Traction.

Based on analysis we found that conventional street shoes such as NIKE or Converse products provided a low level of slip resistance, however, these styles of shoes are often worn by workers in the workplace where oil and or water is commonly found on the floor. When worn as a “street shoe” these styles increase the risk of a slip and fall when the walkway is wet.

This was also true for some footwear labeled as “Slip Resistant” (See data below) which are worn by workers who are exposed to wet and or wet-oily floors. Given such, the consumer has no knowledge as to the actual slip resistant qualities of any type of shoe and often times makes their buying decision on style, color, and price. NFSI research has revealed that such failure on the part of the footwear industry directly contributes to approximately 24% of slip and fall injuries.



SETUP	PRELIM	TRIAL	REPORT	ADVANCED	STEPS
Device ID		STEPS 00000001			
Testing Location/Company		NFSI LAB			
Job/Contract Number		Validation Trials			
Operator		R. Kendzior			
Shoe		NIKE BLACK SPORT			
Shoe Details		Men's Size 9			
Floor		Calibration Tile			
Floor Details		QUARRY			
Contaminant		CANOLA OIL			
Contaminant Details		NA			
Temperature		Saving Cycles <input type="radio"/> All Attempts <input checked="" type="radio"/> Only Good Trials		Foot Duration (ms) 200	
Humidity 40.7% RH		Operational Mode <input checked="" type="radio"/> Standard (sets of three trials) <input type="radio"/> Continuous		Report Type HTML	
Storage Location (folder for saving) c:\XRDS\Steps Data				Angle Method Manual	
Configure your setup parameters and press CONTINUE to proceed.					CONTINUE

SETUP	PRELIM	TRIAL	REPORT	ADVANCED	STEPS
Either press GENERATE below to create the Excel report OR click SETUP above to return to SETUP to begin a new series of trials.					
You may choose to use a Windows tool to capture this screen before beginning again.					
COP Values					
0.202		Comments			
0.205					
0.202					
AVG COP	STDEV	Coefficient of Variation			
0.203	0.001	0.007			
Traction Indication 					
Report Will be Saved To: c:\XRDS\Steps Data\STEPS 00000001 [Date] [Time].rpt					
Press GENERATE to produce report or use SETUP tab to run new trials.					GENERATE



SETUP	PRELIM	TRIAL	REPORT	ADVANCED	STEPS
Device ID		STEPS 00000001			
Testing Location/Company		NFSI LAB			
Job/Contract Number		Validation Trials			
Operator		R. Kendzior			
Shoe		CONVERSE BLACK			
Shoe Details		Men's Size 9			
Floor		Calibration Tile			
Floor Details		QUARRY			
Contaminant		CANOLA OIL			
Contaminant Details		NA			
Temperature		Saving Option		Test Duration (min)	
73.3 deg F		<input type="radio"/> All Attempts <input checked="" type="radio"/> Only Good Trials		200	
Humidity		Operational Mode		Report Type	
40.5 % RH		<input checked="" type="radio"/> Standard (sets of three trials) <input type="radio"/> Continuous		HTML	
Storage Location (folder for saving)				Angle Method	
c:\XRDS\Steps Data				Manual	
Configure your setup parameters and press CONTINUE to proceed.					CONTINUE

SETUP	PRELIM	TRIAL	REPORT	ADVANCED	STEPS
Either press GENERATE below to create the Excel report OR click SETUP above to return to SETUP to begin a new series of trials.					
You may choose to use a Windows tool to capture this screen before beginning again.					
COF Values		Comments			
0.089					
0.088					
0.080					
AVG COF	STDEV	Coefficient of Variation			
0.086	0.005	0.056			
Report Will be Saved To:					
c:\XRDS\Steps Data\STEPS 00000001 [Date] [Time].rpt					
Press GENERATE to produce report or use SETUP tab to run new trials.					GENERATE



SETUP	PRELIM	TRIAL	REPORT	ADVANCED	STEPS
Device ID		STEPS 00000001			
Testing Location/Company		NFSI LAB			
Job/Contract Number		Validation Trials			
Operator		R. Kendzior			
Shoe		TRED SAFE UNISEX			
Shoe Details		Men's Size 9			
Floor		Calibration Tile			
Floor Details		QUARRY			
Contaminant		CANOLA OIL			
Contaminant Details		NA			
Temperature		Saving Options		Test Duration (ms)	
73.8 deg F		<input type="radio"/> All Attempts <input checked="" type="radio"/> Only Good Trials		20	
Humidity		Operational Mode		Report Type	
38.0 % RH		<input checked="" type="radio"/> Standard (sets of three trials) <input type="radio"/> Continuous		HTML	
Storage Location (Folder for savings)				Angle Method	
c:\XRDS\Steps Data				Manual	
Configure your setup parameters and press CONTINUE to proceed.					CONTINUE

SETUP	PRELIM	TRIAL	REPORT	ADVANCED	STEPS
Either press GENERATE below to create the Excel report OR click SETUP above to return to SETUP to begin a new series of trials.					
You may choose to use a Windows tool to capture this screen before beginning again.					
COF Values					
0.137		Comments			
0.139					
0.151					
AVG COF	STDEV	Coefficient of Variation			
0.142	0.008	0.055			
Report Will be Saved To					
c:\XRDS\Steps Data\STEPS 00000001 [Date] [Time].rpt					
Press GENERATE to produce report or use SETUP tab to run new trials.					GENERATE

To address the issue of whether a regulation is necessary, a request, at a minimum, must provide information that could support a claim that the regulation is needed to reduce or eliminate a risk of injury. Although you provide information indicating that injuries result from slipping on flooring materials, you do not put forth any information showing a connection between the point-of-sale labeling requirement that you advocate and a reduction in slip, trip, and fall injuries. Indeed, rather than claiming that slip-resistance labeling would reduce or eliminate the risk of injury, your request states only that mandating a floor slip-resistance labeling requirement "will serve as the first tangible step in advancing an elder fall prevention strategy and national agenda.

The proposed requests are similar to that of the federal governments mandatory labeling of food products whereby important nutritional information is provided via a uniformly standardized label, which the consumer can use to make food-purchasing decisions. Certain food contents may present a health risk to certain individuals therefore requiring labeling. Our petition follows the same line of reasoning. Flooring materials, floor treatments, floor cleaning agents and certain types of footwear may increase the slip and fall risk for many people which we believe the consumer has a right to know exactly what the inherent slip risk is for each of these product types. Product manufacturers have a responsibility to communicate such vital safety information to their customers as to prevent injury and through a simple informative product label.

The economic impact to the manufacturing industry will be minimal. Currently most flooring, floor care, and footwear manufactures test their products performance for quality control purposes either in their own in-house laboratory or via a third-party contracted technical facility making the cost to industry to perform COF testing for their products relatively inexpensive.

The NFSI B101 wet DCOF standards date back to 2012 and were originally developed in partnership with the ceramic tile industry which shortly after publication began an aggressive campaign to undermine the NFSI's safety standards with total disregard for public safety. This is also true for the men and women in industry whose safety is directly jeopardized by the lack of reasonable product testing and labeling. Same level slips and falls are the leading cause of workplace injury in most industries costing billions of dollars annually and countless amount of pain, suffering, and even death. The safety of todays labor force is and has been marginalized in the name of corporate profit.

In our 2015 petition one of the public review responses was from the President of one of the nation's largest manufacturers of ceramic tile who opposed our petition stating that if the consumer wanted to know how slippery their products were all they need to do is rub their fingers across its surface. Such comment was both an insult and insight as to how corporate America thinks about public safety.

Today's residential consumer of floor covering, floor cleaners, and footwear have virtually no information as it relates to the slip resistance and therefore the slip related risk of these various products each of which plays a critical role in preventing accidental slips. In short, consumers are left in the dark and are led to believe that all floor coverings, floor cleaners, and footwear are safe only to realize after a serious and debilitating fall that the products they chose were inherently dangerous.

This petition is less about regulation and more about information. We do not propose that manufacturers need to produce products with a specific level of slip resistance (COF) but rather simply inform the consumer as to the Traction Range the particular product possess so that the consumer can make a more informed buying decision.

Most slips and falls are preventable and if the consumer is aware of the slip risk associated with various types of flooring materials, they will be empowered to make more informed choices. Mandating the use of a uniform product label is the first step in reducing the growing epidemic of falls particularly to our most vulnerable citizens, the elderly. In the interest of public safety, we therefore urge the Commission to adopt our simple and modest requests for mandated product testing and labeling as to begin the journey of fall prevention and the turning of the tide in preventable injury.

Sincerely,

A handwritten signature in blue ink, appearing to be 'Russell J. Kendzior', written over two horizontal lines.

Russell J. Kendzior
President and Chairman of the Board
National Floor Safety Institute
1845 Precinct Line Road. Suite 212
Hurst, TX 76054
(817)749-1705

cc:

Mr. Ralph Nader
P.O. Box 19367
Washington, D.C. 20036

References

1. Rubenstein LZ, Robbins AS, Schulman BL, Rosado J, Osterweil D, Josephson KR. Falls and instability in the elderly. *Journal of the American Geriatrics Society* 1988;36:266–78.
2. National Center for Health Statistics. Health, United States, 2005. With Chartbook on Trends in the Health of Americans. Hyattsville (MD): National Center for Health Statistics; 2005.
3. Sahyoun NR, Pratt LA, Lentzner H, Dey A, Robinson KN. The changing profile of nursing home residents: 1985–1997. *Aging Trends*; No. 4. Hyattsville (MD): National Center for Health Statistics; 2001.
4. Rubenstein LZ, Josephson KR, Robbins AS. Falls in the nursing home. *Annals of Internal Medicine* 1994;121:442–51.
5. Rubenstein LZ. Preventing falls in the nursing home. *Journal of the American Medical Association* 1997;278(7):595–6.
6. Rubenstein LZ, Robbins AS, Josephson KR, Schulman BL, Osterweil D. The value of assessing falls in an elderly population. A randomized clinical trial. *Annals of Internal Medicine* 1990;113(4):308–16.
7. Thapa PB, Brockman KG, Gideon P, Fought RL, Ray WA. Injurious falls in nonambulatory nursing home residents: a comparative study of circumstances, incidence and risk factors. *Journal of the American Geriatrics Society* 1996;44:273–8.
8. Bedsine RW, Rubenstein LZ, Snyder L, editors. Medical care of the nursing home resident. Philadelphia (PA): American College of Physicians; 1996.
9. Ejaz FK, Jones JA, Rose MS. Falls among nursing home residents: an examination of incident reports before and after restraint reduction programs. *Journal of the American Geriatrics Society* 1994;42(9):960–4.
10. Ray WA, Taylor JA, Meador KG, Thapa PB, Brown AK, Kajihara HK, et al. A randomized trial of consultation service to reduce falls in nursing homes. *Journal of the American Medical Association* 1997;278(7):557–62.

Attachments

1. NFSI B101.3 Test Method for Measuring the Wet Dynamic Coefficient of Friction of Hard-Surface Walkways
2. NFSI B101.2 Test Method for Determining the Impact on Wet Coefficients of Friction of Various Chemical or Physical Walkway Surface Cleaners and Treatments on Common Hard-Surface Flooring Materials
3. NFSI B101.5 Standard Guide for Uniform Labeling Method for Identifying the Wet Dynamic Coefficient of Friction (Traction) of Floor Coverings, Floor Coatings, Treatments, Commercial and Residential Floor Chemical Agents, and Consumer Footwear
4. NFSI B101.7 Standard Test Method for Lab Measurement of Footwear Heel Outsole Material Coefficient of Friction on Liquid-Contaminated Floor Surfaces