

Nonfatal Self-Inflicted Injuries Among Adults Aged ≥ 65 Years — United States, 2005

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National Center for Injury Prevention and Control



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Public Health Problem

- 372,722 persons visited emergency departments (ED) for nonfatal self-inflicted injuries in 2005¹
- Most common among adolescents and young adults²

1. CDC. WISQARS™ Available at <http://www.cdc.gov/ncipc/wisqars>.
2. CDC, 2002



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Leading Causes of All Nonfatal Violence-Related Injury for those ≥ 65 Years—U.S., 2005¹

1	Assault by other-struck
2	Self-harm-poisoning
3	Self-harm-cut/pierce
4	Assault by other-fall
5	Sexual Assault
6	Assault by other-cut/pierce
7	Self-harm-other



1. CDC. WISQARS™

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Self-Inflicted Injuries Among Older Adults: A Growing Concern

- Consequences may be more serious than those of younger adults
- Fastest growing demographic



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Consequences of Nonfatal Self-Inflicted Injuries among Older Adults

- Less resilient, longer recovery
- Require more health services
 - Avg. cost per incident:¹
 - ◆ ≥65 years=\$9,749
 - ◆ 25-64 years=\$4,995

1. Corso et al., in press



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Study Objective

- Characterize ED visits for nonfatal self-inflicted injuries among older adults aged ≥ 65 years
- Compare to those among younger adults 20-64 years



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Data Source

- **National Electronic Injury Surveillance System (NEISS)**
 - Operated by U.S. Consumer Product Safety Commission
 - Collects data about treatment of patients in U.S. hospital EDs for consumer-product-related injuries
 - All Injury Program (NEISS-AIP)-collects data on ED visits for all types of injuries



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Population

- NEISS-AIP includes data from 66 hospitals¹
 - stratified probability sample of all hospitals in the United States with a minimum of six beds and a 24-hour ED
 - Data are weighted by the inverse of the probability of selection to produce national estimates

1. Kessler & Schroeder, eds., 2000



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Case Definitions

- **Injury:**¹
 - Bodily harm resulting from an acute exposure to an external force or substance
 - Includes unintentional and violence-related
 - Excludes unintended adverse effects of therapeutic drugs or medical care

1. CDC, 2000



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Case Definitions (2)

- Injuries are categorized by intent:¹
 - Unintentional
 - Assault
 - Legal intervention
 - Self-inflicted
 - ◆ Suicidal behavior
 - ◆ Self-abusive behavior



1. CDC, 2000

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Characteristics

- Sex
- Race/ethnicity
- ED discharge
- Mechanism of injury
- History of self harm, substance abuse, and psychiatric conditions
- Alcohol use at time of injury



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Analysis

- Estimates based on weighted data for 4,478 ED visits for nonfatal self-inflicted injuries
- Significant differences assessed using 95% confidence intervals



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TABLE 1: Estimated number and rate of ED visits for nonfatal self-inflicted injuries among adults by age—U.S., 2005

Age Group	No.	Rate per 100,000	(95%CI)
20-64	278,987	156.8	(125.5-188.2)
≥65	7,105	19.3	(13.9-24.8)



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TABLE 2a: ED visits for nonfatal self-inflicted injuries among adults by age and race/ethnicity—U.S., 2005

Race/Ethnicity	20-64		≥65	
	No.	%	No.	%
Non-Hispanic				
White	146,372	52.5	4,956	69.8
Black	28,702	10.3	453	6.4
Hispanic	15,769	5.7	85	1.2*
Other	6,316	2.3	115	1.6*
Unknown	81,827	29.3	1,496	21.1
Total	278,986	100.0	7,105	100.0

* National estimate is unstable



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TABLE 2b: ED visits for nonfatal self-inflicted injuries among adults by age and sex—U.S., 2005

Sex	20-64		≥65	
	No.	%	No.	%
Male	128,929	46.2	3,233	45.5
Female	150,057	53.8	3,872	54.5
Total	278,986	100.0	7,105	100.0



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TABLE 2c: ED visits for nonfatal self-inflicted injuries among adults by age and intent—U.S., 2005

Intent	20-64		≥65	
	No.	%	No.	%
Suicidal behavior	208,307	74.7	5,710	80.4
Self Abuse	15,955	5.7	85	1.2*
Other	31,402	11.3	779	11.0
No diagnosis	23,323	8.4	532	7.5*
Total	278,986	100.0	7,105	100.0

* National estimate is unstable



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TABLE 3a: Characteristics of ED visits for nonfatal injuries attributed to suicidal behavior among adults—U.S., 2005

Mechanism	20-64		≥65	
	No.	%	No.	%
Cut/pierce	31,627	15.2	1,062	18.6
Poisoning	131,174	63.0	3,425	60.0
Firearm	1,275	0.6	154	2.7*
Other	42,309	20.3	1,046	18.3
Unknown	1,922	0.1	23	0.4*
Total	208,403	100.0	5,712	100.0

* National estimate is unstable



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TABLE 3b: Characteristics of ED visits for nonfatal injuries attributed to suicidal behavior among adults—U.S., 2005

History	20-64		≥65	
	No.	%	No.	%
Self harm	46,173	22.2	976	17.1
Bipolar disorder	15,427	7.4	288	5.0*
Depression	139,395	66.9	4,209	73.7
Alcohol abuse	28,164	13.5	537	9.4
Other subs. abuse	25,925	12.4	85	1.5*
Alcohol at time of injury	64,343	30.9	882	15.4**

* National estimate is unstable

** Statistically significant, $p < 0.05$



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TABLE 3c: Characteristics of ED visits for nonfatal injuries attributed to suicidal behavior among adults—U.S., 2005

Disposition	20-64		≥65	
	No.	%	No.	%
Treated then released	47,045	22.6	473	8.3**
Transferred then released	55,266	26.5	1,205	21.1
Hospitalized	101,303	48.6	4,032	70.6**

* National estimate is unstable

** Statistically significant, $p < 0.05$



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Key Findings

- Less likely to have ED visits for nonfatal self-inflicted injuries compared to younger adults
- More likely to be hospitalized after ED treatment for suicide behavior-related injury compared to younger adults

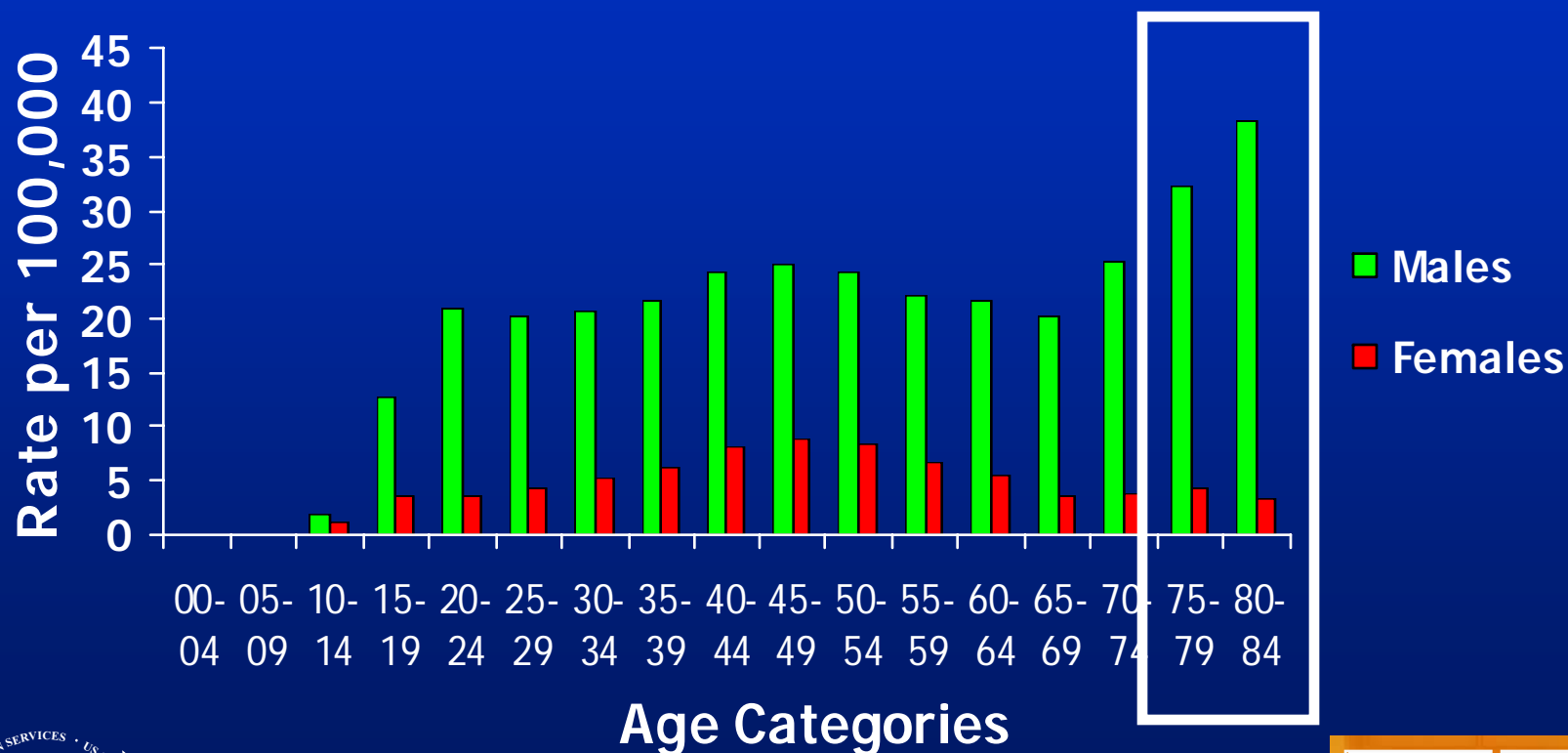


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Previous Research

- Older adult males typically have highest suicide rate¹



1. CDC. WISQARS™

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Previous Research

- Ratio of nonfatal to fatal suicide attempts is much lower for older adults¹
 - ◆ 15-24 years=200:1
 - ◆ >65 years=4:1

1. Conwell, 2001



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Limitations

- Small counts made some rates unstable



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- Classification depended on ED provider



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- Classification depended on ED provider
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Limitations

- Small counts made some rates unstable
- Classification depended on ED provider
- Unable to collect information on dementia, other medical problems, or recent lifestyle changes
- Only captured nonfatal self-inflicted injuries that resulted in ED visits



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Future Research

- Assess more preceding circumstances of injury
- Assess referrals to mental health treatment



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Policy Implications

- Better identification and treatment of clinical depression¹
- More community outreach programs¹

1. Conwell, 2001



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Disclaimer

The findings and conclusions in this presentation have not been formally disseminated by the Centers for Disease Control and Prevention/the Agency for Toxic Substances and Disease Registry and should not be construed to represent any agency determination or policy



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For more information..

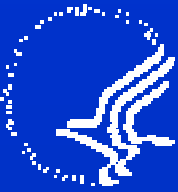
Centers for Disease Control and Prevention. Nonfatal self-inflicted injuries among adults aged ≥ 65 years—United States, 2005. *MMWR* 2007;56:989-993

- Viewed at www.cdc.gov/mmwr



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Thank You

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