NSCISC
NATIONAL SPINAL CORD INJURY STATISTICAL CENTER

Spinal Cord Injury Facts and Figures at a Glance

2018 SCI Data Sheet

This data sheet is a quick reference on demographics and the use of services by people with spinal cord injury in the United States.

The National Spinal Cord Injury Database is a prospective longitudinal multicenter study that currently captures data from an estimated 6% of new SCI cases in the United States. The database has demographic and condition status data through 2017 for 32,727 people with SCI.

National SCI Statistical Center
515 Spain Rehabilitation Center
1717 6th Avenue South
Birmingham, AL 35233-7330

For Statistics: 205-934-3342
For Business: 205-934-3320
TDD: 205-934-4642
FAX: 205-934-2709
E-mail: NSCISC@uab.edu
Website: uab.edu/NSCISC

Incidence

Given the current U.S. population size of 327 million people, a recent estimate showed that the annual incidence of spinal cord injury (SCI) is approximately 54 cases per one million people in the United States, or about 17,700 new SCI cases each year. New SCI cases do not include those who die at the location of the incident that caused the SCI.

Prevalence

The number of people with SCI living in the United States is currently estimated to be approximately 288,000 persons, with a range from 247,000 to 358,000 persons.

Age at Injury

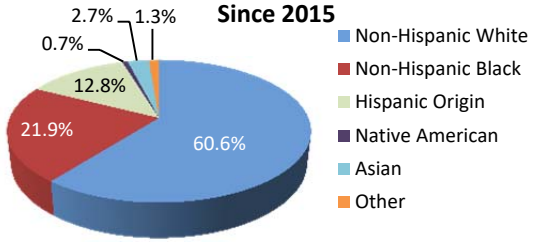
The average age at injury has increased from 29 years during the 1970s to 43 years currently.

Gender

About 78% of new SCI cases are male.

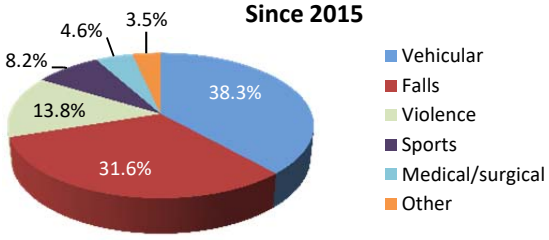
Race/Ethnicity

About 22% of injuries have occurred among non-Hispanic blacks since 2015, which is higher than the proportion of non-Hispanic blacks in the general population (12%).



Cause

Vehicle crashes are currently the leading cause of injury, closely followed by falls. Acts of violence (primarily gunshot wounds) and sports/recreation activities are also relatively common causes.

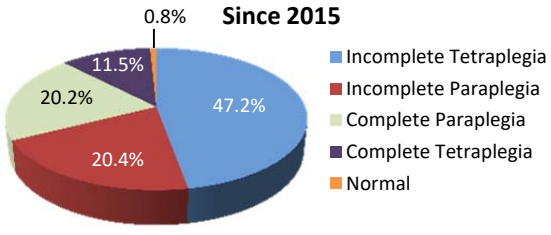


Lengths of Stay

Lengths of stay in the hospital acute care unit have declined from 24 days in the 1970s to 11 days currently. Rehabilitation lengths of stay have also declined from 98 days in the 1970s to 34 days currently.

Neurological Level and Extent of Lesion

Incomplete tetraplegia is currently the most frequent neurological category. The frequency of incomplete and complete paraplegia is virtually the same. Less than 1% of persons experienced complete neurological recovery by the time of hospital discharge.



Spinal Cord Injury Model System
NIDILRR
National Institute on Disability, Independent Living, and Rehabilitation Research

MSKTC SCI · TBI · BURN | Model Systems Knowledge Translation Center

Marital Status

More than half of persons with SCI are single/never married at the time of their injury. The percentage of persons who are married slowly increases over time, as does divorce.

Status (%)	At Injury	Year 1	Year 10	Year 20	Year 30	Year 40
Single	51.2	50.0	41.1	36.1	30.5	25.1
Married	32.9	32.5	33.6	35.1	38.2	43.9
Divorced	9.5	11.2	19.3	23.2	23.9	20.7

Occupational Status

At one year after injury, about 12% of persons with SCI are employed. About one third is employed by 20 years post-injury.

Status (%)	At Injury	Year 1	Year 10	Year 20	Year 30	Year 40
Employed	57.7	12.4	26.9	33.2	32.1	31.5
Student	14.6	15.0	6.5	2.4	0.6	0.0

Education

More than half of persons with SCI are high school graduates at the time of their injury. Level of education slowly increases over time.

Education (%)	At Injury	Year 1	Year 10	Year 20	Year 30	Year 40
High School Only	51.5	54.0	51.1	47.0	43.6	32.3
College or Higher	11.6	12.9	22.1	28.3	35.7	47.3

Re-Hospitalization

About 30% of persons with SCI are re-hospitalized one or more times during any given year following injury. Among those re-hospitalized, the length of hospital stay averages about 22 days. Diseases of the genitourinary system are the leading cause of re-hospitalization, followed by disease of the skin. Respiratory, digestive, circulatory, and musculoskeletal diseases are also common causes.

Lifetime Costs

The average yearly expenses (health care costs and living expenses) and the estimated lifetime costs that are directly attributable to SCI vary greatly based on education, neurological impairment, and pre-injury employment history. These estimates do not include any indirect costs such as losses in wages, fringe benefits, and productivity (indirect costs averaged $74,509 per year in 2017 dollars).

Severity of Injury	Average Yearly Expenses (in 2017 dollars)		Estimated Lifetime Costs by Age at Injury (discounted at 2%)	
	First Year	Each Subsequent Year	25 years old	50 years old
High Tetraplegia (C1–C4) AIS ABC	$1,102,403	$191,436	$4,891,398	$2,688,229
Low Tetraplegia (C5–C8) AIS ABC	$796,583	$117,437	$3,573,960	$2,198,305
Paraplegia AIS ABC	$537,271	$71,172	$2,391,872	$1,569,714
Motor Functional at Any Level AIS D	$359,783	$43,700	$1,634,139	$1,153,420

Data Source: Economic Impact of SCI published in the journal *Topics in Spinal Cord Injury Rehabilitation,* Volume 16, Number 4, in 2011.
ASIA Impairment Scale (AIS) is used to grade the severity of a person's neurological impairment following spinal cord injury.

Life Expectancy

The average remaining years of life for persons with SCI have not improved since the 1980s and remain significantly below life expectancies of persons without SCI. Mortality rates are significantly higher during the first year after injury than during subsequent years, particularly for persons with the most severe neurological impairments.

Age at Injury	No SCI	Life Expectancy (years) for Post-Injury by Severity of Injury and Age at Injury									
		For Persons Who Survive the First 24 Hours					For Persons Surviving at Least 1 Year Post-Injury				
		AIS D—Motor Functional at Any Level	Para	Low Tetra (C5–C8)	High Tetra (C1–C4)	Ventilator Dependent Any Level	AIS D—Motor Functional at Any Level	Para	Low Tetra (C5–C8)	High Tetra (C1–C4)	Ventilator Dependent-Any Level
20	59.6	52.9	45.7	40.3	34.0	11.3	53.2	46.2	41.2	35.2	19.0
40	40.7	35.2	29.7	24.9	20.9	8.7	35.4	30.2	25.7	22.1	13.3
60	23.2	19.5	16.1	13.2	11.1	3.7	19.7	16.5	14.0	12.5	7.9

Cause of Death

Persons enrolled in the National SCI Database since its inception in 1973 have now been followed for 40 years after injury. During that time, the causes of death that appear to have the greatest impact on reduced life expectancy for this population are pneumonia and septicemia. Mortality rates are declining for cancer, heart disease, stroke, arterial diseases, pulmonary embolus, urinary diseases, digestive diseases, and suicide. However, these gains are being offset by increasing mortality rates for endocrine, metabolic and nutritional diseases, accidents, nervous system diseases, musculoskeletal disorders, and mental disorders. There has been no change in the mortality rate for septicemia in the past 40 years, and there has only been a slight decrease in mortality due to respiratory diseases.

 This is a publication of the National Spinal Cord Injury Statistical Center in collaboration with the Model Systems Knowledge Translation Center. The contents of this publication were developed under grants from the National Institute on Disability, Independent Living, and Rehabilitation Research (NIDILRR grant numbers 90DP0083 and 90DP0082). NIDILRR is a Center within the Administration for Community Living (ACL), Department of Health and Human Services (HHS). The contents of this publication do not necessarily represent the policy of NIDILRR, ACL, HHS, and you should not assume endorsement by the Federal Government.

Data from the National SCI Database is from 29 federally funded SCI Model Systems since 1973. Presently, there are 14 systems and 5 Form II (follow up) centers sponsored by NIDILRR. For a complete list of current SCI Model Systems, go to www.msktc.org/sci/model-system-centers.

Citation: National Spinal Cord Injury Statistical Center, Facts and Figures at a Glance. Birmingham, AL: University of Alabama at Birmingham, 2018.