Spinal Cord Injury Facts and Figures at a Glance

This data sheet is a quick reference on demographics and the use of services by people with spinal cord injury in the United States (U.S.). Much of the information reflects recent data collected since 2015. Historical information reflects data collected since the early 1970s.

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 2018 for 33,406 people with SCI.

Incidence

Given the current U.S. population size of 328 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 17,730 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 estimated number of people with SCI living in the United States is approximately 291,000 persons, with a range from 249,000 to 363,000 persons.


Age at Injury

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

Gender

About 78% of new SCI cases are male.

Race/Ethnicity

Recently, about 23% of injuries have occurred among non-Hispanic blacks, which is higher than the proportion of non-Hispanic blacks in the general population (13%).

Cause

Vehicle crashes are the most recent 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 recently. Rehabilitation lengths of stay have also declined from 98 days in the 1970s to 31 days recently.

Neurological Level and Extent of Lesion

Recently, incomplete tetraplegia is 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.

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Education
Since 2015, about a quarter of persons with SCI have a college degree at the time of their injury, compared with 46% of people who survived 40 years of injury.

<table>
<thead>
<tr>
<th>Education (%)</th>
<th>At Injury</th>
<th>Year 1</th>
<th>Year 10</th>
<th>Year 20</th>
<th>Year 30</th>
<th>Year 40</th>
</tr>
</thead>
<tbody>
<tr>
<td>High School Only</td>
<td>51.7</td>
<td>52.7</td>
<td>51.3</td>
<td>48.2</td>
<td>40.5</td>
<td>33.9</td>
</tr>
<tr>
<td>College or Higher</td>
<td>24.4</td>
<td>26.2</td>
<td>26.6</td>
<td>24.7</td>
<td>35.8</td>
<td>46.3</td>
</tr>
</tbody>
</table>

Occupational Status
Since 2015, 17% of persons with SCI are employed at year 1 post-injury. The employment rate increases over time to 32% at 30 years post injury.

<table>
<thead>
<tr>
<th>Status (%)</th>
<th>At Injury</th>
<th>Year 1</th>
<th>Year 10</th>
<th>Year 20</th>
<th>Year 30</th>
<th>Year 40</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employed</td>
<td>66.0</td>
<td>17.4</td>
<td>23.0</td>
<td>28.8</td>
<td>31.6</td>
<td>31.8</td>
</tr>
<tr>
<td>Student</td>
<td>8.1</td>
<td>7.5</td>
<td>3.1</td>
<td>1.0</td>
<td>0.3</td>
<td>0.0</td>
</tr>
</tbody>
</table>

Mortality rates are greatly affected by age at injury and the length of survival. 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. The below estimates do not include any indirect costs such as losses in wages, fringe benefits, and productivity (indirect costs averaged $76,327 per year in 2018 dollars).

Re-Hospitalization
Since 2015, 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 19 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.

Historical Lifetime Costs
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.

Historical 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.

Historical Causes of Death
Persons enrolled in the National SCI Database since its inception in 1973 have now been followed for 45 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 45 years, and there has only been a slight decrease in mortality due to respiratory diseases.