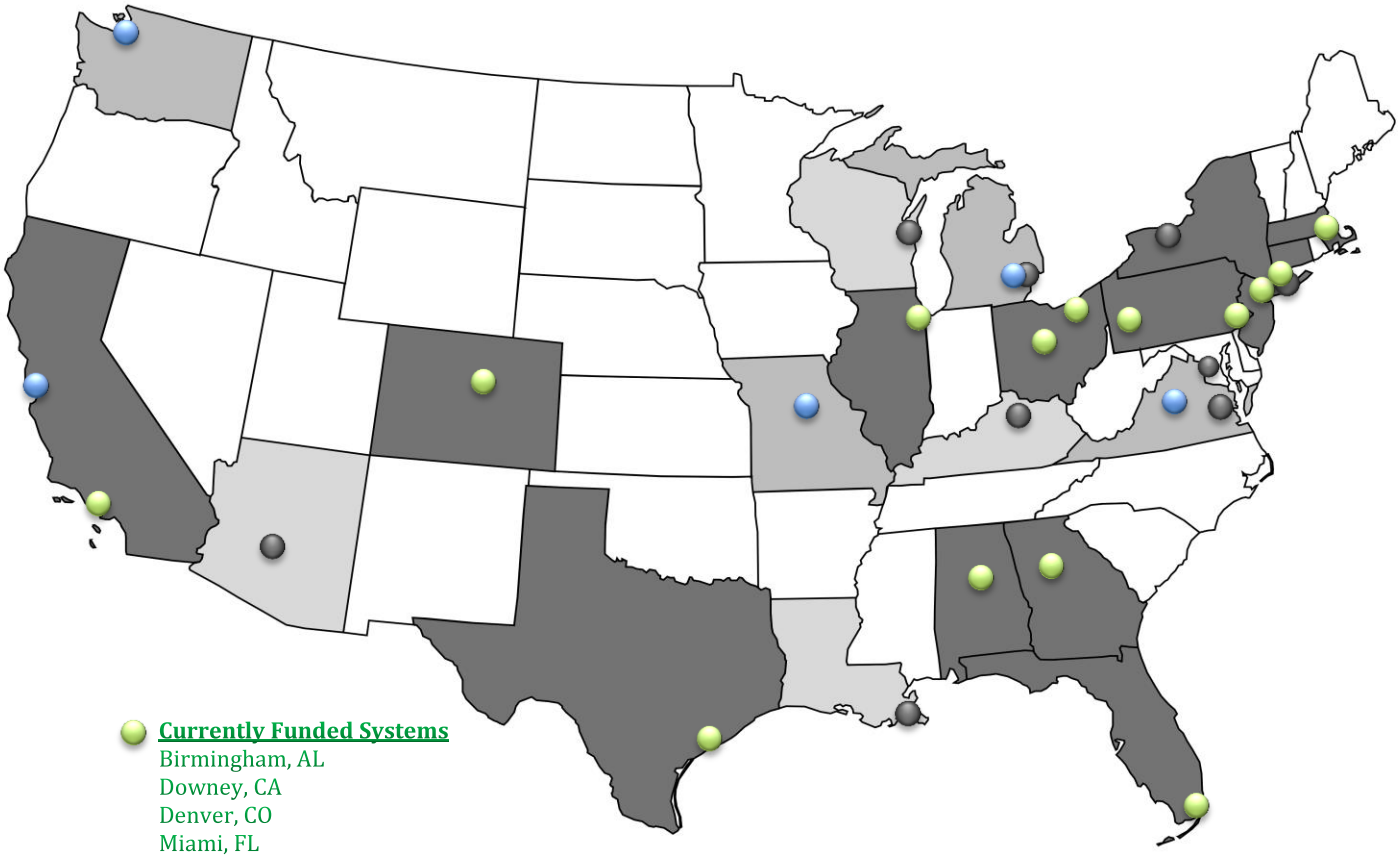
NSCISC National Spinal Cord Injury Statistical Center

Spinal Cord Injury Model Systems

2017 Annual Report – Public Version



Currently Funded Systems
Birmingham, AL
Downey, CA
Denver, CO
Miami, FL
Atlanta, GA
Chicago, IL
Boston, MA and CT
West Orange, NJ
Mount Sinai, NY
Cleveland, OH
Columbus, OH
Philadelphia, PA
Pittsburgh, PA
Houston, TX

Form II Collection
San Jose, CA
Ann Arbor, M
Columbia, MO
Fishersville, VA
Seattle, WA

Previously Funded Systems
Phoenix, AZ
NRH, DC
Louisville, KY
New Orleans, LA
Detroit, MI
NYU, NY
Rochester, NY
Richmond, VA
Milwaukee, WI

UAB MEDICINE
PHYSICAL MEDICINE AND REHABILITATION

Spinal Cord Injury Model System
NIDILRR

NSCISC
NATIONAL SPINAL CORD INJURY STATISTICAL CENTER

COMPLETE PUBLIC VERSION OF

THE 2017 ANNUAL STATISTICAL REPORT

for the

SPINAL CORD INJURY MODEL SYSTEMS

This is a publication of the National Spinal Cord Injury Statistical Center, Birmingham, Alabama

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Contents

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Part I

The National Spinal Cord Injury Statistical Center Activities

October 2016 – November 2017

The current grant cycle of the Spinal Cord Injury Model Systems (SCIMS) and the National Spinal Cord Injury Statistical Center (NSCISC) began on October 1, 2016 and ends on September 30, 2021. This report summarizes the activities pertaining to SCIMS data collection as well as database management and utilization that have occurred during the first year and 1 month of the grant cycle.

National SCI Statistical Center

In 1983, the University of Alabama at Birmingham's Department of Rehabilitation Medicine received federal grant funds to establish a national SCI data center. The UAB operation succeeded the National Spinal Cord Injury Data Research Center that served the Model SCI Care Systems Project between 1973 and 1981. Today, UAB's National Spinal Cord Injury Statistical Center (NSCISC) supervises and directs the collection, management and analysis of the world's largest spinal cord injury database. Organizationally, UAB's SCI Statistical Center is at the hub of a network of 14 federally-sponsored regional Spinal Cord Injury Model Systems located at major medical centers throughout the United States. In each of these settings, SCI Model System personnel collect and submit acute, rehabilitation and follow-up (viz. annual, long-term post-discharge) data on SCI patients who received care in the "System" following injury.

To assure comparability of data acquired by personnel in various centers, rigid scientific criteria have been established for the collection, management and analysis of information entered into the database. Moreover, the NSCISC staff has developed extensive quality control procedures that further enhance the reliability and validity of the database.

Model SCI Systems

Presently there are 14 systems and 5 follow-up centers sponsored by the National Institute on Disability and Rehabilitation Research, Office of Special Education and Rehabilitative Services, U.S. Department of Education:

Current Model Systems

- **Alabama**
  University of Alabama at Birmingham SCI Care System -- UAB Spain Rehabilitation Center
  Birmingham, AL (205) 934-3283
- **California**
  Southern California Spinal Cord Injury Model System -- Rancho Los Amigos National Rehabilitation Center, CA (562) 401-8111
- **Colorado**
  Rocky Mountain Regional SCI System -- Craig Hospital
  Englewood, CO (303) 789-8306
- **Florida**
  South Florida Spinal Cord Injury Model System -- University of Miami, Miami, FL (305) 243-9516
- **Georgia**
  Southeastern Regional Spinal Cord Injury Model System -- Shepherd Center, Inc., Atlanta, GA (404) 350-7591
- **Illinois**
  Midwest Regional SCI Care System -- Rehabilitation Institute of Chicago
  Chicago, IL (312) 238-6207
- **Massachusetts**
  Spaulding New England Regional Spinal Cord Injury Center -- Spaulding Rehabilitation, Boston, MA (617) 573-2862 and Gaylord Specialty Hospital (203) 679-3563
- **New Jersey**
  Northern New Jersey SCI System -- Kessler Institute for Rehabilitation
  West Orange, NJ (973) 243-6973
- **New York**
  Ichan School of Medicine at Mount Sinai -- Department of Rehabilitation Medicine
  New York, NY (212) 241-3084

- **Ohio**
  - Ohio Regional Spinal Cord Injury Model System, Ohio State University, Wexner Medical Center, Columbus, Ohio (614) 366-3877
  - Northeast Ohio Regional Spinal Cord Injury System, Case Western Reserve University, Cleveland, OH (216) 778-8781
- **Pennsylvania**
  - Regional SCI System of Delaware Valley -- Thomas Jefferson University Hospital Philadelphia, PA (215) 955-6579
  - University of Pittsburgh Model System on Spinal Cord Injury - University of Pittsburgh, Pittsburgh, PA (412) 232-7949
- **Texas**

Texas Regional SCI System – TIRR Memorial Hermann, Houston, TX (713) 797-5972

Follow-up Centers

These five centers are subcontracted to submit follow-up data and are also former model systems.

- **California**
  Santa Clara Valley Medical Center, San Jose, CA (408) 885-4177 or 1-800-352-1956
- **Michigan**
  University of Michigan – Ann Arbor, MI (734) 763-0971
- **Washington**
  Northwest Regional SCI System -- University of Washington, Seattle, WA (800) 366-5643
- **Missouri**
  Columbia, Missouri (collected by NSCISC (205) 934-3283)
- **Virginia**
  Fishersville, Virginia (collected by NSCISC (205) 934-3283)

Former and Non-participating SCI Systems

Data from currently non-participating SCI systems (Phoenix, AZ; NRH, DC; New Orleans, LA; Detroit, MI; NYU, NY; Rochester, NY; Cleveland, OH; Richmond, VA and Milwaukee) have been included.

For more information:

National Spinal Cord Injury Statistical Center
www.nscisc.uab.edu

Spinal Cord Injury Information Network
www.spinalcord.uab.edu

National Institute on Disability, Independent Living and Rehabilitation Research
https://www.acl.gov/programs/research-and-development

NSCISC Web Site

The NSCISC public information web pages include Frequently Asked Questions, National SCI Database information, life expectancy calculator, intercultural resources, publications, and documents that are available free of charge to anyone in the world at any time via the internet. An analysis was done recently of the new NSCISC domain using Google Analytics to track the visitors and hits to our website. From November 1, 2015 to December 31, 2016, the NSCISC website drew approximately 38,332 visits; 82.65% were from the Americas, 9.40 % were from Europe,5.36% from Asia, and the rest were from other continents.

In December 2016, when using the Google web site to search for "spinal cord injury", rankings on our UAB Spinal Cord Information Network web site appeared 15th in the list of top 20 web sites among approximately 31 million results found. Other internet search engines such as Bing, list these UAB web sites in the top 10-15 results when searching for keywords similar to "spinal cord injury statistics". When using the narrower search for "national spinal cord injury statistics", the NSCISC web site is number one and also has related pages in the second and third results out of 1.1 million results listed by Google. Moreover, almost all of the top 20 "national spinal cord injury statistics" sites found used data taken directly from the NSCISC web site, and for many of those sites the NSCISC data were the only data provided.

In December 2016, there were roughly 2,500 links on the World Wide Web to one or more pages of our new NSCISC web site. The number of links to the NSCISC site by other sites as well as the replication of NSCISC data on other sites is a reflection of the value, usefulness, and clarity of the information offered by the NSCISC SCI Facts and Figures at a Glance.

Public versions of the NSCISC Annual Reports

The NSCISC Annual Report includes a comprehensive examination of almost all variables in the database with historic variable-oriented information and tables of descriptive analysis using data from the fall data submission. The 2004 - 2016 Annual Statistical Reports are available to the public by request and also available on the NSCISC web site. Stratifications of the data by SCIMS have been removed from this report so that only aggregate information is available.

Facts and Figures at a Glance

The Facts and Figures at a Glance reports demographic and high interest variables, such as cause of injury, occupational status, lifetime costs and life expectancy by categorical level of injury. The Journal of Spinal Cord Medicine publishes this report on a regular basis. Historic Facts and Figures at a Glance have been archived and are available on the NSCISC web site for download.

Fact Sheets

The NSCISC is creating a set of informational fact sheets which summarize data and recent trends in spinal cord injury. The first of the set is entitled 'Recent Trends in Causes of Spinal Cord Injuries' and is on the NSCISC web site.

Quick Search Public Tools: Causes of SCI and Life Expectancy

To better serve NSCISC consumers, two new tools were made available for the public: Causes of SCI and Life Expectancy Calculator. 'Causes of SCI' is a quick search tool to find the leading causes of spinal cord injury over time. Consumers may sort the national database by type of report (full or condensed), multiple timeframes dating back to 1973, race/ethnicity, and gender. The total numbers represent injuries reported by 29 Spinal Cord Injury Model Systems and do not include causes of all injuries that occurred in the US. Life Expectancy is a quick search tool to provide an estimate for the life expectancy of a person with spinal cord injury who: is at least 2 years post-spinal cord injury, has access to good quality healthcare, is not on a ventilator and has not regained all normal feeling and movement, in which case life expectancy is considered the same as the general population.

Publications

NSCISC investigators

In previous cycles, there were 126 peer-reviewed journal articles and 18 book chapters based in whole or in substantial part on the SCIMS database that were either authored or co-authored by NSCISC personnel. Citations for all of these articles and book chapters appear in previous reports and can be found at Database Publications.

Since the start of the current grant cycle, there have been 3 published peer-reviewed journal articles based in whole or substantial part on the SCIMS database authored or co-authored by NSCISC personnel. Citations for the first 2 of these appeared in previous reports. The citation for the latest publication is as follows (note that the International SCI Core Data Set is based almost entirely on the experiences of the model systems and the NSCISC database):

1. Biering-Sorensen F, DeVivo MJ, Charlifue S, Chen Y, New PW, Noonan V, Post MWM, Vogel L. International spinal cord injury core data set (version 2.0) – including standardization of reporting. **Spinal Cord** 2017;55:759-764.

Non-NSCISC investigators

The NSCISC encourages the use of the database and is willing to provide any assistance necessary to those who conduct research using the SCIMS database. The NSCISC also appreciates being notified of any ongoing work and publications that involve the use of the NSCISC database. To the knowledge of the NSCISC, there have been 89 papers published using the SCIMS database with non-NSCISC authors prior to this cycle. Citations for all of these articles appear in previous reports and can be found at Database Publications.

Since the start of the current grant cycle, we are aware of 3 published peer-reviewed journal articles using the NSCISC database with non-NSCISC authors. Citations for these 3 articles appeared in the previous report.

Part II

Status of the National SCI Database

All data submitted to the NSCISC by November 3, 2017, are included in this report. In brief, the Form I dataset includes baseline demographic and clinical information of persons who met eligibility criteria and the Form II dataset includes sociodemographic and outcome data of Form I participants obtained at follow-up. In 1987, the Registry dataset was created to store limited baseline information of persons who did not fully qualify for enrollment.

As of November 3, 2017, the National SCI Database contained information on 32,727 Form I participants and 119,391 Form II records successfully collected from 27,271 participants by phone, in person, by chart review, or by mailed survey. Records with no collected data (those deemed 'Lost to Follow-up') are not included in these tables. The combined total of Registry, Form I, and Form II records in the National SCI Database is 165,990 records. **(**Table 1: Total forms entered into the National SCI Database as of November, 2017***)***

Increase in the Number of Records: Tables 2 – 4

Table 2 reports the number of new records entered into the database since the last Annual Report on December 2, 2016. The number of Registry participants has increased by 222, the number of Form I records has increased by 569, and the number of Form II records has increased by 2,409 (excluding those deemed 'Lost to Follow-up').

Since the beginning of the 2016-2021 funding cycle, the number of Registry records has increased by 222, the number of Form I records has increased by 569, and the number of Form II records has increased by 2,409 (excluding those 'Lost to Follow-up') **(Table 3)**.

Table 4 presents the total number of Form I participants who were admitted since December 2016 and the count and percentage of these participants who were admitted the day of or the day following the injury (classified as Day-1 Admissions). This information is provided because the reporting procedures implemented in November 1995 resulted in a substantial increase in the number of variables collected on participants who enter the System as Day-1 Admissions.

Nationally, 38.8% of participants admitted since December 2016 have been Day-1 Admissions. System percentages range from 88.5% to 0.0%.

Participants by Year of Injury and Year of Data Collection: Tables 5 – 9

The number of participants entered into the National SCI Database by years of injury are depicted in **Tables 5 - 7**. These tables represent Registry, Form I, and Form I Day-1 admission records.

In December 1981, funding was suspended for the National SCI Data Research Center (NSCIDRC) in Phoenix, AZ. Its successor, the UAB-SCI Data Management Service, did not initiate formal operations until March 1, 1983. The decline in participants entered into the database in both 1981 and 1982 is undoubtedly the result of this interruption. The decline in participants enrolled in the National SCI Database since 1984 is the result of fewer Systems being funded by NIDILRR than in previous years.

Table 5 presents the number of Registry participants enrolled by year of injury. The data reflect the historical changes in the SCIMS program. In 1987, criteria for enrollment in the National SCI Database were changed by restricting eligibility to participants admitted to the System within 60 days of injury (the previous criterion was 1 year) and more narrowly defining System catchment areas. Because of this restriction, an additional Registry form was created to collect limited demographic data on those participants who no longer meet eligibility requirements for full data collection.

Variation in Form I participant enrollment is primarily due to three factors: number of funded Systems, eligibility criteria, and size of funded Systems (**Table 6**). The number of funded Systems changed in 1985, 1990, 2000, and 2006 (see chart immediately below) as a result of NIDDILR's competitive selection policy. Eligibility criteria were changed in 1987, restricting Form I enrollment, then in 2000, the eligibility criteria were changed to reflect pre-1987 requirements.

Years	1985-1990	1990-1995	1995-2000	2000-2006	2006-2011	2016-2021
# of Systems	13	13	18	16	14	14

'Date of Injury' and 'Date of Admission to System' data have been collected since 1973. **Table 7** reflects the Form I Day-1 admissions since then. New reporting procedures were implemented in 1995, leading to a substantial number of additional variables collected on participants who entered the System the day of or the day following their injury.

Table 8 presents the total number of follow-up records in the database for each post-injury year. Totals do not include the Form II records that are coded 'Lost to Follow-up.'

Table 9 presents the total number of follow-up records in the database for each post-injury year by calendar year of data collection. Prospective Form II follow-up data collection began in 1975, originally on a yearly basis. From 1996 through September 2000, Form II was collected in post-injury years 1, 2, 5, and 10 and every 5 years thereafter for all participants, except for a

sample of 125 participants from each System for whom a reduced set of Form II data was collected every year. To further reduce the workload, beginning in October 2000, Form II data collection was no longer required at year 2, with one exception: if a participant was still hospitalized for his/her initial hospital care during the first anniversary year, the year 2 (but not year 1) follow-up would be required. In addition, the collection of Form II data yearly from 125 participants per System was terminated. The decrease in the number of Form II records for off-years reflects such changes in the frequency of follow-up data collection. The date on which a record is first entered into the database has been documented since October 1986. Data reported to the database between 1975 and 1986 were thus combined as one group in the table.

Cause of Death: Table 10

All survival analyses in this report use the Collaborative SCI Survival Study database maintained at the NSCISC. This database contains considerably more patients than the National SCI Database contains and has much longer follow-up on individual patients through use of the Social Security Death Index (SSDI), Equifax Nationwide Death Search, on-line obituaries, and the National Death Index (NDI). The Collaborative SCI Survival Study database includes Form I and Registry participants as well as other patients who were treated at an SCI Model System but are not in the National SCI Database. The Collaborative SCI Survival Study database is also the database that was used to produce the chapter on long-term survival and causes of death that was included in the book Spinal Cord Injury: Clinical Outcomes from the Model Systems, published in 1995. Therefore, these data represent an update of the 1992 estimates provided in that book chapter as well as an update of the 2016 Annual Report.

Primary cause of death for the 14,918 deceased participants in the Collaborative SCI Survival Study database appears in **Table 10.** Only persons admitted to a System since 1973 and treated at a System within 1 year of injury were included in this analysis. The number of deaths with unknown causes is high because searches of the NDI for causes of death have only been conducted through 2015. As a result, there are still 2,245 persons whose primary cause of death is unknown, and these were not included in the calculation of any percentages. The assumption is that unknown causes of death will be distributed the same way as known causes. These deaths of unknown causes are almost always persons who died after discharge. Therefore, causes of death that are more likely to occur after discharge, such as diseases of the genitourinary system, neoplasms, and accidents, suicides, and homicides may be somewhat underestimated proportionately.

In participants for whom cause of death is known, diseases of the respiratory system were the leading cause of death (65.4% of these were cases of pneumonia). The second leading cause of death was infectious and parasitic diseases. These were usually cases of septicemia (90.0%) and were usually associated with decubitus ulcers, urinary tract infections, or respiratory infections. Also included in this category were 84 cases of AIDS (5.5%). Cancer ranked third, followed by hypertensive and ischemic heart disease. Specific locations of cancer included lung (338 cases,

26.2%), followed by bladder (116 cases, 9.0%); colon/rectum (113 cases, 8.8%); prostate (71 cases, 5.5%); and liver (53 cases, 4.1%). Other heart disease ranked fifth; however, these cases were often unexplained heart attacks (38.5%, ICD10CM code I46.9) that usually do not represent a true underlying cause of death. Rather, such cases reflect the relatively poor quality of cause-of-death data and reporting practices on many death certificates of SCI patients. Hence, mortality from other heart disease is probably overestimated.

Unintentional injuries were the sixth leading cause of death, followed by diseases of the digestive system, cerebrovascular disease, suicide, and diseases of pulmonary circulation (91.4% of which were cases of pulmonary emboli). Pulmonary emboli usually occurred prior to first definitive discharge.

It should be noted that the categories of 'Unintentional injuries,' 'Suicides,' and 'Homicides' do not include any persons dying from multiple injuries sustained during the original accident. However, these categories do include persons involved in fatal events following discharge. If the 127 cases of subsequent trauma of uncertain nature are divided proportionately between the following three categories, then an additional 79 unintentional injuries, 37 suicides, and 11 homicides took place.

Long-Term Survival: Table 11

Table 11 presents cumulative survival for the Collaborative SCI Survival Study database. Only persons injured since 1973 and treated at a System within 1 year of injury were included in this analysis. Data from currently non-participating Systems are included in the national table.

Patients were considered 'Withdrawn Alive' if: 1) a follow-up form (Form II) for 2016 or later was submitted, indicating the patient was known to be alive, 2) the patient's follow-up was discontinued due to neurologic recovery or transfer to another System, or 3) searches performed in 2017 did not indicate a reported death. The proportion of patients who died in each post-injury year ranged from 4.69% in year 41 to 1.62% in year 10. Annual death rates for those who survived the first post-injury year averaged 2.38% and increased over time as the population aged.

The cumulative 10-, 20-, 30-, and 40-year survival rates for patients with an SCI were 81.06%, 66.69%, 51.99%, and 38.29%, respectively. Median (50%) survival for the total sample is estimated to occur at 31.3 years (±0.15 years (standard error of the median)) after injury. However, because of the high proportion of losses to follow-up, as well as the known under-reporting of SCI fatalities occurring shortly after injury, this information should be interpreted with caution. It is likely some patients were lost to follow-up because they died. Therefore, these annual mortality rates may be underestimated.

Standardized Mortality Ratios: Tables 13A – 13B

Standardized mortality ratios (SMRs) for the Collaborative SCI Survival Study database by neurologic level of injury, ASIA Impairment Scale (AIS) grade, and current age appear in **Table 13A**. The AIS, is used to quantify the degree of residual neurologic function. All persons who were admitted within 1 year of injury to a System since 1973 and survived at least 24 hours after injury were included in this analysis. Comparable SMRs for persons who survive the first post-injury year appear in **Table 13B**. For each neurologic category and age group, the observed number of deaths was compared to an expected number of deaths based on observed length of follow-up and age-sex-race-specific mortality rates for the general U.S. population in 2000 using methods outlined in detail by Smart and Sanders [1]. The year 2000 was chosen because it was the mid-year of follow-up for the SCI population. All follow-up data through 2017 were used.

Differences in calculated SMR values between **Tables 13A and 13B** increase with increasing injury severity due to the much higher first-year mortality rates among more severely injured persons. The SMR is statistically significant for all neurologic groups in both 24-hour and 1-year survivors. Among 1-year survivors, those who are ventilator-dependent and less than 31 years of age have 50.78 times greater mortality than persons of the same age, sex, race, and length of follow-up who do not have an SCI, while persons who have an AIS D injury and are at least 61 years of age, regardless of injury level, have only 1.51 times greater mortality than their counterparts without an SCI.

Life Expectancy: Tables 14A – 14B

Life expectancies for SCI patients who survived at least 24 hours after injury, by age at injury (in 5-year intervals) and neurologic level and extent of lesion, appear in **Table 14A**. Comparable estimates for persons who survived the first post-injury year, by current age, appear in **Table 14B**. These life expectancy estimates were calculated based on applying the SMR values from **Tables 13A and 13B** to the life table for the U.S. general population in the year 2013.

Prior to 2016, life expectancy estimates contained in NSCISC annual reports were based on applying a constant SMR for each neurologic group to all ages. That was the method used by SCI researchers when the NSCISC began making these calculations. However, as sample sizes and lengths of follow-up increased, it became clear that the SMR decreased significantly as age increased. Therefore, this method (the use of a constant SMR with advancing age) typically results in an overestimation of life expectancy at younger ages and an underestimation of life expectancy at older ages, particularly for more severely impaired persons. As a result, more recent reports of life expectancy based on the SMR method use age-specific SMR values for each neurologic group, such as those appearing in **Tables 13A and 13B**. Until 2016, the NSCISC continued to report life expectancy estimates in its annual reports based on a single SMR for each neurologic group to maintain consistency and facilitate evaluation of trends over time. However, the NSCISC believes the benefits of comparability to recently published studies

combined with enhanced precision of life expectancy estimates derived from using age-specific SMRs now outweigh the benefits of maintaining consistency with previous methods of calculation. Therefore, since 2016, life expectancy estimates have been based on age-specific SMRs.

As a result of the change in methodology, the life expectancy estimates contained in this annual report are slightly higher than those contained in reports prior to 2016, with the exception of young persons with C1-4 injury levels or ventilator dependency. This should not be interpreted to imply that life expectancies have changed. The differences with prior estimates are due entirely to the change in methodology. Readers interested in more precise estimates are referred to the NSCISC website life expectancy calculator that includes other risk factors such as sex, cause of injury and health insurance status; separates age, injury levels and AIS grades more precisely; and takes any historical trends in life expectancy into account by using the more flexible and statistically powerful method of person-year multiple logistic regression. Methods for estimating life expectancy that are used by the NSCISC website calculator are detailed in two articles by Strauss et al. [3] and DeVivo[4].

Life expectancies for persons with SCI remain substantially below normal, particularly for persons with tetraplegia and ventilator dependency. Moreover, although mortality rates during the first post-injury year have decreased steadily since the 1970s, annual mortality rates after the first post-injury year have not changed since the early 1980s. Therefore, although general population life expectancy is increasing, life expectancy for persons with SCI who have survived the first year after injury has remained relatively constant, and the gap in life expectancy between persons with SCI and the general population of comparable age, sex, and race, is increasing.

Values in these tables should be considered rough estimates of life expectancy of individual persons because the neurologic categories are rather broad. At a minimum, important prognostic factors that should be considered in determining an individual life expectancy include age, exact neurologic level of injury (particularly among persons with tetraplegia), AIS grade, length of survival that has already occurred after injury, and to a lesser extent, etiology of injury, gender, race, education, and access to care (availability of good insurance coverage or other financial resources)[2]. Significant co-morbidities (cancer, heart disease, diabetes, etc.) should also be considered when present[3].

Form II Follow-up Status: Tables 15-19

Table 15 describes the type of medical care being provided to the participant. Out of 182,698 records, 37.4% of participants came into a System for an appointment during the follow-up window (18 months). The variation between Systems in the category of 'System Appointments' was distinct, ranging from 15.8% to 59.0%. The coding category of 'Future Follow-up Not Required' is for those participants who achieve minimal deficit, defined as no significant motor,

bladder or bowel, or neurologic impairment. For these participants, Form II follow-up is not required, but Systems may choose to continue interviews.

Table 16 categorizes the type of follow-up by participants grouped according to post-injury year. Including those 'Lost' due to break in funding, the percentage of eligible participants lost to follow-up ranged from 17.0% for post-injury year 1 participants to 64.7% for post-injury year 20 participants. Prior to coding a Form II as 'Lost,' the following minimal tracking activities are required: 1) SSDI, Genealogy, or other death search sites are checked for record of death; 2) System records are searched for recent activity and updated contact information; 3) at least two free internet searches and a fee-based search are conducted, if available; 4) viable phone numbers are called at least six times at different times of the day and week; and 5) a Form II Survey is mailed to a viable address.

Table 17 documents the reasons why follow-up data are not obtainable for those participants whose category of follow-up care is 'Lost.' This 'Reason for Lost' variable was added to the database in January 1998 with four categories, including the 'Other' category used to determine if expanded coding categories will be needed in the future. In 2007, the 'Refused/Withdrawn' code was separated into two codes to allow participants a choice to refuse this interview (and be contacted in the next cycle) or to withdraw from the study and not be contacted again unless re-consented. The 'Identity Unknown' code was included in 2009 to be used by Systems in identifying participants whose identity is no longer available due to the break in funding. To help specify the reason for 'Unable to Contact,' the following five codes were added to the database in October 2011: 1) 'Contact made but survey not completed,' 2) 'Attempted contact but language barrier prevented collection,' 3) 'Attempted contact but moved out of country,' 4) 'No contact - Apparently valid contact information,' and 5) 'No contact - No valid contact information.' The 'Identity unknown to NSCISC' code was also added in October 2011 for participants enrolled by de-funded Systems, whose identity may still be known at the enrolling System but is not available to the NSCISC for data collection.

Before October 2011, once a Form II was submitted as 'Lost,' future follow-up was still pursued but no additional Form II coded 'Lost' was required at next follow-up if that participant was still 'Lost.' This policy was changed in the 2016-2021 grant cycle. The submission of a Form II for previously lost participants is now required for the eligible anniversary year (1, 5, 10, 15, etc.) unless participants died, reached neurologic recovery, or withdrew consent, or their identifying information was lost. To fill gaps in the existing database, approximately 33,846 Form II records were inserted to reflect the 'Lost' status at the beginning of the 2011-2016 cycle, and the reason for lost was either coded as 'Break in funding' for unfunded Systems or 'Unknown' for funded Systems. This explains why a large percentage was reported as 'Unknown.'

Table 18 describes the current follow-up status of Form I participants. The status is in a hierarchical order. For example, 'Deceased' supersedes all other codes. Of the 32,727 Form I participants reported to the database since 1972, 31.2% were deceased, 7.4% reached

neurologic recovery, 3.1% withdrew consent, and the identity of 3.6% was lost due to break in funding; 54.7% are still eligible for Form II follow-up.

Table 19 presents analysis of how interviews were conducted; this variable has been collected since 1996. Analysis was performed on required follow-up years only (1, 5, 10, etc.). Nationally, 8.9% of all interviews were conducted in person, with percentages ranging by System from 0.9% to 55.9%. Of the 41,068 records, 71.1% were conducted by phone, with percentages ranging by System from 34.1% to 89.3%. Self-administered (mailed) interviews were conducted 8.1% of the time, with percentages ranging by System from 0.0% to 25.7%. Nationally, 8.6% of all interviews used a combination of the methods (i.e., in-person, by phone, and/or by mail), with percentages ranging by System from 0.2% to 41.0%. The interview method was unknown for 0.8% of all records.

Part III

Descriptive Analysis of the National SCI Database

Introduction

The tables presented in this report are based on a descriptive analysis of most of the variables in the National SCI Database. For most of the Form I variables, each System has been provided with tables reflecting its own participant population. The Form II variables, however, are primarily analyzed by anniversary year of follow-up and presented in a national aggregate format. The narrative for each of the following tables is restricted to analysis of national aggregate data and intersystem variability within the database.

Starting in 1995, revised Form II reporting procedures required submission of Form IIs for all participants in post-injury years 1, 2, 5, and 10, and every 5 years thereafter. Beginning in October 2000, Form II data collection was no longer required at year 2, with one exception: if a participant was still hospitalized for his/her initial hospital care during the first anniversary year, the year 2 (but not year 1) follow-up would be required. For this reason, there has been a significant decrease in the number of records in all the other post-injury years. Therefore, most of the Form II analyses are restricted only to post-injury years 1, 5, 10, 15, 20, 25, 30, 35, 40 and 45.

Lost and Unknown Categories

Since differential losses to follow-up may mask time trends within the data, participants who are lost to follow-up are not included in the tables depicting Form II data. The underlying assumption is that participants who are lost to follow-up will be distributed proportionately across categories in the same way as successfully followed participants.

Data classified as 'Unknown' represent those participants who are being followed but for whom that specific information is unavailable. Therefore, a high proportion of 'Unknown' entries indicate unusual data collection difficulties.

Cross-sectional versus Longitudinal Analysis

Changes in percentages or mean scores over post-injury years must be interpreted cautiously. This is a cross-sectional analysis, and the participants at post-injury year 30 are not the same as those at post-injury year 1, for example. Part of the increase or decrease in scores over time could be due to differential survival of persons with better health or care as well as due to differential loss to follow-up. A truly accurate assessment of changes over time will require a longitudinal approach and multivariate analysis.

Statistical Measures

Data of a categorical nature are presented as frequency and percentage. For continuous variables, the central tendency is measured by mean or median as appropriate. In some tables, the standard deviation (S.D.) is used to measure the dispersion about the population mean (i.e., how closely individual participant values cluster around the mean). If data are normally distributed, 95% of all observed values will fall within 1.96 S.D.s of the mean.

Age at Injury: Tables 20 – 22

The cumulative frequency distribution of age at injury is depicted in **Table 20**. Five participants were less than 1 year old, while one was 98 years old. The most common age at injury was 19 years. Nearly a quarter (23.7%) of all injuries occurred between the ages of 17 and 22 years, nearly half (47.9%) of all injuries occurred between the ages of 16 and 30, and 11.5% of all injuries occurred at age 60 or older. Some descriptive statistics for the age at injury distribution are shown in **Table 21**. Mean (S.D.) age for all participants was 35.3 (17.1) years, with the mean age for participants in each System ranging from a low of 30.7 years to a high of 49.9 years.

Table 22 reflects a consistent trend toward older age at time of injury. The mean age at injury has increased from 28.7 years in 1972-1979 to 42.7 years in 2015-2017. This trend reflects in large part a similar trend in the average age of the U.S. population. However, underlying changes in age-specific SCI incidence rates, changing locations of Systems, and changing referral patterns to Systems may also be contributing to the trend toward older age at injury for persons in the database.

Sex: Table 23

The number of SCI participants by sex is shown in **Table 23**. Overall, 80.6% of all reported SCIs occurred among males. There was very little variability among Systems with regard to the composition of the participant populations by sex. Among Systems, the proportion of male participants ranged from a low of 62.5% to a high of 87.1%.

Race: Tables 24 – 28

The number of SCI participants by race is shown in **Table 24**. There was substantial variability among Systems: the proportion of Caucasian participants ranged from 30.6% to 90.6%, while the proportion of African Americans ranged from 0.0% to 38.6%. Across Systems, the highest proportion of Native American Indians was 3.4% and the highest proportion of participants of Asian descent was 25.0%. High percentages of unknowns (5.2%) in the 'Race' variable are due to a database conversion process that occurred in 1995. When the 'Hispanic Origin' variable was added, all persons coded 'Spanish' in the 'Race' variable were converted to 'Yes, Hispanic origin' in this variable, and their race was then changed to 'Unknown.' For those who were not coded 'Spanish' in this variable, the 'No' code was inserted and their original race code was retained.

It should not be inferred from these data that the incidence of SCI was higher among whites than non-whites. On the contrary, most participants are white because whites compose by far the largest segment of the U.S. population. In fact, other studies have demonstrated conclusively that the SCI incidence rate is highest among non-whites[5].

Overall, 9.6% of respondents endorsed 'Hispanic Origin' (**Table 25**). By System, the percentage ranged from 0.0% to 50.2% out of a total of 32,727 records.

Table 26 depicts Hispanic origin by race: 3.0% reported as Hispanic Caucasian and 0.3% reported as Hispanic African American out of a total of 32,727 records.

The trends over years in racial groups (**Table 27**) reveal an increase in the percentage of participants who identify as African American (from 14.2% in 1972-1979 to 23.2% in 2015-2017). Also, there has been a slight increase in the percentage of participants who identify as Asian/Pacific Islander (from 0.9% in 1972-1979 to 2.6% in 2015-2017), while the percentage of participants who identify as Caucasian has decreased (from 76.8% in the 1972-1979 to 68.4% in 2015-2017).

Analysis of the trends in participation by those of Hispanic origin by year of injury (**Table 28**) shows a 6.8% increase in Hispanic participation into the 1990s (6.0% in 1972-1979 to 12.8% in 1990-1994). The most current time frame, however, shows that participation by those of Hispanic origin has decreased since then (11.3% in 2015-2017).

This trend is due in small part to trends in the U.S. general population. Periodic changes in the identities of participating Systems, changes in eligibility criteria for inclusion into the National SCI Database, and changes in referral patterns to Systems are also partly responsible for this racial trend. However, changes in underlying race-specific SCI incidence rates are also likely.

Ability to Speak and Understand English at Time of Injury: Table 29

This Form I variable documents the participant's self-report of his or her ability to speak and understand English. A similar variable, 'English as primary Language' was part of the National SCI Database from October 2000 to 2011. In 2011, the current version of the question was adopted; existing data were converted to either 'Not at all' or to 'Speaks English, but unknown ability.' Most participants speak at least some English (97.2%) and only 2.0% of participants report their ability to speak English as 'Not at all.'

Etiology: Tables 30 – 36

Table 30 ranks the national causes of injuries and then separates by sex. For males and females, the three leading causes of SCI were the same: auto accidents, falls, and gunshot wounds.

Among males, motorcycle accidents ranked fourth, followed by diving accidents. However, for females, medical/surgical complications ranked fourth and diving ranked fifth.

Significant sex-specific differences are evident in six etiologies: auto accidents (males 28.9%; females 47.1%); gunshot wounds (males 16.7%; females 9.4%); motorcycle accidents (males 7.1%; females 2.2%); diving accidents (males 6.7%; females 2.5%); hit by falling/flying objects (males 3.3%; females 0.7%) and medical/surgical complications (males 2.3%; females 5.2%).

It should be noted that the all-terrain vehicles/ all-terrain cycles (ATV/ATC) category was created in October 1986; before that time, injuries resulting from these vehicles were coded as either 'Motorcycle' or 'Other Vehicle.' While some Systems have converted pre-1986 data where possible, this conversion was not mandatory. Therefore, the number of injuries resulting from ATV/ATC accidents is most probably underreported.

The group etiology categories reported in **Tables 31 – 35** are as follows:

'Vehicular' includes: Automobiles (includes jeeps, trucks, dune buggies, and buses; Motorcycles (2-wheeled, motorized vehicles, including mopeds and motorized dirt bikes); Boats; Fixed-wing aircraft; Rotating-wing aircraft; Snowmobiles; Bicycles (includes tricycles and unicycles); ATV and ATC (includes both 3-wheeled and 4-wheeled vehicles); and Other vehicular, unclassified (includes tractors, bulldozers, go-carts, steamrollers, trains, road graders, forklifts).

'Violence' includes: Gunshot wounds; All other penetrating wounds (includes stabbing, impalement); Person-to-person contact (includes being hit with a blunt object, falls as a result of being pushed (as an act of violence); Explosions (includes bomb, grenade, dynamite, or gasoline).

'Sports' includes: Diving; Football; Trampoline; Snow skiing; Water skiing; Wrestling; Baseball/softball; Basketball/volleyball; Surfing (includes body surfing); Horseback riding; Gymnastics (includes all gymnastic activities other than trampoline); Rodeo (includes bronco/bull riding); Track and field (includes pole vault, high jump, etc.); Field sports (includes field hockey, lacrosse, soccer, and rugby); Hang gliding; Air sports (includes parachuting, para-sailing); Winter sports (includes sled, snow tube, toboggan, ice hockey, snow-boarding); Skateboarding; and Unclassified (includes auto racing, glider kite, slide, swimming, bungee jumping, scuba diving, roller-blading, jet-skiing, cheerleading, etc.).

'Falls' also includes jumping and being pushed accidentally (not as an act of violence).

'Medical/surgical Complication' is defined as "Impairment of spinal cord function resulting from adverse effects of medical, surgical or diagnostic procedures and treatment."

'Other' includes: Hit by falling/flying object (includes ditch cave in, avalanche, rockslide); Pedestrian (includes falling/jumping into the path of a vehicle); and all other unclassified injuries.

The percentage of injuries in each etiology group appears in **Table 31**. Overall, 'Vehicular' ranked first in the National SCI Database (42.2%) and first in nine Systems; 'Falls' ranked first in four Systems (50.0%, 32.4%, 30.3% and 43.7%, respectively), and 'Violence' ranked first in one System.

'Falls' ranked second nationally (22.4%) for six Systems; 'Vehicular' ranked second most frequent etiology in six Systems (37.5%, 29.0%, 31.2%, 28.3%, 29.2% and 29.7%, respectively). 'Violence' ranked third nationally (17.1%) and second in two Systems.

The percentage of injuries in each etiology group by age at injury is depicted in **Table 32**. Vehicular accidents were the predominant cause of SCI in participants up to 45 years of age. After age 60, falls were the leading cause of SCI. The percentage of SCIs resulting from sports and violence declined with advancing age, while the percentage resulting from falls and medical/surgical complications increased proportionately.

Table 33 depicts the percentage of injuries in each etiology group by sex. The percentage of injuries resulting from vehicular accidents, violence, and sports differed by sex. Females were more likely to be injured by a vehicular accident (females, 51.9%; males, 39.8%), but violence and sports were more likely the cause of male injuries (males, 18.5% and 11.2%, respectively; females, 11.4% and 5.6%, respectively).

Table 34 depicts the percentage of injuries in each etiology group by race. Vehicular accidents were the leading cause of injuries across all races except for African Americans, for whom violence was the leading cause.

Table 35 shows the percentage of injuries in each etiology group by Hispanic origin. Vehicular accidents and violence were the most common causes of injuries for those of Hispanic origin (35.6% and 32.0%, respectively), whereas, vehicular accidents accounted for 43.0% and violence accounted for only 15.4% of injuries among those of non-Hispanic origin.

Although vehicular accidents continue to be the leading cause of SCI (**Table 36**), the percentage declined from 46.9% in the 1970s to 37.4% during 2015-2017. The percentage of injuries due to falls has increased gradually and consistently since the 1970s, and falls currently account for 31.4% of all SCIs. Injuries due to acts of violence peaked in the 1990-1994 period (28.9%), and have since declined (13.9%, 2015-2017). Sports-related SCIs declined from 14.4% during the 1970s to 8.3% since 2015. Medical and surgical complications account for a small percentage of all injuries, but this percentage increased gradually from 1.2% in the 1970s to 4.6% during 2015-2017. These trends are mainly due to the aging of the U.S. population but are also in part due to changing locations of the Systems, changing referral patterns to these Systems, changes in underlying incidence rates, or a combination of these factors.

Work Relatedness: Table 37

This variable was added to the database in October 2000, and only records entered after January 1, 2001, are included in **Table 37**. Of the 12,227 available records, 9.1% had a work-related SCI. The percentage of participants at each System with a work-related SCI ranged from 3.9% to 13.0%.

Marital Status: Tables 38 - 40

Marital status at injury is depicted in **Table 38**. The code 'Living with significant other' was added to the database in October 2011. It is not surprising, given the young age at which most injuries occur, that half of the participants in the database were single/never married (50.8%) at the time of injury. Substantial intersystem variability was noted, from 12.5% to 63.7%, while the percentage of divorced participants ranged from 5.1% to 25.0%.

Table 39 shows a steady increase across post-injury year categories in the percentage of participants who endorsed 'Married' (from 32.0% of post-injury year 1 participants to 43.8% of post-injury year 40 participants) or 'Divorced' (from 11.1% of post-injury year 1 participants to 23.9% of post-injury year 30 participants). The percentage of participants in the 'Single, never married' category ranged from 49.3% of those at post-injury year 1 to 25.0% of those at post-injury year 40.

Table 40 reflects all changes since the last Form II with a known marital status code (or since Form I if there is no Form II marital status). If a year 1 Form II has marital status, and the year 5 Form II is lost, then the year 10 Form II reflects any marital change since the year 1 Form II. Separations are ignored. Codes 'Divorced + Married,' 'Widowed + Married,' 'Divorced + Widowed + Married' may be in any order. Marital status was relatively stable over time. 'No Change' was reported for 92.6% of post-injury year 1 participants and for 82.7% of post-injury year 30 participants.

Level of Education: Tables 41 - 42

The highest level of formal education completed at time of injury appears in **Table 41**. More than 60% (excluding 'Other') of the participants were at least high school graduates at the time of injury, whereas more than 80% were at least 19 years of age at injury and would normally be expected to have completed high school. Approximately one tenth (8.3%) of participants had an eighth grade education or less, whereas only about 2% were less than 15 years of age at injury and would normally be expected to have an eighth grade education or less.

The proportion of participants with an eighth grade education or less ranged by System from 0.0% to 21.7%. Overall, 5.8% of the participants had an unknown level of education, suggesting some Systems are having substantial difficulty collecting this information.

In **Table 42**, level of education is shown to be higher in participants at later post-injury years than in those with more recent injuries. Overall, 69.2% of post-injury year 1 participants had completed at least a high school education, compared with 90.6% of post-injury year 35 participants.

Occupational Status & Job Census Code: Tables 43 - 46

The Occupational Status tables review the primary occupational, educational or training status of the participant at the time of injury. Since these sub-categories are not mutually exclusive, the primary occupational, educational or training status is selected on the basis of the injured person's opinion.

Occupational status at the time of injury is shown in **Table 43**. Nationally, 57.7% of participants were reportedly working at the time of injury. Among Systems, this was the most common occupational status reported, ranging from 66.4% to 46.2%.

The national rankings for the other most commonly reported occupational status categories ranked in order as follows: 'Unemployed' (15.6%), 'Student' (14.6%), and 'Retired' (7.2%).

Table 44 shows an increase in the percentage of working respondents over the post-injury years, from 12.4% of post-injury year 1 participants to 34.4% of post-injury year 25 participants, then declining in later years to 30.7% for post-injury year 40 participants. Other categories with an increase across post-injury year are 'Retired' and 'Other,' whereas the percentage reporting 'Unemployed' decreased over the post-injury years (from 54.3% of post-injury year 1 participants to 26.3% of post-injury year 40 participants).

Job Census Code **Tables 45 and 46** reflect data entered into the database since January 1, 2001. At injury, 39.6% of respondents reported 'Not Working.' The second most reported category was 'Precision, production, craft and repair,' at 10.5%. There was very little variability across Systems. **Table 46** shows Job Census Code by post-injury year. 'Not Working' was reported by 83.1% of respondents at post-injury year 1 then decreased to 64.9% for post-injury year 25 participants. The percentage of participants in the 'Management, business and financial' and 'Professional' categories increased over the post-injury years (from 3.5% and 4.0%, respectively, of post-injury year 1 participants to 9.2% and 11.9%, respectively, of post-injury year 35 participants).

Veteran Status & VA Health Care Services Used: Tables 47 - 48

Veteran status analysis includes Form I records entered after January 1, 2001. This variable documents whether or not the participant is a veteran of the U.S. military forces (i.e., Air Force, Army, Coast Guard, Marine Corp or Navy). **Table 47** shows only 8.1% of Form I participants are veterans.

Table 48 identifies the participants' use of Veteran Administration (VA) health care services since last follow-up. VA services data have been collected since October 31, 2000. A small percentage of participants used VA services for health care, ranging from 4.0% of post-injury year 1 participants to 5.2% of post-injury year 35 participants.

Primary Payer: Tables 49 - 50

Table 49 documents the participants' primary payer of medical costs during inpatient stay. This care includes hospitalization, outpatient medical and rehabilitation services, vocational rehabilitation, education, training, equipment, medications and supplies, attendant care and custodial care but does not include income maintenance (unemployment payments). 'Primary' is defined as the organization that pays first. 'Private Insurance' ranked first during the period of initial hospitalization, providing support for about half (49.8%) of the participants. Medicaid provided support for more than one fourth (27.3%) of the participants during this same period.

Primary payers by post-injury year appears in **Table 50. '**Private Insurance' ranked first among participants at post-injury years 1 and 5 (44.4% and 32.2%, respectively). However, the proportion of participants receiving Medicare benefits increased substantially across post-injury years, from 7.7% of post-injury year 1 participants to 52.3% of post-injury year 40 participants. The proportion of participants receiving Medicaid support decreased steadily through all post-injury years.

The high number of records coded as 'Unknown/missing' and therefore excluded in Tables 49 and 50 is a result of the historical changes in data collection. Sponsors of care data were collected from 1973 to September 2006, with up to five entries for sponsors. Beginning in 1987, coding position #1 (position #1 is the first of five entries) was designated for the primary payer with no order for the following 4 positions. For records prior to 1987 that had more than one entry, all codes were moved down one position, and the 'Unknown' code was inserted in coding position #1. In 2006, the 'Sponsor of care' variables were retired. In October 2011, a single primary payer variable was added back to the database and 'Primary Sponsor of Care' was converted to 'Primary Payer.'

Family Household Income Level at Time of Injury: Table 51

Table 51 categorizes the income level of the family members living in the same household as the participant. The incomes of all family members 15 years old and over, related to the respondent by birth, marriage, or adoption, and living in the household were included. Overall, about one quarter (24.0%) of participants endorsed income of less than $25,000, with System variability ranging from 0.0% to 76.2%. About one fifth (20.4%) of participants had income of $75,000 or more, ranging from 6.5% to 62.5%. Participant responses of 'Decline to answer' or 'Participant doesn't know' constituted 17.3%, making the total unknown rate of response above 20%.

Family Income: Table 52

Table 52 categorizes the income level of the family members living in the same household as the participant by post-injury years. The incomes of all family members 15 years old and over, related to the respondent by birth, marriage or adoption and living in the household were included. The proportion of participants with family income less than $25,000 was above 40% for participants in post-injury years 1 - 25, but declined for those in post-injury years 30, 35, and 40 (38.1%, 33.7%, and 27.9%, respectively). Family income of $75,000 or more was reported by approximately 15.0% of post-injury year 1, 5, 10, and 15 participants, but increased across the remaining years, to 28.6% of post-injury year 40 participants.

The 'Family income' variable was first added to the database in 1996, as one of the items included in the Craig Handicap Assessment and Reporting Technique (CHART) economic self-sufficiency subscale. Use of the CHART economic self-sufficiency subscale was discontinued after September 2006. The 'Family income' variable, however, was added to the database in October 2011. To a large extent, these historical changes explain the high number of unknown/missing data in this variable.

Injuries & Spinal Surgery: Table 53 - 55

Table 53, Vertebral Injury, documents spinal fractures and/or dislocations that occurred at the same time as the SCI. A spinal fracture or dislocation is defined as any break, rupture, or crack through or between any parts of the vertebral column from the occiput to coccyx. On average, 80.0% of participants had at least one vertebral injury, with percentages ranging by System from 68.4% to 92.7%.

Associated injuries are summarized in **Table 54**. This variable documents at least one of the following conditions: moderate to severe traumatic brain injury (Glasgow Coma Scale score of 12 or below), non-vertebral fractures requiring surgery, severe facial injuries affecting sensory organs, major chest injury requiring chest-tube or mechanical ventilation, traumatic amputations of an arm or leg or injuries severe enough to require surgical amputation, severe hemorrhaging, or damage to any internal organ requiring surgery. This variable excludes associated injuries not listed, negative findings from exploratory surgeries, and injuries that pre-date the SCI. Associated injuries occurred in 38.4% of cases, ranging by System from 12.5% to 56.5%.

The 'Spinal Surgery' variable (**Table 55**) documents whether any of the following spinal surgical procedures were performed at any point during the inpatient hospitalization period following the SCI: laminectomy, neural canal restoration, open reduction, spinal fusion, or internal fixation of the spine. On average, 79.3% of participants underwent spinal surgery, ranging by System from 68.2% to 100.0%.

Place of Residence: Tables 56 – 58

Table 56 summarizes place of residence at the time of injury. This variable has been collected for System admissions since December 1, 1995. In October 2000, 'Convent, monastery, or other religious order' was added to 'Group Living Situation.' In October 2011, a new code, 'Assisted Living,' was added. At the time of injury, the majority (97.7%) of participants were living in a private residence, which includes house, apartment, or individual residence in a retirement village. There is very little variability between Systems.

Place of residence at discharge is shown in **Table 57**. Most participants (87.4%) were discharged to a private residence. The proportion of participants discharged to a private residence ranged by System from 74.6% to 94.7%.

Table 58 shows place of residence across post-injury years. By far, private residence was most common, ranging from 91.4% for post-injury year 1 participants to 98.2% for post-injury year 40 participants. The percentage of those reporting nursing home residences decreased across years, from 3.9% of post-injury year 1 participants to 0.8% of post-injury year 40 participants.

Days Hospitalized at Acute Unit: Tables 59 – 61

Table 59 depicts median days from injury to System admission by year of injury. Median days from injury to System admission were at the peak (20 days) in 1972-1979 and at the lowest (1 day) in 1990-1999. A change in eligibility criteria implemented in January 1987 resulted in a decrease in median days from injury to System admission. The eligibility criteria allowed only patients admitted to the System within 60 days of injury to be entered into the National SCI Database. In 2000, eligibility criteria resumed the previous standards (allowing injuries within 1 year of admission). For the recent years (2015-2017), the longest median duration from injury to System admission is 14.5 days at one System and eight systems had a median of 1 day from injury to System admission.

Database revisions in November 1995 resulted in the separation of the single 'Length of stay' variable into 'Acute care length of stay' and 'Rehabilitation care length of stay.' Data on the length of stay were separated based on formulas involving days from injury to rehabilitation and total days hospitalized, with all short-term discharge days applied to rehabilitation. The next two tables (Tables 60 and 61) include records for those patients who were admitted to the system within 1 day of their injury (Day-1s Only).

Table 60 reflects median days spent in acute care for each System by year of injury. Median acute care length of stay has declined from 24 days in 1972-1979 to 11 days in 2015-2017.

Table 61 depicts median days hospitalized in the acute care unit by year of injury and by neurologic level and extent of lesion (neurological category). 'Neurologic category at discharge' documents the level and extent of the lesion at discharge. Minimal deficit groups were added in 1987, and retrospective updates were allowed but not required. Participants with complete

tetraplegia injuries typically had the longest acute stays (an average of 25 days for all years), while participants with minimal deficits had the shortest stays. The decrease in median acute length of stay over the past five decades is noted across various levels of neurological category. Minimal deficit categories ('Paraplegia, Minimal Deficit' and 'Tetraplegia, Minimal Deficit') were added in October 1987 to better describe participants with minimal or no neurologic deficit. Retrospective updates were allowed but not required for minimal deficit categories.

Days Hospitalized at Rehabilitation: Tables 62A – 63B

The next four tables document the median rehabilitation length of stay for people with SCI that were: 1) admitted to system within 1 day of their injury (Day-1s Only, **Tables 62A and 63A**) and 2) all people admitted to rehabilitation, regardless of Day-1 status (**Tables 62B and 63B**).

Among people with SCI admitted to system within 1 day of their injury, the median rehabilitation length of stay has declined over the last five decades, from 98 days in 1972-1979 to 34 days in 2015-2017 (**Table 62A**). Among people admitted to rehabilitation, regardless of Day-1 status, the median rehabilitation length of stay has also decreased from 91 days in 1972-1979 to 43 days in 2015-2017 (**Table 62B**).

Table 63A shows that, among people with SCI that were admitted to a System within 1 day of their injury, the median days hospitalized in the rehabilitation unit were greatest for participants with complete tetraplegia (an average of 95 days for all years), ranging from 142 days in 1972-1979 to 50 days in 2010-2014 with a slight increase to 56 days in 2015-2017. For those with incomplete paraplegia, the rehabilitation length of stay ranged from 68 days in 1972-1979 to 26 days in 2015-2017.

Including all people admitted to rehabilitation, regardless of Day-1 status, the median days hospitalized in the rehabilitation unit were greatest for participants with complete tetraplegia (an average of 94 days for all years), ranging from 122 days in 1972-1979 to 64 days in 2005-2009 with a slight increase to 68 days for 2010-2014 and 2015-2017 (**Table 63B)**. For those with incomplete paraplegia, the rehabilitation length of stay ranged from 68 days in 1972-1979 to 31 days in 2015-2017.

Neurologic Level at Discharge: Tables 64 - 67

The proportion of participants with cervical, thoracic, lumbar, and sacral levels of injury at discharge is presented in the next four tables. To determine a single neurologic level of injury, the most rostral (highest) sensory and motor level on the left and right side at discharge was used. Percentages presented in all four tables were calculated based on the total number of records (cervical, thoracic, lumbar and sacral = 30,898 records).

Overall, 54.3% of participants had cervical lesions at discharge, 34.9% had thoracic lesions, 10.4% had lumbar lesions, and 0.4% had sacral lesions. Close to half (45.3%) of the participants in the

database were discharged with cervical lesions at C4 (15.1%), C5 (15.1%), C6 (10.1%), or C7 (5.0%). The next most common levels of lesion at discharge were T12 (6.1%) and L01 (4.9%).

Neurologic Categories: Tables 68 - 71

'Neurologic category at discharge,' which documents the level and extent of lesion at discharge, is separated into paraplegia complete, incomplete, or minimal deficit, and tetraplegia complete, incomplete, or minimal deficit. As above, minimal deficit groups were added in 1987, and retrospective updates were allowed but not required.

Table 68 shows that, at the time of discharge, most participants had neurologically incomplete tetraplegia (32.2%), followed by neurologically complete paraplegia (24.2%), neurologically complete tetraplegia (18.8%), and neurologically incomplete paraplegia (18.6%).

Neurologic categories at discharge by etiology group are depicted in **Table 69**. Neurologically incomplete tetraplegia ranked first for etiologies of vehicular accidents (32.8%), sports (47.7%) and falls (41.1%). Neurologically complete paraplegia ranked first (42.2%) for SCIs resulting from violence. Neurologically incomplete paraplegia ranked first (47.6%) in SCIs resulting from medical/surgical complications. Interestingly, 84.9% of all sports-related injuries resulted in tetraplegia, while 67.9% of all violence-related injuries resulted in paraplegia.

The neurologic category at discharge grouped by year of injury is depicted in **Table 70**. Both tetraplegia complete and paraplegia complete injuries have declined since the 1970s (25.3% and 27.7%, respectively) to current levels (10.9% and 18.7%, respectively, in 2015-2017).

Neurologic data in **Table 71** were collected from only those participants who completed a clinical System neurologic exam. This exam may be conducted from 6 months prior to the first anniversary of the injury to 6 months after the first anniversary. At the year 1 exam, neurologically incomplete tetraplegia ranked first (22.0%), followed by neurologically complete paraplegia (19.2%), neurologically incomplete paraplegia (14.3%), and neurologically complete tetraplegia (13.9%).

ASIA Impairment Scale: Tables 72 – 77

As mentioned above, the AIS, formerly known as the Frankel Grade, is used to quantify the degree of residual neurologic function. The next six tables report AIS grades, at rehabilitation admission and System discharge, and by cervical, thoracic, lumbar, and sacral levels.

Table 72 depicts the proportion of participants with each AIS grade at discharge. Nationally, 'Complete (A)' injuries at discharge constitute the largest category (43.0%), and 'Functional Motor Incomplete (D)' injuries constitute the second largest category (29.2%). Two Systems have the highest rates of 'Complete (A)' injuries (57.5% and 49.0%, respectively), whereas one System has the highest rate of 'Functional Motor Incomplete (D)' injuries (50.0%).

AIS grade at admission to acute care, admission to rehabilitation, and discharge from the System appears in **Table 73** (for Day-1 Admissions only). The collection of data regarding neurologic function at admission to rehabilitation began October 31, 2000, and accordingly, the values in the 'Rehabilitation admission' column were generated from a smaller 'known value' sample. Between acute admission and System discharge, the proportion of participants declined in three out of the four categories ('Complete (A),' 'Sensory Incomplete (B),' and 'Non-functional Motor Incomplete (C)'). Conversely, the percentage of participants with injuries in the 'Functional Motor Incomplete (D)' category increased from 18.9% at acute admission to 31.8% at System discharge.

AIS grade by neurologic level of lesion at discharge appears in **Tables 74-76**. Among persons with cervical lesions, neurologically complete (A) and functional motor incomplete (D) lesions were equally common. Thoracic lesions were more likely to be neurologically complete (A). Lumbar lesions were more likely to be functional motor incomplete (D).

Table 77 depicts the proportion of participants with each AIS grade at the first anniversary after the injury. These data require a System exam and can be collected from 6 months prior to the 1-year anniversary to 6 months after the anniversary. Of the participants with completed year 1 follow-ups, 33.1% had neurologically complete (A) injuries and 22.2% had functional motor incomplete (D) injuries.

ASIA Motor Index Scores: Tables 78 - 79

The ASIA motor index score is a measure of motor function, ranging from 0 to 100, used to document neurologic recovery. The 'ASIA Motor Index Score' variable was added in 1986 and data collection at the time of admission to rehabilitation was added in 1993. The analyses for Tables 78 and 79 used data entered since October 1993.

Mean ASIA motor index scores (Day-1 Admissions only) at acute admission, admission to rehabilitation and first definitive System discharge appear in **Table 78**. Nationally, the mean score increased from 44.1 at System admission to 48.1 at rehabilitation admission and to 55.8 at discharge. A similar trend was observed at each System.

Table 79 shows the mean ASIA motor index scores (56.8 for all Systems combined) at 1 year post-injury. These data require a System exam and may be collected from 6 months prior to the 1-year anniversary to 6 months after the anniversary.

Sensory Scores: Table 80 – 83

The sensory index and summary scores, as described in the International Standards for Neurological Classification of Spinal Cord Injury guidelines, were measured by testing 28 key dermatomes on each side (right and left) from C2 to S4-5, with scores ranging from 0 (no sensation) to 2 (intact). The total maximum score for light touch and pin prick on the left and right is 56 each (total 112 on the right and 112 on the left). The associated table averages

excluded records categorized as 'No exam.' These variables were added October 1, 2011, and were collected at three time points: rehabilitation admission, System discharge, and post-injury year 1 exam. Comparison of the averages must be interpreted cautiously as multiple factors impact System differences.

Table 80 shows the mean total light touch score at rehabilitation admission was 65.8. Mean System scores at rehabilitation admission ranged from 47.1 to 83.7. The mean Light Touch Total at System discharge was 71.1, and mean System Light Touch Total scores ranged from 59.0 to 93.1.

Table 81 shows the mean Pin Prick Total score at rehabilitation admission was 57.7. Mean System Pin Prick Total at rehabilitation admission ranged from 44.1 to 80.0. The mean Pin Prick Total at System discharge was 62.8, and mean System Pin Prick Total scores ranged from 50.2 to 93.5.

Tables 82 and 83 show descriptive statistics for Light Touch and Pin Prick Total Scores at post-injury year 1. The mean Light Touch Total score for all Systems was 67.9, and scores ranged from 32.6 to 79.7. The mean Pin Prick Total Score for all Systems was 64.0, and scores ranged from 34.8 to 78.1.

Respirator Use: Tables 84 - 86

These tables document the use of mechanical ventilation to sustain respiration. In October 2000, data collection of respirator use during System hospitalization was deleted and the data are now collected at the time of System rehabilitation admission and at the time of System discharge. The database collects three different categories of mechanical ventilator use: 1. 'Yes, limited, short-term use for pulmonary complications;' 2. 'Yes, ventilator-dependent or ventilator use requiring a weaning process;' and 3. 'Yes, phrenic nerve stimulator.' These three groups have been combined into the mechanical ventilator ('Respirator Use') required category.

Tables 84 and 85 separate paraplegia (Table 84) from tetraplegia (Table 85) level lesions. Of the participants with paraplegia level lesions admitted to System rehabilitation, 5.6% required respirator assistance. Most persons with paraplegia were discharged with no respirator use (only 0.5% required respirator use at discharge). **Table 85** shows 20.1% of the persons with tetraplegia required the use of a mechanical respirator at the time of rehabilitation admission, whereas only 5.7% were discharged requiring a respirator. Intersystem variability in the proportion of persons with tetraplegia who required the use of a respirator at System rehabilitation admission was substantial, ranging from 0.0% to 33.7%. The proportion of those with tetraplegia who were discharged requiring a respirator also varied considerably, ranging from 0.0% to 16.9%. This variability may be partly attributed to whether Systems provide services for participants requiring mechanical ventilation.

Table 86 shows the proportion of participants who required the use of a mechanical respirator at 1 year post-injury. Only 3.5% of participants in the tetraplegia group and 0.2% of participants in the paraplegia group still required the respirator at 1 year post-injury.

Functional Independence Measure Scores: Tables 87- 88

Functional status of participants at System discharge and gain in function from rehabilitation admission to System discharge are important measures of the quality of care provided by SCI Model Systems. The instrument chosen by the SCIMS to assess functional status is the Functional Independence Measure (FIM), introduced in 1986 by the Task Force to Develop a Uniform Data System (UDS) for Medical Rehabilitation. Although the complete FIM consists of 18 items, only the motor items are currently documented in the National SCI Database. The FIM Motor Total Score has 13 units as the lowest possible score and 91 units as the highest possible score (representing the most independent level of motor function). Items include feeding, grooming, bathing, dressing upper and lower body, toileting, bladder and bowel control, transfer to bed or chair, toilet, tub or shower, locomotion and stair climbing. Form I required FIM data after October 1988, and Form II required FIM data after February 1996. FIM data are not collected from those less than 6 years old.

Table 87 shows the national mean FIM Motor Total Score increased from rehabilitation admission to discharge (25.2 and 54.3, respectively). There is very little variability between Systems in rehabilitation admission and discharge scores.

Table 88 shows an increase in mean FIM Motor Total Score from rehabilitation admission to discharge, regardless of the neurologic category. Persons with complete tetraplegia had the lowest FIM scores (15.0 at rehabilitation admission and 28.5 at discharge).

Method of Bladder Management: Tables 89 - 92

These tables represent the primary method of bladder management being used at discharge and by participants grouped according to post-injury year. In November 1995, new categories were added (codes: 2-'Indwelling catheter after augmentation or continent diversion;' 3-'Catheter free with external collector, no sphincterotomy;' 4-'Catheter free with external collector and sphincterotomy;' 7-'Intermittent catheter program (ICP) only;' 8-'ICP with external collector;' and 9-'ICP after augmentation or continent diversion'). Considering this is a recent change, the minimal number of participants in those categories is not surprising, and as a result, the tables must be interpreted cautiously.

Tables 89 and 90 show the method of bladder management at System discharge, separated by sex. The most common discharge categories for males were ICP (with or without an external collector; 44.4%), followed by normal micturition (17.0%), indwelling catheter (14.3%), and condom catheter (catheter free with external collector; 11.7%). Most females were discharged with ICP (39.8%) as well, followed by indwelling catheterization (27.9%) and normal micturition

(20.8%). There is intersystem variation in bladder management. For example, suprapubic cystostomy is used more often in one System than in the other Systems, regardless of sex.

Tables 91 and 92 show the method of bladder management used by participants grouped by year post-injury, separated by sex. Because of increasingly short lengths of stay in rehabilitation, many males have not yet completed the ICP and graduated to the use of condom catheter drainage before discharge. This trend is reflected by the decline in all forms of ICP use reported by post-injury year 1 and year 5 participants (34.2% and 29.2%, respectively, for males; 32.8% and 30.0%, respectively for females) and concomitant increase in all condom usage ('Catheter free with external collector') reported for males (17.1% and 21.0%, respectively), as compared with method of bladder management at discharge. The gradual decrease in normal micturition over time for both males and females may result from aging or individuals being increasingly less likely over time to return for follow-up. The high percentages of individuals with suprapubic cystostomies after year 20 is the result of a high proportion of records from one System, in which this is a more common method of management.

Reason for Change in Bladder Management: Table 93

This variable documents the reason for the most recent change in primary method of bladder management since the Form I or last followed Form II (whichever is most recent). Change is defined as using a different 'Bladder Management' code from the last known code. If there is more than one change in bladder management method, the most recent reason for change was reported. The primary reason is defined by the participant when more than one reason for change is reported; when the participant does not specify the primary reason, the codes are in hierarchical order. This variable was added for all Form II interviews conducted on or after October 1, 2011.

Among post-injury year 1 participants, 69.3% reported no change to the primary type of bladder management and among participants at later post-injury years, approximately 80% reported 'No change' in bladder management. Regained bladder control was the main reason for bladder management changes for those in early post-injury years (ranging from 15.7% for post-injury year 1 participants to 5.2% at post-injury year 10 participants), while medical complications were an increasing factor for a change in bladder management for those in the later post-injury year, ranging from 7.4% for post-injury year 30 participants to 8.8% for post-injury year 40 participants.

Body Mass Index: Table 94-95

Height and weight have been collected since October 2006. Both measurements are taken near rehabilitation admission as well as at each Form II interview. Height may be collected by self-report but weight requires a calibrated scale measurement at a System exam, which results in a large number of missing records for Table 95, as more than 70% of follow-up data were obtained by phone interviews or mail.

Weight and height were used to calculate body mass index (BMI; kg/m^2). Nationally, the mean BMI near the time of System rehabilitation admission is 26.6 (**Table 94**), ranging by System from 25.1 to 31.1. **Table 95** shows the mean BMI by System for each post-injury year, which ranged from 25.5 to 26.9. There was little variability in mean BMI across all post-injury years and across all Systems.

Diabetes Diagnosis: Tables 96 – 97

These variables identify the self-reported presence of diabetes prior to the injury and at each required follow-up year. The interviewer asks *"Prior to your spinal cord injury, had you been told by a health professional that you have diabetes or high blood sugar?"* for Form I collection, and *"Currently, do you have diabetes or high blood sugar?"* for Form II collection. The 'Diabetes' variable was added to the database for Form I and Form II in October 2011 and modified in October 2016.

Prior to injury, 10.4% of participants had diabetes. In post-injury year 1 participants, the prevalence of diabetes is 10.4%, the same as what was reported at the time of injury, and this prevalence rate is steady over the post-injury year with a slight increase for post-injury year 40 participants (13.9%).

Urinary Tract Infection: Table 98

This variable identifies the self-reported frequency of a urinary tract infection requiring treatment with an antibiotic in the past 12 months. This variable was added to the database for Form II in October 2011 and modified in October 2016. Over one half of post-injury year 1 participants (54.4%) reported one or more urinary tract infections with antibiotic treatment (1 to 2 times, 4.1%; 3 to 5 times, 2.6%; > 5 times, 1.2%; or unknown times, 46.2%). The prevalence of urinary tract infection is fairly stable over the post-injury years.

Pressure Ulcer: Table 99

This variable identifies the self-reported occurrence of a pressure ulcer of grade 2 or higher in the past 12 months. This variable was added to the database for Form II in October 2011. Among post-injury year 1 participants, 24.6% reported the occurrence of pressure ulcers since discharge from rehabilitation. The prevalence of pressure ulcer increased over the post-injury years to 35.1% for post-injury year 40 participants.

Rehospitalizations: Tables 100 - 102

These variables document all rehospitalizations in all hospitals (i.e., System and non-System) that occurred during the 12 months prior to the date of the interview. Cause of rehospitalization was added in March 2001.

Tables 100 and 101 show the total number of rehospitalizations and mean total days by post-injury year. By far, the majority of participants reported no rehospitalization across all post-injury year categories. Percentages ranged from 63.6% of post-injury year 1 participants to 73.2% of post-injury year 25 participants. Among those rehospitalized, the mean total of days hospitalized ranged from 23.4 days for post-injury year 1 participants to 19.8 days for post-injury year 20 participants.

Diseases of the genitourinary system were the leading cause of rehospitalization during most post-injury years, ranging from 32.5% for post-injury year 40 participants to 47.3% for post-injury year 1 participants (**Table 102**). Disease of the skin was the second most common cause of rehospitalization, ranging from 18.7% for post-injury year 1 participants to 34.2% for post-injury year 20 participants. Other common causes of rehospitalization included respiratory, digestive, circulatory, and musculoskeletal diseases. The relatively high percentages of 'Other, Unclassified' causes suggest that additional categories may need to be identified for this variable. Percentages may total more than 100 because each participant may endorse multiple rehospitalizations and reasons.

Anxiety Diagnosis: Table 103

This variable documents self-reported diagnosis of anxiety prior to injury (Form I). The interviewer asks *"Prior to your spinal cord injury, had you ever been told by a health professional that you had post-traumatic stress disorder (PTSD), panic disorder or generalized anxiety disorder (GAD)?"* Data are collected primarily by self-report. When more than one diagnosis is reported, the first chronologic disorder is entered to the database. This variable was added to the database for Form I in October 2011.

Almost 90% of participants had no anxiety disorder prior to injury (**Table 103**). General anxiety disorder prior to injury was endorsed most often (6.4%), with System percentages ranging from 0.0% to 10.3%.

Depression: Table 104

Table 104 documents a self-reported diagnosis of depression prior to the SCI (Form I). The interviewer asks *"Prior to your spinal cord injury, had you ever been told by a health professional that you have depression?"* Data are collected primarily by self-report and include major depression and clinical depression but exclude bipolar, adjustment disorder, grief and bereavement. This variable was added to the database for Form I in October 2011.

Overall, 14.1% of participants reported being diagnosed with depression prior to injury. System percentages ranged from 5.4% to 25.8%.

Patient Health Questionnaire: Tables 105-106

The Patient Health Questionnaire-9 (PHQ-9) consists of nine questions reflecting the frequency of problems associated with possible depression. Each of the nine questions is scored from 0 (no problem) to 3 (nearly every day). Major depressive syndrome is defined as scoring a 2 or 3 on at least one of the first two questions and scoring at least a 2 on a total of at least five of the nine questions. Other depressive syndrome is defined as scoring a 2 or 3 on at least one of the first two questions and scoring a 2 or 3 on two to four of the nine questions. Also, the severity of depression score is calculated as the sum of the scores from the nine PHQ questions. The PHQ-9 was required for Form II collection after March 1, 2001. PHQ questions 3-9 were not required from October 2011 to September 2016, which explains the large percentage of unknown/missing data.

Table 105 depicts the frequency and percentage of persons with major or other depressive syndrome by post-injury year. Excluding unknown/missing data, the percentage of persons with major depressive syndrome ranges from 11.5% for post-injury year 1 participants to 6.0% for post-injury year 20 participants. The percentage of persons with other depressive syndrome ranges from 11.0% for post-injury year 30 participants to 7.9% for post-injury year 15 participants.

Table 106 depicts the mean severity of depression score by post-injury year category. This analysis includes records with scores of 0. Overall, mean depression severity scores varied slightly over the years, ranging from 5.4 for post-injury year 1 participants to 3.9 for post-injury year 20 participants.

Pain: Tables 107 - 108

The severity of pain score reflects the participant's self-reported usual level of pain over the past 4 weeks, on a scale of 0 to 10. These data were required after March 1, 2001. **Table 107** depicts the mean severity of pain score. The total mean usual level of pain did not vary across post-injury years, staying between 4.2 and 4.5. Furthermore, reported severity of pain scores did not vary substantially between Systems.

Table 108 reflects responses to the question of the degree to which pain interfered with work or usual routine. This is a variable from the SF-12 that was added to the NSCISC database in May 1998. It was retained in the National SCI Database along with the self-reported rating of overall health when the remainder of the SF-12 was dropped from the database in September 2000.

Overall, most persons who reported that they had pain also reported that the pain either did not interfere with work or that it interfered only a little bit. The percentage of participants who reported pain interference as 'Not at all' was lowest (18.2%) for post-injury year 1 participants and highest, at 29.5%, for post-injury year 25 participants; the percentage for those at post-injury years 30, 35 and 40 was 28.1%, 26.6% and 26.0%, respectively. Approximately 16%–

20% of persons reported that pain interfered with work/routine 'Quite a bit' to 'Extremely' across all post-injury years.

Self-Perceived Health Status: Tables 109 - 110

"In general, would you say that your health is excellent, very good, good, fair or poor?" is question 1 from the Short Form Health Survey (SF-36). It was added to the database in 1995. "*Compared to a year ago, how would you rate your health in general now?"* is question 2 from the SF-36. If the interview is conducted at year 1, then the time frame is 'since rehabilitation discharge' instead of 'compared to a year ago.' This variable was added in May 1998. These questions are not collected from participants less than 18 years old.

Table 109 depicts the participant's perception of their current health by post-injury year. At the year 1 interview, participants are asked to rate their health since rehabilitation discharge. Most participants (31.9%) endorsed 'Good' and the fewest (5.7%) endorsed 'Poor.' Endorsements of 'Excellent' and 'Very good' increased slightly across post-injury years until post-injury year 25, then decreased slightly for participants in the post-injury years 30 and 35.
Most post-injury year 1 participants reported their health as 'Much Better' or 'Somewhat Better' (32.8% and 23.1%, respectively). However, reports of 'Somewhat Worse' health increased across post-injury years, from 7.6% for post-injury year 1 participants to 22.2% for post-injury year 35 participants (**Table 110**).

Alcohol Use – AUDIT C: Table 111 – 116

These variables document alcohol use over the past 12 months as defined by the AUDIT-C for participants at least 18 years old. The variables were added to the database for all Form I participants with System admission dates on or after October 1, 2011, and all Form II interviews conducted on or after October 1, 2011. Data are collected by interview only according to the AUDIT-C manual. Across the three Alcohol Use tables, the rate that participants declined to answer was less than 2.0%.

Table 111 categorizes the number of times a participant drank alcohol in the 12 months prior to injury (Form I). One quarter (25.7%) of participants endorsed not drinking during the year prior to injury, with percentages ranging from 12.5% to 46.5%. About 30% of participants reported having a drink at least twice a week prior to injury.

Table 112 categorizes how often a participant drank alcohol in the 12 months prior to the follow-up interview by post-injury year. For post-injury year 1 participants, almost half (44.8%) endorsed not drinking at all since discharge, and the percentage of non-alcohol users hovered near 40% across all post-injury years. The number of drinks was fairly consistent across post-injury years as well.

Table 113 categorizes the typical number of drinks a participant drank on the days when drinking in the 12 months prior to injury (Form I). Over one third of participants (36.4%)

endorsed having '1 or 2 drinks', with percentages ranging from 19.4% to 55.4%. Slightly over 10% of participants reported drinking 5 or more drinks on one occasion.

Table 114 categorizes the typical number of drinks a participant drank on the days when drinking in the 12 months prior to the post-injury interview. Among post-injury year 1 participants, 33.9% endorsed drinking '1 or 2 drinks' on one occasion, and the percentage increased over post-injury year to 50.3% for post-injury year 40 participants. The percentage of participants drinking 5 or more drinks at one occasion varied by post-injury years, ranging from 1.8% for post-injury year 40 participants to 7.1% for post-injury year 20 participants.

Table 115 categorizes how often a participant drank six or more drinks on one occasion in the 12 months prior to injury (Form I). Over one half of all respondents (58.1%) reported never having six or more drinks on one occasion, (9.1%) of participants reported drinking six or more drinks on a monthly basis, and 9.0% of participants reported drinking six or more drinks at least weekly.

Table 116 categorizes how often a participant drank six or more drinks on one occasion in the 12 months prior to the post-injury interview. About 80% of all participants endorsed never drinking six or more drinks, with the percent remaining stable across the years until post-injury year 25 participants; responses then rose slightly across years to 88.1% for post-injury year 40 participants. Across follow-up years, the percentage of participants who reported drinking six or more drinks at least weekly ranged from 1.4% of post-injury year 1 participants to 3.9% at post-injury year 25.

Satisfaction with Life: Table 117

This table reflects the mean total score measuring the concept of life satisfaction based on the participant's responses to these five statements: *"1. In most ways my life is close to my ideal; 2. The conditions of my life are excellent; 3. I am satisfied with my life; 4. So far I have gotten the important things I want in life; and 5. If I could live my life over, I would change almost nothing."* Response options are: strongly disagree (1), disagree (2), slightly disagree (3), neither agree or disagree (4), slightly agree (5), agree (6), or strongly agree (7). Total score ranges from 5 to 35; higher scores imply more satisfaction with life.

Only records entered into the database after 1995 for participants aged 18 or older was used in this analysis. Nationally, mean life satisfaction total score increased across the post-injury years, from 19.1 for post-injury year 1 participants to 24.3 for post-injury year 40 participants.

CHART: Tables 118 - 121

The Craig Handicap Assessment and Reporting Technique (CHART) questionnaire is widely used in measuring societal participation for persons with disabilities. CHART data were added to the National SCI Database in November 1995. The questionnaire is administered at follow-up to individuals who are 18 years or older. From 1995 to October 2000, the version of the CHART

that was used in the database consisted of 26 questions and five subscales (physical independence, mobility, occupation, social integration, and economic self-sufficiency). In 2000, the version included in the database was changed to the short form that consists of only 20 questions and includes a sixth subscale (cognitive independence). CHART data collected from 1996 through 2000 were converted to the short form by the NSCISC so that all CHART data in the database are in the same format. In 2006, the CHART was further reduced to 15 questions and four subscales by removing the economic self-sufficiency questions and subscale and the cognitive independence subscale. The following tables show the mean score of four subscales: physical independence, mobility, occupation, and social integration. Each subscale score is capped at 100, and scores of less than 100 imply the presence of a handicap.

Table 118 depicts the mean CHART physical independence subscale score by post-injury year for each System. The mean physical independence score increased across post-injury years, from 71.5 for post-injury year 1 participants to 87.9 for post-injury year 40 participants. However, there was considerable intersystem variability in physical independence scores. For example, for post-injury year 1 participants, mean physical independence scores by System ranged from 53.9 to 85.9.

Table 119 depicts the mean CHART mobility subscale score by post-injury year for each System. The mean mobility score shows little variability across years, ranging from 73.5 for post-injury year 1 participants to 78.9 for post-injury year 15 participants then declining slightly to 75.6 for post-injury year 40 participants.

Table 120 depicts the mean CHART occupation subscale score by post-injury for each System. The mean occupation score increased across years, from 49.2 for post-injury year 1 participants to 65.6 for post-injury year 25 participants, then declined slightly to 58.5 for post-injury year 40 participants. However, there was considerable intersystem variability in occupation scores. For example, mean occupation scores for post-injury year 1 participants by System ranged from 37.1 to 62.5. Although the occupation subscale includes other activities besides competitive employment, the trend over post-injury years in this subscale score is consistent with many previous studies of return to work after SCI that have shown a gradual increase in the employment rate over time.

Table 121 depicts the mean CHART social integration subscale by post-injury year for each System. Social integration scores changed very little across years, ranging from the lowest of 85.1 (post-injury year 40 participants) to the highest of 87.2 (post-injury year 25 participants).

Ambulation: Tables 122 - 125

Tables 122-124 reflect ambulation ability by post-injury year. These three variables were added May 1, 2004, and reflect the yes/no responses to these three questions: *Are you able to walk (with or without mobility aid) for 150 feet in your home? Are you able to walk (with or without mobility aid) for one street block outside? Are you able to walk (with or without mobility aid) up one flight of steps?*

Among 7,705 participants who were interviewed at 1 year post injury, 37.8% reported being able to walk for 150 feet at home, 32.7% reported being able to walk for one street block outside the home, and 32.3% reported being able to walk up one flight of stairs. The gradual decrease in ambulation ability reported over post-injury years may be the result of aging or because as ambulation improves, follow-up decreases.

Table 125 reflects the types of mobility aids most often used by participants by post-injury year. Percentages may equal more than 100 because some participants used more than one mobility aid (up to five entries per record is possible). Approximately one half of post-injury year 1 participants were not ambulatory (51.7%), this increased to 78.6% of post-injury year 40 participants. Of those who were ambulatory, 17.7% of post-injury year 1 participants but only 4.6% at post-injury year 40 participants did not use a mobility aid. A straight cane was the most commonly used aid across most of the post-injury years. Only a small percentage of participants reported use of an 'Other' aid, suggesting the categories established for this variable are adequate.

Wheelchair Use: Tables 126 - 127

Variables in Tables 126 and 127 were added in May 2004. **Table 126** reflects the participants who use wheelchairs or scooters more than 40 hours per week by post-injury year. The use of wheelchairs tended to increase across the years, from 58.9% of post-injury year 1 participants to 80.0% of post-injury year 30 participants. The increase may be the result of aging or reduced follow-up as ambulation improves. **Table 127** identifies the most common type of wheelchair was 'manual' in all years, but use of power chairs increased across years, from 22.4% of post-injury year 1 participants to 36.9% of post-injury year 40 participants.

Technology Use: Tables 128-134

Table 128 reflects computer use by participants by post-injury year. This variable was required after May 1, 2004. Overall, computer use increased across post-injury years, from 68.8% of post-injury year 1 participants to 79.6% of post-injury year 35 participants. Slightly over one third of respondents (28.4% to 38.2%) used a computer only at home, with little variability across all post-injury years.

Table 129 reflects computer use with assistance from another person by post-injury year. This variable documents the need for assistance of another person to use a computer, including turning the computer on or off; positioning the computer or individual for computer use; assistance with set up or devices; and using a computer by proxy. This variable was added to the database for Form II in October 2011. Among post-injury year 1 participants, 10.0% required assistance from another person to operate a computer, but among post-injury year 40 participants, only 6.7% needed assistance. Participants who reported not using a computer remained fairly stable across years at approximately 16%.

Table 130 shows utilization of assistive devices for computer use by post-injury year. This variable recorded up to five assistive devices used to operate a computer. The first device listed

was the most frequently used device. This variable was added to the database for Form II in October 2011. Totals may equal more than 100% because each participant may endorse up to five devices. Across post-injury years, about two thirds of participants endorsed no assistive devices (ranging from 64.1% of post-injury year 1 participants to 69.1% of post-injury year 10 participants). Across all post-injury years, the most often used devices were speech recognition software or a brace/splint (near 5% for each).

The next four tables describe variables that were required after May 1, 2004.

Table 131 reflects internet or email usage by participants by post-injury year. This includes the use of electronic devices that access the internet or email in addition to a computer. Daily internet or email access increased across post-injury years, from 51.8% of post-injury year 1 participants to 75.0% of post-injury year 40 participants.

Table 132 shows ownership of a modified vehicle. The percentage of participants who owned a modified vehicle increased across post-injury years, from 26.0% of post-injury year 1 participants to 71.7% of post-injury year 40 participants. The most common type of modified vehicle owned by participants or their families is a van, followed by car.

Table 133 shows approximately 15% of respondents who own a modified vehicle do not drive. The majority of respondents who drive, transfer into their vehicle rather than driving from their wheelchairs.

Table 134 reflects cell phone usage by post-injury year. The percentage of participants using a cell phone shows little variation across years, ranging from 78.0% of post-injury year 1 participants to 85.8% of post-injury year 40 participants.

Source of Health & Disability Information: Table 135

Table 135 documents the medium the participant used to access health and disability news and information in the past 12 months. This variable has been collected since October 2006. Up to five sources are documented, with the primary source entered in the first data entry position. Percentages may total more than 100 because each participant may endorse up to five sources. The codes for 'Conversation with family or friends' and 'Conversation with health professionals', were added October 2011. The majority of respondents reported used the internet, television, or both for health and disability information. Conversations with health care professionals were used by about one third of post-injury year 1 participants, followed by a dip to 28.1% of post-injury year 25 participants, then another increase for post-injury year 35 and 40 participants (43.5% and 59.3% respectively).

Tables

Source: National Spinal Cord Injury Statistical Center, University of Alabama at Birmingham, 2017 Annual Statistical Report – Complete Public Version

Table 1. Total Forms Entered into the National SCI Database as of November 3, 2017

Form II excludes Lost to Follow-up

	Registry	Form I	Form II	Total
Total	13,872	32,727	119,391	165,990

Footnote 1: Form II includes 27,271 participants with Follow-up records.

Table 2. Number of New Records Entered into the National SCI Database since the Last *Annual Report in December 2016*

Form II excludes Lost to Follow-up

	Registry	Form I	Form II	Total
Total	222	569	2,409	3,200

Table 3. Number of New Records Entered into the National SCI Database for 2016-2021 Funding Cycle

Form II excludes Lost to Follow-up

	Registry	Form I	Form II	Total
Total	222	569	2,409	3,200

Table 4. Percentage of Form I Day-1 Admissions Entered into the National SCI Database for 2016-2021 Funding Cycle

	Total Number of Form Is Entered	Total Day-1 Admissions	% Day-1 Admissions
Total	569	221	38.8

Table 5. Number of Registry Patients by Year of Injury

(continued)

	Year of Injury													
	1986	**1987**	**1988**	**1989**	**1990**	**1991**	**1992**	**1993**	**1994**	**1995**	**1996**	**1997**	**1998**	**1999**
Total	73	488	437	478	521	508	553	563	560	617	568	581	608	570

(continued)

	Year of Injury													
	2000	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**
Total	444	506	477	358	373	453	404	386	370	431	444	400	319	341

	Year of Injury				
	2014	**2015**	**2016**	**2017**	**Total**
Total	270	353	295	123	13,872

Table 6. Number of Form I Patients by Year of Injury

(continued)

	Year of Injury														
	1972	**1973**	**1974**	**1975**	**1976**	**1977**	**1978**	**1979**	**1980**	**1981**	**1982**	**1983**	**1984**	**1985**	**1986**
Total	3	220	401	579	684	822	848	1,005	1,130	818	749	1,155	1,097	977	930

(continued)

	Year of Injury													
	1987	**1988**	**1989**	**1990**	**1991**	**1992**	**1993**	**1994**	**1995**	**1996**	**1997**	**1998**	**1999**	**2000**
Total	662	628	645	597	705	650	654	689	638	735	754	729	767	674

(continued)

	Year of Injury												
	2001	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**
Total	716	723	694	636	658	686	779	787	697	703	676	757	761

	Year of Injury				
	2014	**2015**	**2016**	**2017**	**Total**
Total	753	752	642	362	32,727

Footnote 1: Enrollment criteria changed in 1987 and 2000.

Table 7. Number of Form I Day-1 Admissions by Year of Injury

(continued)

	Year of Injury													
	1972	**1973**	**1974**	**1975**	**1976**	**1977**	**1978**	**1979**	**1980**	**1981**	**1982**	**1983**	**1984**	**1985**
Total	1	72	103	178	196	238	229	293	359	262	221	463	434	331

(continued)

	Year of Injury													
	1986	**1987**	**1988**	**1989**	**1990**	**1991**	**1992**	**1993**	**1994**	**1995**	**1996**	**1997**	**1998**	**1999**
Total	429	378	348	359	382	413	388	394	376	351	409	400	406	397

(continued)

	Year of Injury										
	2000	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**
Total	323	356	350	290	267	282	290	277	290	249	269

	Year of Injury							
	2011	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**Total**
Total	286	254	274	258	273	235	148	13,781

Footnote 1: Enrollment criteria changed in 1987 and 2000.

Table 8. Number of Form IIs by Post-Injury Year

Excludes Lost to Follow-up *(continued)*

	Post-Injury Year													
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**
Total	24,712	12,967	9,530	8,120	13,718	5,894	5,041	4,161	3,440	7,970	2,117	1,566	1,122	885

(continued)

	Post-Injury Year															
	15	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**30**
Total	5,298	489	344	260	191	4,054	50	24	16	19	3,150	7	5	8	9	2,477

	Post-Injury Year								
	31	**32**	**33**	**35**	**36**	**37**	**39**	**40**	**Total**
Total	1	1	1	1,353	1	1	1	388	119,391

Table 9. Number of Form IIs by Post-Injury Year and Calendar Year of Data Collection

Excludes Lost to Follow-up *(Continued on next page)*

	Calendar Year of Data Collection															
Post-Injury year	**1975-1986**	**1987**	**1988**	**1989**	**1990**	**1991**	**1992**	**1993**	**1994**	**1995**	**1996**	**1997**	**1998**	**1999**	**2000**	**2001**
1	7,513	981	693	451	427	590	521	582	529	485	506	571	590	548	454	476
2	5,999	808	723	443	381	457	333	555	440	390	407	466	467	468	389	45
3	4,669	681	624	540	390	399	275	396	445	361	245	199	87	113	48	26
4	3,635	597	496	445	421	434	263	368	306	350	254	211	197	64	60	5
5	2,921	408	430	361	328	472	254	328	300	242	335	389	348	279	296	305
6	2,277	384	254	323	280	381	295	305	295	217	114	220	230	162	119	14
7	1,712	405	248	205	258	354	257	345	260	204	107	112	213	174	142	32
8	1,268	305	279	220	141	280	221	289	301	211	92	89	100	174	160	22
9	935	239	208	228	167	181	210	222	269	234	89	104	82	98	139	20
10	634	211	147	186	174	202	146	226	216	234	259	231	212	192	181	239
11	364	176	139	152	121	186	135	140	194	179	21	57	88	82	57	13
12	148	146	110	132	107	132	129	141	118	160	12	11	62	71	57	7
13	35	81	100	105	92	107	93	134	124	99	9	5	12	42	59	9
14	0	35	59	96	71	100	70	115	128	112	7	17	13	10	35	9
15	0	0	29	57	80	98	112	83	103	140	180	224	263	252	234	237
16	0	0	0	24	38	83	53	75	69	91	18	6	10	4	2	0
17	0	0	0	0	14	32	67	57	72	59	13	5	10	0	1	4
18	0	0	0	0	0	11	25	70	49	64	7	7	12	0	1	2
19	0	0	0	0	0	0	4	26	63	47	2	20	11	8	5	1
20	0	0	0	0	0	0	0	7	20	75	111	167	170	178	160	203
21	0	0	0	0	0	0	0	0	3	20	4	3	8	2	1	0
22	0	0	0	0	0	0	0	0	0	2	2	4	5	2	2	0
23	0	0	0	0	0	0	0	0	0	0	0	3	5	0	0	0
24	0	0	0	0	0	0	0	0	0	0	0	2	2	2	4	0
25	0	0	0	0	0	0	0	0	0	0	0	0	6	55	105	155
26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
32	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
33	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
37	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
39	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	32,110	5,457	4,539	3,968	3,490	4,499	3,463	4,464	4,304	3,976	2,794	3,123	3,203	2,980	2,711	1,824

Footnote 1: Date of each record first entered into the database (Indate) was added in 1986.

Footnote 2: Form II data collection frequency changed in 1995 and 2000.

Table 9. Number of Form IIs by Post-Injury Year and Calendar Year of Data Collection

Excludes Lost to Follow-up

	Calendar Year of Data Collection																
Post-injury year	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Total
1	434	490	592	472	457	516	616	538	667	539	381	650	672	648	571	552	24,712
2	18	30	31	15	10	9	18	13	20	12	8	4	1	4	1	2	12,967
3	1	3	8	1	1	2	6	2	2	1	1	2	1	0	1	0	9,530
4	2	2	0	1	0	1	5	1	0	1	0	0	1	0	0	0	8,120
5	272	243	272	300	338	423	382	322	338	331	367	459	431	488	335	421	13,718
6	1	1	2	1	0	0	7	2	3	1	1	2	2	1	0	0	5,894
7	1	0	1	1	1	1	3	2	0	0	1	0	2	0	0	0	5,041
8	4	0	2	0	0	0	1	0	0	0	0	0	0	1	1	0	4,161
9	7	6	0	0	0	0	1	0	0	1	0	0	0	0	0	0	3,440
10	212	169	188	196	190	296	311	250	268	241	316	410	312	351	258	312	7,970
11	2	4	1	1	0	1	1	1	1	1	0	0	0	0	0	0	2,117
12	2	8	3	1	1	0	4	3	0	0	0	0	0	0	1	0	1,566
13	3	8	0	0	0	0	3	1	0	0	0	0	0	0	1	0	1,122
14	2	3	1	0	0	0	1	0	0	0	0	0	0	1	0	0	885
15	140	117	143	158	178	239	221	187	202	175	238	253	227	251	216	261	5,298
16	0	2	3	0	0	0	9	1	0	0	0	0	0	0	1	0	489
17	0	0	6	0	0	0	3	0	0	0	0	1	0	0	0	0	344
18	0	1	8	0	0	0	1	0	0	0	0	0	0	1	1	0	260
19	0	1	2	0	0	0	1	0	0	0	0	0	0	0	0	0	191
20	182	163	223	202	215	173	130	111	155	140	222	201	225	249	169	203	4,054
21	0	0	3	1	4	0	0	1	0	0	0	0	0	0	0	0	50
22	1	0	1	2	0	0	1	2	0	0	0	0	0	0	0	0	24
23	0	2	2	0	0	0	1	0	0	1	0	0	1	0	1	0	16
24	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	19
25	131	142	178	196	166	219	209	178	217	168	204	157	144	170	156	194	3,150
26	0	0	3	1	0	2	0	0	0	0	1	0	0	0	0	0	7
27	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	5
28	0	0	5	2	0	0	0	0	0	0	0	0	0	0	1	0	8
29	0	0	8	1	0	0	0	0	0	0	0	0	0	0	0	0	9
30	0	5	53	105	112	205	177	179	214	178	213	190	245	244	179	178	2,477
31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
32	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
33	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
35	0	0	0	0	0	0	6	53	100	105	183	185	155	241	166	159	1,353
36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
37	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
39	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
40	0	0	0	0	0	0	0	0	0	0	1	9	38	113	101	126	388
Total	1,415	1,400	1,753	1,657	1,673	2,087	2,118	1,847	2,187	1,895	2,137	2,523	2,457	2,765	2,163	2,409	119,391

Footnote 1: Date of each record first entered into the database (Indate) was added in 1986.

Footnote 2: Form II data collection frequency changed in 1995 and 2000.

Table 10. Primary Cause of Death

ICD10 Codes	Primary Cause of Death	n	%
J00-J99	Diseases of the respiratory system	2,780	21.9
A00-B99	Infective and parasitic diseases	1,526	12.0
I10-I25	Neoplasms	1,290	10.2
C00-D48	Hypertensive and ischemic heart disease	1,265	10.0
I00-I09, I46	Other heart disease	1,062	8.4
S00-X59	Unintentional injuries	841	6.6
K00-K93	Diseases of the digestive system	602	4.8
I60-I69	Cerebrovascular disease	458	3.6
X60-X84	Suicide	397	3.1
I26-I28	Disease of pulmonary circulation	396	3.1
N00-N99	Diseases of the genitourinary system	373	2.9
R00-R99	Symptoms and ill-defined conditions	368	2.9
E00-E90	Endocrine, nutritional, metabolic and immunity disorders	343	2.7
G00-H95	Diseases of the nervous system and sense organs	255	2.0
I70-I79	Diseases of the arteries, arterioles, and capillaries	147	1.2
M00-M99	Diseases of the musculoskeletal system and connective tissue	129	1.0
Y10-Y34	Subsequent trauma of uncertain nature (unintentional/suicide/homicide)	127	1.0
F00-F99	Mental disorders	124	1.0
X85-Y09	Homicides	111	0.9
D50-D89	Diseases of blood and blood-forming organs	38	0.3
I80-I89	Diseases of veins, lymphatics, and other diseases of the circulatory system	24	0.2
Q00-Q99	Congenital anomalies	15	0.1
Y35	Legal intervention	2	<0.1

Footnote 1: There are 2,245 persons whose primary cause of death is unknown.

Table 11. Cumulative Survival – National

Years Post Injury	Patients Entered	Dead	Censored	Effective Number Exposed	Proportion Dead	Proportion Surviving	Cumulative Survival at Beginning of Interval
0 - 1	50,047	2,097	8,434	45,830.0	0.0458	0.9542	1.0000
1 - 2	39,516	909	2,774	38,129.0	0.0238	0.9762	0.9542
2 - 3	35,833	615	760	35,453.0	0.0173	0.9827	0.9315
3 - 4	34,458	621	363	34,276.5	0.0181	0.9819	0.9153
4 - 5	33,474	544	815	33,066.5	0.0165	0.9835	0.8988
5 - 6	32,115	530	1,801	31,214.5	0.0170	0.9830	0.8840
6 - 7	29,784	508	864	29,352.0	0.0173	0.9827	0.8690
7 - 8	28,412	501	381	28,221.5	0.0178	0.9822	0.8539
8 - 9	27,530	483	295	27,382.5	0.0176	0.9824	0.8388
9 - 10	26,752	429	531	26,486.5	0.0162	0.9838	0.8240
10 - 11	25,792	483	1,032	25,276.0	0.0191	0.9809	0.8106
11 - 12	24,277	410	596	23,979.0	0.0171	0.9829	0.7951
12 - 13	23,271	429	462	23,040.0	0.0186	0.9814	0.7815
13 - 14	22,380	391	389	22,185.5	0.0176	0.9824	0.7670
14 - 15	21,600	442	530	21,335.0	0.0207	0.9793	0.7535
15 - 16	20,628	375	779	20,238.5	0.0185	0.9815	0.7379
16 - 17	19,474	389	542	19,203.0	0.0203	0.9797	0.7242
17 - 18	18,543	364	508	18,289.0	0.0199	0.9801	0.7095
18 - 19	17,671	348	595	17,373.5	0.0200	0.9800	0.6954
19 - 20	16,728	350	672	16,392.0	0.0214	0.9786	0.6815
20 - 21	15,706	322	814	15,299.0	0.0210	0.9790	0.6669
21 - 22	14,570	291	756	14,192.0	0.0205	0.9795	0.6529
22 - 23	13,523	324	649	13,198.5	0.0245	0.9755	0.6395
23 - 24	12,550	297	636	12,232.0	0.0243	0.9757	0.6238
24 - 25	11,617	248	669	11,282.5	0.0220	0.9780	0.6086
25 - 26	10,700	270	691	10,354.5	0.0261	0.9739	0.5953
26 - 27	9,739	231	642	9,418.0	0.0245	0.9755	0.5797
27 - 28	8,866	235	515	8,608.5	0.0273	0.9727	0.5655
28 - 29	8,116	219	500	7,866.0	0.0278	0.9722	0.5501
29 - 30	7,397	197	610	7,092.0	0.0278	0.9722	0.5348
30 - 31	6,590	186	670	6,255.0	0.0297	0.9703	0.5199
31 - 32	5,734	155	528	5,470.0	0.0283	0.9717	0.5045
32 - 33	5,051	115	503	4,799.5	0.0240	0.9760	0.4902
33 - 34	4,433	143	461	4,202.5	0.0340	0.9660	0.4784
34 - 35	3,829	125	406	3,626.0	0.0345	0.9655	0.4621
35 - 36	3,298	99	557	3,019.5	0.0328	0.9672	0.4462
36 - 37	2,642	75	545	2,369.5	0.0317	0.9683	0.4316
37 - 38	2,022	41	368	1,838.0	0.0223	0.9777	0.4179
38 - 39	1,613	39	311	1,457.5	0.0268	0.9732	0.4086
39 - 40	1,263	40	370	1,078.0	0.0371	0.9629	0.3977
40 - 41	853	33	299	703.5	0.0469	0.9531	0.3829
41 - 42	521	12	211	415.5	0.0289	0.9711	0.3649
42 - 43	298	2	169	213.5	0.0094	0.9906	0.3544
43 - 44	127	1	121	66.5	0.0150	0.9850	0.3511
44 - 45	5	0	5	2.5	0.0000	1.0000	0.3458
Total	50,047	14,918	35,129				

Footnote 1: Patients entered = Number of individuals alive at start of interval.

Footnote 2: Dead = Number of individuals who died during the interval.

Footnote 3: Censored = Number of individuals alive at start of interval ineligible for further follow-up due to study termination or lost to follow-up (survival status was unknown) during the interval.

*Footnote 4: Effective Number Exposed = Number of individuals exposed to risk of dying in interval (patients entered - 0.5 * censored).*

Footnote 5: Proportion Dead = Conditional probability of death during the interval (dead / effective number exposed).

Footnote 6: Proportion Surviving = Conditional probability of surviving the interval (1- proportion dead).

*Footnote 7: Cumulative Survival at Beginning of Interval = previous cumulative survival * proportion surviving previous interval.*

Source: National Spinal Cord Injury Statistical Center, University of Alabama at Birmingham, 2017 Annual Statistical Report – Complete Public Version

Table 13A. SMRs for Persons with SCI Surviving at Least 24 Hours Post-Injury

Neurologic Group	Age Group	Actual Deaths	Expected Deaths	SMR	95% Confidence Limits
Vent Dependent	0-30	224	2.28	98.25	86.00 – 111.76
	31-45	182	3.84	47.40	40.88 – 54.67
	46-60	197	7.80	25.26	21.91 – 28.97
	61+	357	17.07	20.91	18.83 – 23.17
C1-4 AIS A,B,C	0-30	269	23.05	11.67	10.34 – 13.13
	31-45	703	58.86	11.94	11.08 – 12.85
	46-60	806	110.67	7.28	6.79 – 7.80
	61+	809	174.72	4.63	4.32 – 4.96
C5-8 AIS A,B,C	0-30	322	48.48	6.64	5.95 – 7.40
	31-45	926	135.72	6.82	6.39 – 7.27
	46-60	1287	243.27	5.29	5.01 – 5.59
	61+	975	283.48	3.44	3.23 – 3.66
T1-S3 AIS A,B,C	0-30	406	78.76	5.15	4.67 – 5.68
	31-45	1066	226.50	4.71	4.43 – 5.00
	46-60	1358	418.62	3.24	3.07 – 3.42
	61+	1276	537.56	2.37	2.24 – 2.51
All Level AIS D	0-30	112	42.76	2.62	2.17 – 3.14
	31-45	336	145.33	2.31	2.07 – 2.57
	46-60	762	401.79	1.90	1.77 – 2.03
	61+	1676	1078.80	1.55	1.48 – 1.63

Footnote 1: SMR= Standardized mortality ratios (Actual death/Expected death).

Source: National Spinal Cord Injury Statistical Center, University of Alabama at Birmingham, 2017 Annual Statistical Report – Complete Public Version

Table 13B. SMRs for Persons with SCI Surviving at Least 1 Year Post-Injury

Neurologic Group	Age Group	Actual Deaths	Expected Deaths	SMR	95% Confidence Limits
Vent Dependent	0-30	98	1.93	50.78	41.44 – 61.61
	31-45	94	3.45	27.25	22.14 – 33.19
	46-60	101	6.64	15.21	12.45 – 18.40
	61+	75	10.12	7.41	5.87 – 9.24
C1-4 AIS A,B,C	0-30	220	20.13	10.93	9.55 – 12.45
	31-45	639	55.84	11.44	10.58 – 12.36
	46-60	697	103.16	6.76	6.27 – 7.27
	61+	585	155.04	3.77	3.48 – 4.09
C5-8 AIS A,B,C	0-30	260	42.95	6.05	5.35 – 6.82
	31-45	876	131.37	6.67	6.24 – 7.12
	46-60	1194	235.54	5.07	4.79 – 5.36
	61+	817	265.73	3.07	2.87 – 3.29
T1-S3 AIS A,B,C	0-30	346	69.10	5.01	4.50 – 5.56
	31-45	1006	218.72	4.60	4.32 – 4.89
	46-60	1296	408.00	3.18	3.01 – 3.35
	61+	1155	518.95	2.23	2.10 – 2.36
All Level AIS D	0-30	90	37.62	2.39	1.93 – 2.93
	31-45	323	139.44	2.32	2.07 – 2.58
	46-60	712	383.80	1.86	1.72 – 2.00
	61+	1543	1020.50	1.51	1.44 – 1.59

Footnote 1: SMR= Standardized mortality ratios (Actual death/Expected death).

Source: National Spinal Cord Injury Statistical Center, University of Alabama at Birmingham, 2017 Annual Statistical Report – Complete Public Version

Table 14A. Life Expectancy for Persons with SCI Surviving at Least 24 Hours Post-Injury

		Neurologic Level				Ventilator Dependent
Age at Injury	No SCI	Any Level AIS-*D*	T1-S3	C5-C8	C1-C4	Any Level
10 years	69.4	62.4	55.0	49.4	42.7	17.5
15 years	64.5	57.6	50.2	44.6	38.1	13.6
20 years	59.6	52.9	45.7	40.3	34.0	11.3
25 years	54.8	48.4	41.7	36.3	30.6	10.9
30 years	50.1	44.0	37.7	32.4	27.2	10.6
35 years	45.4	39.6	33.7	28.6	24.0	10.4
40 years	40.7	35.2	29.7	24.9	20.9	8.7
45 years	36.1	31.0	26.0	21.5	18.2	7.7
50 years	31.6	26.9	22.4	18.3	15.4	6.1
55 years	27.3	23.0	19.0	15.5	12.9	4.6
60 years	23.2	19.5	16.1	13.2	11.1	3.7
65 years	19.3	15.9	13.0	10.6	8.8	2.7
70 years	15.6	12.6	10.0	8.0	6.5	1.8
75 years	12.2	9.5	7.3	5.7	4.6	1.0
80 years	9.1	6.9	5.1	3.8	3.0	0.5

Footnote 1: Values for persons with no SCI are from the 2013 life tables for the U.S. general population.

Table 14B. Life Expectancy for Persons with SCI Surviving at Least 1 Year Post-Injury

		Neurologic Level				Ventilator Dependent
Current Age	No SCI	Any Level AIS-*D*	T1-S3	C5-C8	C1-C4	Any Level
10 years	69.4	62.8	55.5	50.4	44.0	25.8
15 years	64.5	57.9	50.7	45.6	39.3	21.7
20 years	59.6	53.2	46.2	41.2	35.2	19.0
25 years	54.8	48.7	42.2	37.2	31.8	17.9
30 years	50.1	44.3	38.1	33.2	28.4	17.4
35 years	45.4	39.8	34.1	29.4	25.1	15.5
40 years	40.7	35.4	30.2	25.7	22.1	13.3
45 years	36.1	31.2	26.5	22.3	19.4	11.8
50 years	31.6	27.1	22.8	19.0	16.6	9.8
55 years	27.3	23.2	19.4	16.2	14.2	8.3
60 years	23.2	19.7	16.5	14.0	12.5	7.9
65 years	19.3	16.1	13.4	11.3	10.0	6.5
70 years	15.5	12.7	10.3	8.5	7.5	4.6
75 years	12.2	9.7	7.6	6.2	5.3	3.1
80 years	9.1	7.0	5.4	4.2	3.6	1.9

Footnote 1: Values for persons with no SCI are from the 2013 life tables for the U.S. general population.

Table 15. Category of Follow-up Care

	Category of Follow-up Care					
n (%)	System appt	Interview only	Lost	Future follow-up not required	Unkn	Total
Total	68,250 (37.4)	48,641 (26.6)	63,307 (34.7)	2,155 (1.2)	345 (0.2)	182,698

Footnote 1: 'Future Follow-up Not Required'=Form IIs coded 8 (Minimal Deficit).
Footnote 2: 'Lost' includes Lost to Follow-up due to breaks in funding.

Table 16. Category of Follow-up Care by Post-Injury Year

	Post-Injury Year									
Category of Follow-up Care n (%)	1	5	10	15	20	25	30	35	40	Total
System appt	17,999 (60.4)	6,643 (28.3)	3,231 (17.4)	1,772 (12.0)	1,066 (9.3)	680 (7.8)	365 (6.0)	158 (5.4)	53 (7.4)	31,967
Interview only	5,530 (18.6)	6,777 (28.9)	4,630 (24.9)	3,470 (23.4)	2,957 (25.7)	2,442 (28.1)	2,091 (34.5)	1,178 (40.0)	335 (46.8)	29,410
Future follow-up not required	1,095 (3.7)	260 (1.1)	102 (0.5)	48 (0.3)	28 (0.2)	26 (0.3)	21 (0.3)	15 (0.5)	0 (0.0)	1,595
Lost	5,076 (17.0)	9,756 (41.6)	10,607 (57.1)	9,527 (64.3)	7,434 (64.7)	5,550 (63.8)	3,587 (59.2)	1,593 (54.1)	328 (45.8)	53,458
Unkn	88 (0.3)	38 (0.2)	7 (0.0)	8 (0.1)	3 (0.0)	2 (0.0)	0 (0.0)	2 (0.1)	0 (0.0)	148
Total	29,788	23,474	18,577	14,825	11,488	8,700	6,064	2,946	716	116,578

Footnote 1: 'Lost' includes Lost to Follow-up due to break in funding.

Table 17. Reasons for Lost by Post-Injury Year: Lost to Follow-up Records Only

	Post-Injury Year									
Reason for Lost n (%)	**1**	**5**	**10**	**15**	**20**	**25**	**30**	**35**	**40**	**Total**
Refused/withdrew consent	97 (3.1)	90 (1.1)	60 (0.6)	48 (0.5)	54 (0.7)	35 (0.6)	5 (0.1)	0 (0.0)	0 (0.0)	389
Incarcerated and not available	51 (1.6)	59 (0.7)	51 (0.5)	43 (0.5)	29 (0.4)	12 (0.2)	13 (0.4)	6 (0.4)	1 (0.3)	265
Unable to contact	845 (26.9)	1,121 (13.1)	993 (9.8)	663 (7.1)	608 (8.2)	575 (10.4)	306 (8.5)	54 (3.4)	0 (0.0)	5,165
Refused interview	54 (1.7)	64 (0.8)	69 (0.7)	63 (0.7)	50 (0.7)	75 (1.4)	55 (1.5)	38 (2.4)	6 (1.8)	474
Withdrew consent	155 (4.9)	158 (1.9)	141 (1.4)	130 (1.4)	99 (1.3)	125 (2.3)	143 (4.0)	79 (5.0)	20 (6.1)	1,050
ID unkn due to break in funding	2 (0.1)	42 (0.5)	25 (0.2)	11 (0.1)	142 (1.9)	397 (7.2)	798 (22.2)	370 (23.2)	38 (11.6)	1,825
Contact made but survey not completed*	54 (1.7)	73 (0.9)	60 (0.6)	82 (0.9)	71 (1.0)	70 (1.3)	75 (2.1)	72 (4.5)	15 (4.6)	572
Language barrier*	0 (0.0)	2 (0.0)	5 (0.0)	3 (0.0)	2 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	12
Moved out of country*	6 (0.2)	13 (0.2)	17 (0.2)	10 (0.1)	8 (0.1)	5 (0.1)	5 (0.1)	5 (0.3)	0 (0.0)	69
No contact, but valid information*	97 (3.1)	136 (1.6)	151 (1.5)	181 (1.9)	158 (2.1)	142 (2.6)	151 (4.2)	140 (8.8)	27 (8.2)	1,183
No contact, no valid information*	94 (3.0)	201 (2.4)	287 (2.8)	301 (3.2)	333 (4.5)	278 (5.0)	303 (8.4)	235 (14.8)	60 (18.3)	2,092
Identity unkn to NSCISC	0 (0.0)	18 (0.2)	43 (0.4)	1 (0.0)	0 (0.0)	146 (2.6)	24 (0.7)	2 (0.1)	0 (0.0)	234
Break in funding	288 (9.2)	2,286 (26.8)	2,855 (28.3)	3,198 (34.1)	2,534 (34.3)	1,984 (35.7)	1,112 (31.0)	469 (29.4)	159 (48.5)	14,885
Other	113 (3.6)	106 (1.2)	87 (0.9)	87 (0.9)	112 (1.5)	39 (0.7)	34 (0.9)	12 (0.8)	2 (0.6)	592
Unkn	1,283 (40.9)	4,157 (48.8)	5,250 (52.0)	4,553 (48.6)	3,198 (43.2)	1,667 (30.0)	563 (15.7)	111 (7.0)	0 (0.0)	20,782
Total	3,139	8,526	10,094	9,374	7,398	5,550	3,587	1,593	328	49,589

Footnote 1: Form IIs entered into the database since January 1, 1998.
Footnote 2: In February 2007, 'Refusal/Withdrawn Consent' code is invalid; 'Withdrew consent' and 'Patient refusal' codes were added.
Footnote 3: In February 2009, 'Identity unknown' code was added for participants with no personal identifiers due to break in funding.
*Footnote 4: In October 2011, 'Unable to contact' is invalid; *codes were added.*

Table 18. Form I Participant Status

	Participant Status						
n (%)	Deceased	Neuro-recovery	With-drawn	ID unkn	Eligible	Eligible/ lost	Total
Total	10,227 (31.2)	2,409 (7.4)	1,009 (3.1)	1,179 (3.6)	12,056 (36.8)	5,847 (17.9)	32,727

Footnote 1: Eligible/Lost: Eligible for follow-up, but last Form II coded lost (Category of Care=5).

Table 19. How the Interview Was Conducted

	How was interview conducted						
n (%)	In person	By phone	Mail	Combo	Not done, N/A	Unkn	Total
Total	3,658 (8.9)	29,207 (71.1)	3,337 (8.1)	3,524 (8.6)	1,027 (2.5)	315 (0.8)	41,068

Footnote 1: Form IIs entered into the database since March 1, 1996, and only in required interview years (1, 5, 10...).
Footnote 2: Code 4 (combo) added in 1998.

Table 20. Age at Injury: Frequency Distribution

Age	Freq-uency	Percent	Cumulative Percent
<1	5	0.02	0.02
1	13	0.04	0.06
2	10	0.03	0.09
3	22	0.07	0.15
4	22	0.07	0.22
5	18	0.06	0.28
6	20	0.06	0.34
7	15	0.05	0.38
8	18	0.06	0.44
9	20	0.06	0.50
10	33	0.10	0.60
11	15	0.05	0.64
12	37	0.11	0.76
13	106	0.32	1.08
14	210	0.64	1.72
15	416	1.27	2.99
16	801	2.45	5.44
17	1143	3.49	8.94
18	1402	4.28	13.22
19	1430	4.37	17.59
20	1294	3.95	21.55
21	1275	3.90	25.44
22	1193	3.65	29.09
23	1093	3.34	32.43
24	1048	3.20	35.63
25	983	3.00	38.63
26	884	2.70	41.34
27	842	2.57	43.91
28	790	2.41	46.32
29	792	2.42	48.74
30	703	2.15	50.89
31	684	2.09	52.98
32	668	2.04	55.02
33	546	1.67	56.69
34	491	1.50	58.19
35	546	1.67	59.86
36	527	1.61	61.47
37	489	1.49	62.97
38	519	1.59	64.55
39	447	1.37	65.92
40	439	1.34	67.26
41	456	1.39	68.65
42	432	1.32	69.97
43	421	1.29	71.26
44	418	1.28	72.54
45	408	1.25	73.79
46	373	1.14	74.93
47	402	1.23	76.15
48	383	1.17	77.32
49	378	1.16	78.48
50	380	1.16	79.64
51	328	1.00	80.64
52	342	1.05	81.69
53	343	1.05	82.74
54	336	1.03	83.76
55	327	1.00	84.76
56	335	1.02	85.79
57	315	0.96	86.75
58	294	0.90	87.65
59	278	0.85	88.50
60	291	0.89	89.39
61	273	0.83	90.22
62	262	0.80	91.02
63	212	0.65	91.67
64	228	0.70	92.37
65	195	0.60	92.96
66	214	0.65	93.62
67	201	0.61	94.23
68	191	0.58	94.81
69	159	0.49	95.30
70	135	0.41	95.71
71	152	0.46	96.18
72	114	0.35	96.53
73	130	0.40	96.92
74	116	0.35	97.28
75	121	0.37	97.65
76	94	0.29	97.93
77	114	0.35	98.28
78	80	0.24	98.53
79	85	0.26	98.79
80	66	0.20	98.99
81	49	0.15	99.14
82	46	0.14	99.28
83	50	0.15	99.43
84	36	0.11	99.54
85	31	0.09	99.64
86	29	0.09	99.72
87	21	0.06	99.79
88	22	0.07	99.86
89	16	0.05	99.91
90	10	0.03	99.94
91	6	0.02	99.95
92	6	0.02	99.97
93	1	0.00	99.98
94	3	0.01	99.98
95	3	0.01	99.99
97	1	0.00	100.00
98	1	0.00	100.00

Source: National Spinal Cord Injury Statistical Center, University of Alabama at Birmingham, 2017 Annual Statistical Report – Complete Public Version

Table 21. Age at Injury

	Age at Injury				
	N	Mean	Standard Deviation	Minimum	Maximum
Total	32,722	35.3	17.1	0	98

Footnote 1: Excludes 5 records reporting unknown age.

Table 22. Trend in Age by Year of Injury

Year of Injury	Age at Injury				
	N	Mean	Standard Deviation	Minimum	Maximum
1972-1979	4,562	28.7	14.1	1	88
1980-1984	4,949	30.5	14.7	1	90
1985-1989	3,842	32.3	15.8	0	92
1990-1994	3,295	33.7	16.0	1	97
1995-1999	3,623	36.4	17.0	0	98
2000-2004	3,443	37.6	16.7	3	90
2005-2009	3,607	40.5	18.0	1	94
2010-2014	2,947	42.3	18.3	3	95
2015-2017	2,454	42.7	18.7	0	95
Total	32,722	35.3	17.1	0	98

Footnote 1: Excludes 5 records reporting unknown age.

Table 23. Sex

	Sex		
n (%)	Male	Female	Total
Total	26,365 (80.6)	6,355 (19.4)	32,720

Footnote 1: Excludes 2 records reporting sex as 'transgender.'
Footnote 2: Excludes 5 records reporting sex as 'unknown.'

Table 24. Racial Group

	Racial Group							
n (%)	Caucasian	African American	Native American	Asian	Other	Declined	Unkn	Total
Total	22,152 (67.7)	7,406 (22.6)	311 (1.0)	561 (1.7)	595 (1.8)	14 (0.0)	1,688 (5.2)	32,727

Footnote 1: High percentages of unknowns are mainly due to database conversion process in 1995.
Footnote 2: 'Declined' code was added in October 2011.

Table 25. Hispanic Origin

	Hispanic Origin				
n (%)	No	Yes	Declined	Unkn	Total
Total	29,286 (89.5)	3,149 (9.6)	11 (0.0)	281 (0.9)	32,727

Footnote 1: 'Declined' code was added in October 2011.

Table 26. Hispanic Origin by Race

	Racial Group							
Hispanic Origin n (%)	Caucasian	African American	Native American	Asian	Other	Declined	Unkn	Total
No	21,072 (64.4)	7,221 (22.1)	273 (0.8)	543 (1.7)	167 (0.5)	3 (0.0)	7 (0.0)	29,286
Yes	969 (3.0)	103 (0.3)	37 (0.1)	17 (0.1)	423 (1.3)	8 (0.0)	1,592 (4.9)	3,149
Declined	5 (0.0)	2 (0.0)	0 (0.0)	0 (0.0)	1 (0.0)	3 (0.0)	0 (0.0)	11
Unkn	106 (0.3)	80 (0.2)	1 (0.0)	1 (0.0)	4 (0.0)	0 (0.0)	89 (0.3)	281
Total	22,152	7,406	311	561	595	14	1,688	32,727

Footnote 1: High percentage of unknowns is mainly due to a database conversion process in 1995.
Footnote 2: 'Declined' code was added in October 2011.

Table 27. Trend in Race by Year of Injury

	Year of Injury									
Racial Group n (%)	**1972-1979**	**1980-1984**	**1985-1989**	**1990-1994**	**1995-1999**	**2000-2004**	**2005-2009**	**2010-2014**	**2015-2017**	**Total**
Caucasian	3,505 (76.8)	3,524 (71.2)	2,488 (64.8)	1,804 (54.7)	2,251 (62.1)	2,416 (70.2)	2,392 (66.3)	2,091 (71.0)	1,681 (68.4)	22,152
African American	648 (14.2)	873 (17.6)	957 (24.9)	959 (29.1)	982 (27.1)	814 (23.6)	962 (26.7)	641 (21.8)	570 (23.2)	7,406
Native American	88 (1.9)	65 (1.3)	29 (0.8)	15 (0.5)	17 (0.5)	11 (0.3)	31 (0.9)	29 (1.0)	26 (1.1)	311
Asian	42 (0.9)	61 (1.2)	55 (1.4)	62 (1.9)	83 (2.3)	71 (2.1)	74 (2.1)	50 (1.7)	63 (2.6)	561
Other	16 (0.4)	17 (0.3)	10 (0.3)	47 (1.4)	110 (3.0)	98 (2.8)	114 (3.2)	94 (3.2)	89 (3.6)	595
Declined	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	7 (0.2)	7 (0.3)	14
Unkn	263 (5.8)	409 (8.3)	303 (7.9)	408 (12.4)	180 (5.0)	33 (1.0)	34 (0.9)	35 (1.2)	23 (0.9)	1,688
Total	4,562	4,949	3,842	3,295	3,623	3,443	3,607	2,947	2,459	32,727

Footnote 1: High percentage of unknowns is mainly due to a database conversion process in 1995.
Footnote 2: 'Declined' code was added in October 2011.

Table 28. Trend in Hispanic Origin by Year of Injury

	Year of Injury									
Hispanic Origin n (%)	**1972-1979**	**1980-1984**	**1985-1989**	**1990-1994**	**1995-1999**	**2000-2004**	**2005-2009**	**2010-2014**	**2015-2017**	**Total**
No	4,288 (94.0)	4,539 (91.7)	3,534 (92.0)	2,856 (86.7)	3,120 (86.1)	2,992 (86.9)	3,252 (90.2)	2,577 (87.4)	2,128 (86.5)	29,286
Yes	272 (6.0)	408 (8.2)	307 (8.0)	421 (12.8)	398 (11.0)	429 (12.5)	310 (8.6)	325 (11.0)	279 (11.3)	3,149
Declined	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	1 (0.0)	7 (0.2)	3 (0.1)	11
Unkn	2 (0.0)	2 (0.0)	1 (0.0)	18 (0.5)	105 (2.9)	22 (0.6)	44 (1.2)	38 (1.3)	49 (2.0)	281
Total	4,562	4,949	3,842	3,295	3,623	3,443	3,607	2,947	2,459	32,727

Footnote 1: 'Declined' code was added in October 2011.

Source: National Spinal Cord Injury Statistical Center, University of Alabama at Birmingham, 2017 Annual Statistical Report – Complete Public Version

Table 29. Ability to Speak and Understand English at Time of Injury

	English Understanding							
n (%)	Very well	Well	Not well	Not at all	Speaks English, unkn ability	Declined	Unkn	Total
Total	3,856 (32.2)	269 (2.2)	58 (0.5)	238 (2.0)	7,470 (62.3)	1 (0.0)	89 (0.7)	11,981

Footnote 1: Data were required for all admissions to System since October 1, 2000.
Footnote 2: High percentage of "Speaks English, unknown ability" is mainly due to a database conversion process in 2011.

Table 30. Etiology of SCI by Sex

Rank	Etiology n (%)	Males	Females	Total
1	Auto accident	7,604 (28.9)	2,991 (47.1)	10,595 (32.4)
2	Fall	5,903 (22.4)	1,436 (22.6)	7,339 (22.5)
3	Gunshot wound	4,402 (16.7)	595 (9.4)	4,997 (15.3)
4	Motorcycle accident	1,866 (7.1)	138 (2.2)	2,004 (6.1)
5	Diving	1,756 (6.7)	157 (2.5)	1,913 (5.9)
6	Medical/surgical complication	599 (2.3)	332 (5.2)	931 (2.8)
7	Hit by falling/flying object	856 (3.3)	45 (0.7)	901 (2.8)
8	Bicycle	471 (1.8)	63 (1.0)	534 (1.6)
9	Pedestrian	380 (1.4)	133 (2.1)	513 (1.6)
10	Person-to-person contact	249 (0.9)	69 (1.1)	318 (1.0)
11	Other unclassified	263 (1.0)	25 (0.4)	288 (0.9)
12	All other penetrating wounds	202 (0.8)	57 (0.9)	259 (0.8)
13	All-terrain vehicle (ATV) and cycle (ATC)	208 (0.8)	35 (0.6)	243 (0.7)
14	Other vehicular	176 (0.7)	19 (0.3)	195 (0.6)
15	Snow skiing	165 (0.6)	19 (0.3)	184 (0.6)
16	Winter sports	134 (0.5)	30 (0.5)	164 (0.5)
17	Other sport	125 (0.5)	27 (0.4)	152 (0.5)
18	Football	149 (0.6)	0 (0.0)	149 (0.5)
19	Horseback riding	73 (0.3)	76 (1.2)	149 (0.5)
20	Surfing: includes body surfing	135 (0.5)	6 (0.1)	141 (0.4)
21	Fixed-wing aircraft	72 (0.3)	29 (0.5)	101 (0.3)
22	Wrestling	94 (0.4)	2 (0.0)	96 (0.3)
23	Trampoline	65 (0.2)	8 (0.1)	73 (0.2)
24	Gymnastics	37 (0.1)	21 (0.3)	58 (0.2)
25	Snowmobile	48 (0.2)	8 (0.1)	56 (0.2)
26	Field sports	44 (0.2)	2 (0.0)	46 (0.1)
27	Hang gliding	38 (0.1)	2 (0.0)	40 (0.1)
28	Air sports	37 (0.1)	1 (0.0)	38 (0.1)
29	Water skiing	33 (0.1)	3 (0.0)	36 (0.1)
30	Boat	22 (0.1)	12 (0.2)	34 (0.1)
31	Rotating wing aircraft	31 (0.1)	2 (0.0)	33 (0.1)
32	Rodeo	24 (0.1)	1 (0.0)	25 (0.1)
33	Baseball/softball	23 (0.1)	1 (0.0)	24 (0.1)
34	Explosion	14 (0.1)	2 (0.0)	16 (0.0)
35	Basketball/volleyball	14 (0.1)	0 (0.0)	14 (0.0)
36	Skateboard	8 (0.0)	0 (0.0)	8 (0.0)
37	Track and field	6 (0.0)	0 (0.0)	6 (0.0)
	Total	26,326	6,347	32,673

Footnote 1: Excludes 54 records reporting unknown etiology and/or unknown /other sex.

Source: National Spinal Cord Injury Statistical Center, University of Alabama at Birmingham, 2017 Annual Statistical Report – Complete Public Version

Table 31. Grouped Etiology

n (%)	Etiology							
	Vehicular	Violence	Sports	Falls	Med/surg	Other	Unkn	Total
Total	13,796 (42.2)	5,591 (17.1)	3,316 (10.1)	7,339 (22.4)	931 (2.8)	1,702 (5.2)	52 (0.2)	32,727

Footnote 1: Vehicular=codes 1-9; Violence=codes 10-15; Sports=codes 20-29, 70-78; Falls=code 30; Medical/surgical complication=code 50.

Table 32. Grouped Etiology by Age at Injury

Etiology n (%)	Age at Injury						
	<15	16-30	31-45	46-60	61-75	≥ 76	Total
Vehicular	362 (36.9)	7,261 (46.3)	3,332 (44.5)	1,927 (37.7)	755 (27.9)	159 (20.5)	13,796
Violence	226 (23.1)	3,735 (23.8)	1,229 (16.4)	330 (6.5)	63 (2.3)	8 (1.0)	5,591
Sports	236 (24.1)	2,224 (14.2)	544 (7.3)	232 (4.5)	73 (2.7)	7 (0.9)	3,316
Falls	78 (8.0)	1,671 (10.7)	1,717 (22.9)	1,960 (38.4)	1,404 (51.9)	509 (65.7)	7,339
Med/surg	27 (2.8)	107 (0.7)	122 (1.6)	315 (6.2)	298 (11.0)	62 (8.0)	931
Other	51 (5.2)	659 (4.2)	536 (7.2)	330 (6.5)	104 (3.8)	22 (2.8)	1,702
Unkn	0 (0.0)	16 (0.1)	11 (0.1)	11 (0.2)	6 (0.2)	8 (1.0)	52
Total	980	15,673	7,491	5,105	2,703	775	32,727

Footnote 1: Vehicular=codes 1-9; Violence=codes 10-15; Sports=codes 20-29, 70-78; Falls=code 30; Medical/surgical complication=code 50.

Table 33. Grouped Etiology by Sex

Etiology n (%)	Sex		
	Male	Female	Total
Vehicular	10,498 (39.8)	3,297 (51.9)	13,795
Violence	4,867 (18.5)	723 (11.4)	5,590
Sports	2,960 (11.2)	356 (5.6)	3,316
Falls	5,903 (22.4)	1,436 (22.6)	7,339
Med/surg	599 (2.3)	332 (5.2)	931
Other	1,499 (5.7)	203 (3.2)	1,702
Unkn	39 (0.1)	8 (0.1)	47
Total	26,365	6,355	32,720

Footnote 1: Vehicular=codes 1-9; Violence=codes 10-15; Sports=codes 20-29, 70-78; Falls=code 30; Medical/surgical complication=code 50.
Footnote 2: Excludes 7 records reporting unknown/other sex.

Table 34. Grouped Etiology by Racial Group

	Racial Group							
Etiology n (%)	Caucasian	African American	Native American	Asian	Other	Declined	Unkn	Total
Vehicular	10,555 (47.6)	2,073 (28.0)	178 (57.2)	243 (43.3)	230 (38.7)	5 (35.7)	512 (30.3)	13,796
Violence	1,435 (6.5)	3,199 (43.2)	43 (13.8)	88 (15.7)	130 (21.8)	2 (14.3)	694 (41.1)	5,591
Sports	2,903 (13.1)	219 (3.0)	14 (4.5)	44 (7.8)	33 (5.5)	1 (7.1)	102 (6.0)	3,316
Falls	5,298 (23.9)	1,436 (19.4)	54 (17.4)	134 (23.9)	154 (25.9)	6 (42.9)	257 (15.2)	7,339
Med/surg	710 (3.2)	155 (2.1)	4 (1.3)	21 (3.7)	18 (3.0)	0 (0.0)	23 (1.4)	931
Other	1,218 (5.5)	317 (4.3)	18 (5.8)	29 (5.2)	30 (5.0)	0 (0.0)	90 (5.3)	1,702
Unkn	33 (0.1)	7 (0.1)	0 (0.0)	2 (0.4)	0 (0.0)	0 (0.0)	10 (0.6)	52
Total	22,152	7,406	311	561	595	14	1,688	32,727

Footnote 1: Vehicular=codes 1-9; Violence=codes 10-15; Sports=codes 20-29, 70-78; Falls=code 30; Medical/surgical complication=code 50.

Table 35. Grouped Etiology by Hispanic Origin

	Hispanic Origin				
Etiology n (%)	No	Yes	Declined	Unkn	Total
Vehicular	12,583 (43.0)	1,122 (35.6)	3 (27.3)	88 (31.3)	13,796
Violence	4,521 (15.4)	1,007 (32.0)	1 (9.1)	62 (22.1)	5,591
Sports	3,105 (10.6)	194 (6.2)	1 (9.1)	16 (5.7)	3,316
Falls	6,654 (22.7)	595 (18.9)	6 (54.5)	84 (29.9)	7,339
Med/surg	851 (2.9)	74 (2.3)	0 (0.0)	6 (2.1)	931
Other	1,535 (5.2)	151 (4.8)	0 (0.0)	16 (5.7)	1,702
Unkn	37 (0.1)	6 (0.2)	0 (0.0)	9 (3.2)	52
Total	29,286	3,149	11	281	32,727

Footnote 1: Vehicular=codes 1-9; Violence=codes 10-15; Sports=codes 20-29, 70-78; Falls=code 30; Medical/surgical complication=code 50.

Table 36. Trend in Grouped Etiology by Year of Injury

	Year of Injury									
Etiology n (%)	1972-1979	1980-1984	1985-1989	1990-1994	1995-1999	2000-2004	2005-2009	2010-2014	2015-2017	Total
Vehicular	2,141 (46.9)	2,236 (45.2)	1,620 (42.2)	1,197 (36.3)	1,449 (40.0)	1,634 (47.5)	1,459 (40.4)	1,140 (38.7)	920 (37.4)	13,796
Violence	605 (13.3)	792 (16.0)	723 (18.8)	952 (28.9)	764 (21.1)	478 (13.9)	544 (15.1)	390 (13.2)	343 (13.9)	5,591
Sports	655 (14.4)	705 (14.2)	390 (10.2)	249 (7.6)	254 (7.0)	302 (8.8)	289 (8.0)	269 (9.1)	203 (8.3)	3,316
Falls	752 (16.5)	836 (16.9)	796 (20.7)	659 (20.0)	847 (23.4)	792 (23.0)	1,000 (27.7)	884 (30.0)	773 (31.4)	7,339
Med/surg	53 (1.2)	83 (1.7)	80 (2.1)	76 (2.3)	131 (3.6)	87 (2.5)	170 (4.7)	139 (4.7)	112 (4.6)	931
Other	353 (7.7)	294 (5.9)	231 (6.0)	159 (4.8)	174 (4.8)	145 (4.2)	141 (3.9)	118 (4.0)	87 (3.5)	1,702
Unkn	3 (0.1)	3 (0.1)	2 (0.1)	3 (0.1)	4 (0.1)	5 (0.1)	4 (0.1)	7 (0.2)	21 (0.9)	52
Total	4,562	4,949	3,842	3,295	3,623	3,443	3,607	2,947	2,459	32,727

Footnote 1: Vehicular=codes 1-9; Violence=codes 10-15; Sports=codes 20-29, 70-78; Falls=code 30; Medical/surgical complication=code 50.

Table 37. Work Relatedness

	Injury Related to Work			
n (%)	No	Yes	Unkn	Total
Total	10,975 (89.8)	1,114 (9.1)	138 (1.1)	12,227

Footnote 1: Form Is entered to the database since January 1, 2001.

Table 38. Marital Status at Time of Injury

	Marital Status at Injury								
n (%)	Single	Married	Divorced	Separated	Widowed	Signifi-cant other	Other	Unkn	Total
Total	16,638 (50.8)	10,694 (32.7)	3,084 (9.4)	1,083 (3.3)	850 (2.6)	132 (0.4)	38 (0.1)	208 (0.6)	32,727

Footnote 1: 'Significant other' was added in October 2011.

Table 39. Marital Status by Post-Injury Year

	Post-Injury Year									
Marital Status n (%)	1	5	10	15	20	25	30	35	40	Total
Single	12,183 (49.3)	6,199 (45.2)	3,234 (40.6)	1,979 (37.4)	1,452 (35.8)	1,037 (32.9)	754 (30.4)	367 (27.1)	97 (25.0)	27,302
Married	7,916 (32.0)	4,396 (32.0)	2,648 (33.2)	1,793 (33.8)	1,412 (34.8)	1,146 (36.4)	943 (38.1)	567 (41.9)	170 (43.8)	20,991
Divorced	2,731 (11.1)	2,144 (15.6)	1,515 (19.0)	1,146 (21.6)	934 (23.0)	750 (23.8)	591 (23.9)	304 (22.5)	80 (20.6)	10,195
Separated	828 (3.4)	378 (2.8)	204 (2.6)	126 (2.4)	89 (2.2)	61 (1.9)	55 (2.2)	25 (1.8)	5 (1.3)	1,771
Widowed	581 (2.4)	333 (2.4)	201 (2.5)	128 (2.4)	103 (2.5)	108 (3.4)	92 (3.7)	50 (3.7)	20 (5.2)	1,616
Significant other	119 (0.5)	75 (0.5)	59 (0.7)	53 (1.0)	33 (0.8)	26 (0.8)	32 (1.3)	35 (2.6)	15 (3.9)	447
Other	28 (0.1)	17 (0.1)	10 (0.1)	7 (0.1)	1 (0.0)	6 (0.2)	3 (0.1)	1 (0.1)	0 (0.0)	73
Unkn	326 (1.3)	176 (1.3)	99 (1.2)	66 (1.2)	30 (0.7)	16 (0.5)	7 (0.3)	4 (0.3)	1 (0.3)	725
Total	24,712	13,718	7,970	5,298	4,054	3,150	2,477	1,353	388	63,120

Footnote 1: 'Significant other' was added in October 2011.

Table 40. Change in Marital Status by Post-Injury Year

Change in Marital Status n (%)	Post-Injury Year									
	1	5	10	15	20	25	30	35	40	Total
No change	8,585 (92.6)	5,140 (85.3)	3,806 (84.2)	2,890 (83.9)	2,673 (84.4)	2,491 (83.5)	2,049 (82.7)	1,133 (83.7)	333 (85.8)	29,100
Divorce	196 (2.1)	356 (5.9)	217 (4.8)	156 (4.5)	153 (4.8)	130 (4.4)	106 (4.3)	49 (3.6)	13 (3.4)	1,376
Marriage	174 (1.9)	261 (4.3)	265 (5.9)	196 (5.7)	191 (6.0)	190 (6.4)	148 (6.0)	75 (5.5)	15 (3.9)	1,515
Widowed	35 (0.4)	50 (0.8)	42 (0.9)	18 (0.5)	20 (0.6)	40 (1.3)	30 (1.2)	23 (1.7)	10 (2.6)	268
Divorce + Marriage	23 (0.2)	45 (0.7)	45 (1.0)	59 (1.7)	56 (1.8)	72 (2.4)	71 (2.9)	32 (2.4)	8 (2.1)	411
Widowed + Marriage	0 (0.0)	7 (0.1)	4 (0.1)	4 (0.1)	4 (0.1)	8 (0.3)	11 (0.4)	5 (0.4)	0 (0.0)	43
Divorce, marriage + Widowed	4 (0.0)	2 (0.0)	0 (0.0)	1 (0.0)	1 (0.0)	3 (0.1)	5 (0.2)	1 (0.0)	0 (0.0)	17
Significant other	81 (0.9)	63 (1.0)	50 (1.1)	54 (1.6)	26 (0.8)	17 (0.6)	32 (1.3)	27 (2.0)	7 (1.8)	357
Other	47 (0.5)	34 (0.6)	33 (0.7)	10 (0.3)	11 (0.3)	14 (0.5)	14 (0.6)	2 (0.1)	0 (0.0)	165
Unkn	126 (1.4)	69 (1.1)	57 (1.3)	55 (1.6)	31 (1.0)	19 (0.6)	11 (0.4)	6 (0.4)	2 (0.1)	376
Total	9,271	6,027	4,519	3,443	3,166	2,984	2,477	1,353	388	33,628

Footnote 1: Form IIs entered into the database since January 1, 2001.
Footnote 2: 'Significant other' was added in October 2011.

Table 41. Highest Level of Education at Time of Injury

n (%)	Education Level									
	8^{th} grade or less	9^{th}-11^{th} grade	High school or GED	Assoc	Bachs	Mas-ters	Doc-torate	Other	Unkn	Total
Total	2,720 (8.3)	7,382 (22.6)	15,882 (48.5)	1,000 (3.1)	2,505 (7.7)	680 (2.1)	378 (1.2)	280 (0.9)	1,900 (5.8)	32,727

Table 42. Highest Level of Education by Post-Injury Year

	Post-Injury Year									
Education Level n (%)	**1**	**5**	**10**	**15**	**20**	**25**	**30**	**35**	**40**	**Total**
8th grade or less	1,699 (6.9)	730 (5.3)	363 (4.6)	170 (3.2)	104 (2.6)	73 (2.3)	64 (2.6)	30 (2.2)	13 (3.4)	3,246
9th to 11th grade	5,086 (20.6)	1,885 (13.7)	961 (12.1)	540 (10.2)	384 (9.5)	241 (7.7)	150 (6.1)	74 (5.5)	12 (3.1)	9,333
High School/GED	13,038 (52.8)	7,712 (56.2)	4,009 (50.3)	2,620 (49.5)	1,885 (46.5)	1,420 (45.1)	1,074 (43.4)	536 (39.6)	125 (32.2)	32,419
Associate degree	937 (3.8)	771 (5.6)	651 (8.2)	474 (8.9)	423 (10.4)	324 (10.3)	266 (10.7)	158 (11.7)	51 (13.1)	4,055
Bachelor's degree	2,177 (8.8)	1,620 (11.8)	1,222 (15.3)	901 (17.0)	753 (18.6)	671 (21.3)	555 (22.4)	338 (25.0)	106 (27.3)	8,343
Master's degree	622 (2.5)	406 (3.0)	371 (4.7)	314 (5.9)	275 (6.8)	263 (8.3)	230 (9.3)	138 (10.2)	57 (14.7)	2,676
Doctorate degree	318 (1.3)	180 (1.3)	144 (1.8)	107 (2.0)	105 (2.6)	94 (3.0)	95 (3.8)	56 (4.1)	20 (5.2)	1,119
Other	259 (1.0)	176 (1.3)	130 (1.6)	94 (1.8)	81 (2.0)	42 (1.3)	28 (1.1)	14 (1.0)	3 (0.8)	827
Unkn	576 (2.3)	238 (1.7)	119 (1.5)	78 (1.5)	44 (1.1)	22 (0.7)	15 (0.6)	9 (0.7)	1 (0.3)	1,102
Total	24,712	13,718	7,970	5,298	4,054	3,150	2,477	1,353	388	63,120

Table 43. Occupational Status at Time of Injury

	Occupational Status at Injury											
n (%)	**Work**	**Home-maker**	**OJT**	**Work-shop**	**Stud-ent**	**Unem-ployed**	**Retired**	**Retired, disab-ility***	**Retired, non-disabil-ity***	**Other**	**Unkn**	**Total**
Total	18,873 (57.7)	598 (1.8)	84 (0.3)	20 (0.1)	4,777 (14.6)	5,092 (15.6)	2,364 (7.2)	12 (0.0)	37 (0.1)	467 (1.4)	403 (1.2)	32,727

*Footnote 1: In June 2017, 'Retired' code invalid; * 'Retired, disability' and *'Retired, non-disability' codes were added.*
Footnote 2: OJT = on the job training.

Table 44. Occupational Status by Post-Injury Year

	Post-Injury Year									
Occupational Status n (%)	**1**	**5**	**10**	**15**	**20**	**25**	**30**	**35**	**40**	**Total**
Work	3,053 (12.4)	2,811 (20.5)	2,144 (26.9)	1,633 (30.8)	1,343 (33.1)	1,083 (34.4)	793 (32.0)	429 (31.7)	119 (30.7)	13,408
Homemaker	401 (1.6)	268 (2.0)	185 (2.3)	111 (2.1)	73 (1.8)	58 (1.8)	61 (2.5)	29 (2.1)	8 (2.1)	1,194
OJT	32 (0.1)	19 (0.1)	8 (0.1)	3 (0.1)	6 (0.1)	1 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	69
Workshop	13 (0.1)	5 (0.0)	7 (0.1)	2 (0.0)	1 (0.0)	4 (0.1)	0 (0.0)	0 (0.0)	0 (0.0)	32
Student	3,706 (15.0)	2,043 (14.9)	515 (6.5)	180 (3.4)	98 (2.4)	43 (1.4)	15 (0.6)	10 (0.7)	0 (0.0)	6,610
Unemployed	13,410 (54.3)	6,407 (46.7)	3,779 (47.4)	2,419 (45.7)	1,835 (45.3)	1,306 (41.5)	906 (36.6)	423 (31.3)	102 (26.3)	30,587
Retired	1,707 (6.9)	1,087 (7.9)	662 (8.3)	456 (8.6)	332 (8.2)	326 (10.3)	406 (16.4)	321 (23.7)	109 (28.1)	5,406
Retired, disability*	23 (0.1)	42 (0.3)	31 (0.4)	22 (0.4)	13 (0.3)	16 (0.5)	16 (0.6)	16 (1.2)	16 (4.1)	195
Retired, non-disability*	26 (0.1)	26 (0.2)	8 (0.1)	14 (0.3)	7 (0.2)	6 (0.2)	4 (0.2)	14 (1.0)	10 (2.6)	115
Other	1,720 (7.0)	734 (5.4)	485 (6.1)	363 (6.9)	298 (7.4)	283 (9.0)	262 (10.6)	107 (7.9)	23 (5.9)	4,275
Unkn	621 (2.5)	276 (2.0)	146 (1.8)	95 (1.8)	48 (1.2)	24 (0.8)	14 (0.6)	4 (0.3)	1 (0.3)	1,229
Total	24,712	13,718	7,970	5,298	4,054	3,150	2,477	1,353	388	63,120

*Footnote 1: In June 2017, 'Retired' code became invalid; * 'Retired, disability' and *'Retired, non-disability' codes were added.*
Footnote 2: OJT = on the job training.

Source: National Spinal Cord Injury Statistical Center, University of Alabama at Birmingham, 2017 Annual Statistical Report – Complete Public Version

Table 45. Job Census Code at Time of Injury

(Continued)

	Job Census Code						
n (%)	Management, business, financial	Computer, engineer, science*	Education, legal, communication, arts media*	Healthcare practitioners and technicians*	Services	Sales and related	Office and admin support
Total	737 (6.0)	20 (0.2)	30 (0.2)	21 (0.2)	936 (7.7)	451 (3.7)	384 (3.1)

(Continued)

	Job Census Code						
n (%)	Farming, fishing and forestry	Construction/ extraction*	Install/ maintain/ repair	Production*	Transportation and material moving	Military specific	Professional specialty**
Total	242 (2.0)	46 (0.4)	348 (2.8)	24 (0.2)	470 (3.8)	36 (0.3)	984 (8.0)

	Job Census Code					
n (%)	Technicians and related support**	Precision production, craft, and repair**	Handlers, equipment cleaners, helpers, and laborers**	NA, not working	Unkn	Total
Total	336 (2.7)	1,289 (10.5)	671 (5.5)	4,847 (39.6)	355 (2.9)	12,227

Footnote 1: Form Is entered to the database since January 1, 2001.
*Footnote 2: In October 2016: * codes were added, ** codes become invalid.*

Table 46. Job Census Code by Post-Injury Year

	Post-Injury Year									
Job Census Code n (%)	**1**	**5**	**10**	**15**	**20**	**25**	**30**	**35**	**40**	**Total**
Management, business, financial	322 (3.5)	262 (4.3)	230 (5.1)	211 (6.1)	251 (7.9)	231 (7.7)	198 (8.0)	124 (9.2)	38 (9.8)	1,867
Computer, engineer, science*	18 (0.2)	5 (0.1)	8 (0.2)	18 (0.5)	8 (0.3)	9 (0.3)	13 (0.5)	11 (0.8)	8 (2.1)	98
Education, legal, communication, art/media*	8 (0.1)	7 (0.1)	8 (0.2)	9 (0.3)	4 (0.1)	9 (0.3)	5 (0.2)	10 (0.7)	9 (2.3)	69
Healthcare practitioners and technicians*	4 (0.0)	7 (0.1)	10 (0.2)	7 (0.2)	4 (0.1)	2 (0.1)	1 (0.0)	2 (0.1)	1 (0.3)	38
Services	111 (1.2)	98 (1.6)	69 (1.5)	58 (1.7)	53 (1.7)	37 (1.2)	23 (0.9)	9 (0.7)	3 (0.8)	461
Sales and related	124 (1.3)	138 (2.3)	135 (3.0)	87 (2.5)	72 (2.3)	72 (2.4)	53 (2.1)	24 (1.8)	5 (1.3)	710
Office and admin support	113 (1.2)	149 (2.5)	135 (3.0)	133 (3.9)	116 (3.7)	129 (4.3)	82 (3.3)	37 (2.7)	10 (2.6)	904
Farming, fishing and forestry	33 (0.4)	28 (0.5)	17 (0.4)	18 (0.5)	12 (0.4)	19 (0.6)	15 (0.6)	5 (0.4)	0 (0.0)	147
Construction/extraction*	2 (0.0)	1 (0.0)	1 (0.0)	1 (0.0)	0 (0.0)	2 (0.1)	1 (0.0)	0 (0.0)	0 (0.0)	8
Install/maintain/repair	33 (0.4)	31 (0.5)	20 (0.4)	12 (0.3)	17 (0.5)	8 (0.3)	5 (0.2)	3 (0.2)	3 (0.8)	132
Production*	1 (0.0)	3 (0.0)	1 (0.0)	1 (0.0)	1 (0.0)	0 (0.0)	1 (0.0)	1 (0.1)	1 (0.3)	10
Transportation and material moving	26 (0.3)	21 (0.3)	14 (0.3)	8 (0.2)	12 (0.4)	10 (0.3)	10 (0.4)	3 (0.2)	4 (1.0)	108
Military specific	4 (0.0)	3 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	1 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	8
Professional specialty**	367 (4.0)	316 (5.2)	343 (7.6)	315 (9.1)	346 (10.9)	369 (12.4)	298 (12.0)	161 (11.9)	31 (8.0)	2,546
Technicians and related support**	69 (0.7)	75 (1.2)	71 (1.6)	57 (1.7)	54 (1.7)	59 (2.0)	44 (1.8)	23 (1.7)	2 (0.5)	454
Precision production, craft, and repair**	75 (0.8)	67 (1.1)	66 (1.5)	56 (1.6)	36 (1.1)	39 (1.3)	29 (1.2)	13 (1.0)	3 (0.8)	384
Handlers, equipment cleaners, helpers, and laborers**	25 (0.3)	20 (0.3)	15 (0.3)	10 (0.3)	6 (0.2)	10 (0.3)	9 (0.4)	0 (0.0)	0 (0.0)	95
N/A, not working	7,704 (83.1)	4,678 (77.6)	3,282 (72.6)	2,356 (68.4)	2,104 (66.5)	1,936 (64.9)	1,670 (67.4)	920 (68.0)	268 (69.1)	24,918
Unkn	232 (2.5)	118 (2.0)	94 (2.1)	86 (2.5)	70 (2.2)	42 (1.4)	20 (0.8)	7 (0.5)	2 (0.5)	671
Total	9,271 (27.6)	6,027 (17.9)	4,519 (13.4)	3,443 (10.2)	3,166 (9.4)	2,984 (8.9)	2,477 (7.4)	1,353 (4.0)	388 (1.2)	33,628

Footnote 1: Form Is entered to the database since January 1, 2001.
*Footnote 2: In October 2016: * codes were added, ** codes become invalid.*

Source: National Spinal Cord Injury Statistical Center, University of Alabama at Birmingham, 2017 Annual Statistical Report – Complete Public Version

Table 47. Veteran Status at Time of Injury

n (%)	Veteran Status			
	No	Yes	Unkn	Total
Total	11,032 (90.2)	996 (8.1)	199 (1.6)	12,227

Footnote 1: Form Is entered to the database since January 1, 2001.

Table 48. VA Health Care System Services Used by Post-Injury Year

VA Healthcare Services Used n (%)	Post-Injury Year									
	1	5	10	15	20	25	30	35	40	Total
No	1,121 (12.1)	498 (8.3)	414 (9.2)	308 (8.9)	265 (8.4)	279 (9.3)	234 (9.4)	109 (8.1)	20 (5.2)	3,248
Yes	373 (4.0)	249 (4.1)	165 (3.7)	97 (2.8)	111 (3.5)	125 (4.2)	117 (4.7)	70 (5.2)	17 (4.4)	1,324
N/A, not a veteran	7,620 (82.0)	5,172 (85.8)	3,863 (85.5)	2,980 (86.5)	2,750 (86.8)	2,553 (85.6)	2,113 (85.3)	1,161 (85.8)	349 (89.9)	28,561
Unkn	176 (1.9)	108 (1.8)	78 (1.7)	60 (1.7)	41 (1.3)	27 (0.9)	13 (0.5)	13 (1.0)	2 (0.5)	518
Total	9,290 (27.6)	6,027 (17.9)	4,520 (13.4)	3,445 (10.2)	3,167 (9.4)	2,984 (8.9)	2,477 (7.4)	1,353 (4.0)	388 (1.2)	33,651

Footnote 1: Form IIs entered into the database since October 31, 2000.

Table 49. Primary Payer of Medical Costs at Time of Injury

n (%)	Primary Payer									
	Private insurance	Medi-care	Medicaid	Worker's compen-sation	Vet admin	Other govern ment	No pay	Private funds	Other	Total
Total	9,866 (49.8)	1,548 (7.8)	5,421 (27.3)	1,365 (6.9)	35 (0.2)	276 (1.4)	771 (3.9)	343 (1.7)	206 (1.0)	19,831

Footnote 1: This variable was not collected between 2006 and 2011. Exclude records 12,896 coded as 'unknown/decline.'

Table 50. Primary Payer of Medical Costs by Post-Injury Year

	Post-Injury Year									
Primary Payer n (%)	**1**	**5**	**10**	**15**	**20**	**25**	**30**	**35**	**40**	**Total**
Private insurance	6,715 (44.4)	2,968 (32.2)	1,806 (30.6)	1,367 (32.6)	1,083 (32.6)	715 (33.3)	505 (33.4)	346 (31.9)	137 (35.5)	15,642
Medicare	1,172 (7.7)	2,751 (29.9)	2,179 (36.9)	1,641 (39.1)	1,354 (40.8)	912 (42.5)	683 (45.1)	558 (51.4)	202 (52.3)	11,452
Medicaid	5,023 (33.2)	2,360 (25.6)	1,228 (20.8)	657 (15.7)	474 (14.3)	257 (12.0)	176 (11.6)	77 (7.1)	22 (5.7)	10,274
Worker's compensation	1,135 (7.5)	626 (6.8)	403 (6.8)	304 (7.2)	238 (7.2)	136 (6.3)	83 (5.5)	51 (4.7)	14 (3.6)	2,990
Veterans administration	125 (0.8)	92 (1.0)	73 (1.2)	47 (1.1)	43 (1.3)	38 (1.8)	31 (2.0)	23 (2.1)	4 (1.0)	476
Other government	303 (2.0)	117 (1.3)	40 (0.7)	38 (0.9)	23 (0.7)	12 (0.6)	7 (0.5)	6 (0.6)	1 (0.3)	547
No pay	208 (1.4)	40 (0.4)	26 (0.4)	30 (0.7)	26 (0.8)	11 (0.5)	11 (0.7)	5 (0.5)	2 (0.5)	359
Private funds	323 (2.1)	209 (2.3)	113 (1.9)	85 (2.0)	61 (1.8)	53 (2.5)	12 (0.8)	14 (1.3)	3 (0.8)	873
Other	119 (0.8)	45 (0.5)	40 (0.7)	27 (0.6)	16 (0.5)	11 (0.5)	6 (0.4)	5 (0.5)	1 (0.3)	270
Total	15,123	9,208	5,908	4,196	3,318	2,145	1,514	1,085	386	42,883

Footnote 1: This variable was not collected between 2006 and 2011. Excludes 20,237 records coded as 'unknown/decline.'

Table 51. Family Household Income at Time of Injury

	Family Household Income							
n (%)	**<$25,000**	**$25,000-$49,999**	**$50,000-$74,999**	**$75,000 or more**	**Participant doesn't know**	**Declined**	**Unkn**	**Total**
Total	1,012 (24.0)	850 (20.2)	595 (14.1)	860 (20.4)	392 (9.3)	337 (8.0)	163 (3.9)	4,209

Footnote 1: Data were required for all admissions to System since October 1, 2011.

Table 52. Family Household Income by Post-Injury Year

	Post-Injury Year									
Family Household Income n (%)	**1**	**5**	**10**	**15**	**20**	**25**	**30**	**35**	**40**	**Total**
<$25,000	2,742 (42.5)	2,100 (46.3)	1,503 (43.7)	1,282 (43.0)	1,248 (44.7)	823 (42.0)	558 (38.1)	365 (33.7)	107 (27.9)	10,728
$25,000-$49,999	1,391 (21.6)	902 (19.9)	832 (24.2)	696 (23.3)	592 (21.2)	388 (19.8)	283 (19.3)	262 (24.2)	87 (22.7)	5,433
$50,000-$74,999	765 (11.9)	518 (11.4)	399 (11.6)	381 (12.8)	347 (12.4)	259 (13.2)	182 (12.4)	138 (12.7)	54 (14.1)	3,043
$75,000 or more	1,049 (16.3)	718 (15.8)	496 (14.4)	490 (16.4)	498 (17.9)	418 (21.3)	345 (23.5)	252 (23.2)	110 (28.6)	4,376
Participant doesn't know	296 (4.6)	141 (3.1)	81 (2.4)	57 (1.9)	40 (1.4)	29 (1.5)	22 (1.5)	13 (1.2)	5 (1.3)	684
Declined	206 (3.2)	161 (3.5)	126 (3.7)	76 (2.5)	64 (2.3)	42 (2.1)	75 (5.1)	54 (5.0)	21 (5.5)	825
Total	6,449 (25.7)	4,540 (18.1)	3,437 (13.7)	2,982 (11.9)	2,789 (11.1)	1,959 (7.8)	1,465 (5.8)	1,084 (4.3)	384 (1.5)	25,089

Footnote 1: Form IIs entered into the database since January 1, 1996.
Footnote 2: This variable was not collected between 2006 and 2011. Excludes 16,035 'unknown' records.
Footnote 3: 'Participant doesn't know/Declined' was added in October 2011.

Table 53. Vertebral Injury

	Vertebral Injury			
n (%)	**No**	**Yes**	**Unkn**	**Total**
Total	1,541 (19.6)	6,301 (80.0)	33 (0.4)	7,875

Footnote 1: Data were required for all admissions to System since October 1, 2006.

Table 54. Associated Injury

	Associated Injury			
n (%)	**No**	**Yes**	**Unkn**	**Total**
Total	4,806 (61.0)	3,025 (38.4)	44 (0.6)	7,875

Footnote 1: Data were required for all admissions to System since October 1, 2006.

Table 55. Spinal Surgery

n (%)	Spinal Surgery			
	No	Yes	Unkn	Total
Total	1,602 (20.3)	6,244 (79.3)	29 (0.4)	7,875

Footnote 1: Data were required for all admissions to System since October 1, 2006.

Table 56. Place of Residence at Time of Injury

n (%)	Place of Residence at Time of Injury										
	Private	Hospi-tal	Nursing home	Group living	Correc-tional Instit	Hotel motel	Home-less	Assist-ed living	Other	Unkn	Total
Total	15,140 (97.7)	56(0.4)	38 (0.2)	109(0.7)	11 (0.1)	20(0.1)	85 (0.5)	2 (0.0)	10 (0.1)	32(0.2)	15,503

Footnote 1: Data required for all admissions to System since December 1, 1995.
Footnote 2: 'Assisted Living' was added in October 2011.

Table 57. Place of Residence at Discharge

n (%)	Place of Residence at Discharge											
	Private	Hospi-tal	Nursing home	Group living	Correc-tional Instit	Hotel motel	Deceas-ed	Home-less	Assisted living	Other	Unkn	Total
Total	28,603 (87.4)	522 (1.6)	2,182 (6.7)	413 (1.3)	49 (0.1)	84 (0.3)	706 (2.2)	17 (0.1)	18 (0.1)	25 (0.1)	108 (0.3)	32,727

Footnote 1: 'Assisted Living' was added in October 2011.

Table 58. Place of Residence by Post-Injury Year

	Post-Injury Year									
Residence n (%)	**1**	**5**	**10**	**15**	**20**	**25**	**30**	**35**	**40**	**Total**
Private residence	22,596 (91.4)	12,853 (93.7)	7,608 (95.5)	5,093 (96.1)	3,920 (96.7)	3,062 (97.2)	2,407 (97.2)	1,319 (97.5)	381 (98.2)	59,239
Hospital	125 (0.5)	26 (0.2)	6 (0.1)	4 (0.1)	2 (0.0)	4 (0.1)	1 (0.0)	0 (0.0)	0 (0.0)	168
Nursing home	965 (3.9)	398 (2.9)	207 (2.6)	111 (2.1)	76 (1.9)	43 (1.4)	45 (1.8)	15 (1.1)	3 (0.8)	1,863
Group living situation	319 (1.3)	182 (1.3)	47 (0.6)	23 (0.4)	12 (0.3)	4 (0.1)	5 (0.2)	2 (0.1)	1 (0.3)	595
Correctional institution	34 (0.1)	15 (0.1)	9 (0.1)	6 (0.1)	4 (0.1)	2 (0.1)	0 (0.0)	0 (0.0)	0 (0.0)	70
Hotel/motel	55 (0.2)	8 (0.1)	4 (0.1)	1 (0.0)	2 (0.0)	0 (0.0)	1 (0.0)	3 (0.2)	0 (0.0)	74
Homeless	17 (0.1)	6 (0.0)	4 (0.1)	3 (0.1)	0 (0.0)	1 (0.0)	0 (0.0)	1 (0.1)	0 (0.0)	32
Assisted living	40 (0.2)	27 (0.2)	4 (0.1)	6 (0.1)	7 (0.2)	8 (0.3)	9 (0.4)	5 (0.4)	2 (0.5)	108
Other	31 (0.1)	3 (0.0)	4 (0.1)	3 (0.1)	2 (0.0)	2 (0.1)	3 (0.1)	3 (0.2)	1 (0.3)	52
Unkn	530 (2.1)	200 (1.5)	77 (1.0)	48 (0.9)	29 (0.7)	24 (0.8)	6 (0.2)	5 (0.4)	0 (0.0)	919
Total	24,712	13,718	7,970	5,298	4,054	3,150	2,477	1,353	388	63,120

Footnote 1: 'Assisted Living' was added in October 2011.

Table 59. Median Days from Injury to Admission by Year of Injury

	Year of Injury									
median (n)	**1972-1979**	**1980-1984**	**1985-1989**	**1990-1994**	**1995-1999**	**2000-2004**	**2005-2009**	**2010-2014**	**2015-2017**	**Overall**
Total	20.0 (4,562)	15.0 (4,949)	2.0 (3,842)	1.0 (3,295)	1.0 (3,623)	5.0 (3,443)	8.0 (3,607)	8.0 (2,947)	8.0 (2,459)	7.0 (32,727)

Footnote 1: Eligibility criteria changed in 1987 and 2000.

Table 60. Median Days Hospitalized in the System's Acute Care Unit by Year of Injury (Day-1s Only)

	Year of Injury									
median (n)	1972-1979	1980-1984	1985-1989	1990-1994	1995-1999	2000-2004	2005-2009	2010-2014	2015-2017	Overall
Total	24.0 (1,224)	23.0 (1,626)	19.0 (1,747)	15.0 (1,876)	13.0 (1,900)	13.0 (1,577)	12.0 (1,351)	11.0 (1,020)	11.0 (881)	16.0 (13,202)

Footnote 1: In 1995, variable 'Length of Stay' was separated.

Table 61. Median Days Hospitalized in the System's Acute Care Unit by Year of Injury and Neurologic Category (Day-1s Only)

	Year of Injury									
Neurologic Category median (n)	1972-1979	1980-1984	1985-1989	1990-1994	1995-1999	2000-2004	2005-2009	2010-2014	2015-2017	Overall
Tetraplegia, complete	27.0 (313)	30.0 (348)	24.0 (315)	26.0 (322)	24.0 (313)	24.0 (265)	23.0 (176)	18.0 (103)	19.5 (84)	25.0 (2,239)
Tetraplegia, incomplete	24.0 (323)	22.0 (509)	18.0 (542)	15.0 (483)	10.0 (545)	11.0 (482)	10.0 (487)	10.0 (421)	9.5 (388)	14.0 (4,180)
Tetraplegia, minimal deficit	23.0 (3)	11.0 (5)	11.5 (42)	9.0 (76)	7.0 (59)	8.0 (37)	8.0 (12)	8.5 (12)	8.5 (2)	9.0 (248)
Paraplegia, complete	23.0 (327)	22.0 (401)	19.0 (408)	16.0 (513)	13.0 (482)	15.0 (353)	14.0 (287)	13.0 (192)	13.0 (152)	17.0 (3,115)
Paraplegia, incomplete	21.5 (218)	22.0 (325)	18.0 (381)	13.0 (378)	12.0 (363)	11.0 (271)	10.0 (291)	11.0 (232)	10.0 (182)	14.0 (2,641)
Paraplegia, minimal deficit	0.0 (0)	10.0 (7)	13.0 (29)	10.0 (71)	12.0 (39)	10.5 (26)	11.0 (12)	10.0 (8)	5.0 (3)	11.0 (195)
Normal, minimal deficit	19.0 (36)	18.0 (24)	12.0 (13)	10.0 (8)	10.0 (8)	9.0 (18)	13.0 (6)	9.0 (5)	5.0 (10)	13.5 (128)
Unkn	16.0 (4)	23.0 (7)	24.0 (17)	18.0 (25)	18.0 (91)	16.0 (125)	12.0 (80)	11.0 (47)	14.5 (60)	15.0 (456)
Total	24.0 (1,224)	23.0 (1,626)	19.0 (1,747)	15.0 (1,876)	13.0 (1,900)	13.0 (1,577)	12.0 (1,351)	11.0 (1,020)	11.0 (881)	16.0 (13,202)

Footnote 1: Paraplegia and tetraplegia minimal deficit categories were added in 1987. Some records have been updated.
Footnote 2: Neurologic category at discharge was used as the basis of comparison.

Table 62A. Median Days Hospitalized in the System's Rehab Unit by Year of Injury (Day-1s Only)

	Year of Injury									
median (n)	1972-1979	1980-1984	1985-1989	1990-1994	1995-1999	2000-2004	2005-2009	2010-2014	2015-2017	Overall
Total	98.0 (1,198)	86.0 (1,645)	73.0 (1,743)	58.0 (1,841)	44.0 (1,903)	42.0 (1,449)	38.0 (1,325)	35.0 (1,060)	34.0 (917)	53.0 (13,081)

Table 62B. Median Days Hospitalized in the System's Rehab Unit by Year of Injury (All Rehab Admissions)

	Year of Injury									
median (n)	1972-1979	1980-1984	1985-1989	1990-1994	1995-1999	2000-2004	2005-2009	2010-2014	2015-2017	Overall
Total	91.0 (4,419)	86.0 (4,812)	77.0 (3,722)	59.0 (3,159)	45.0 (3,553)	46.0 (3,228)	44.0 (3,475)	44.0 (2,915)	43.0 (2,429)	60.0 (31,712)

Table 63A. Median Days Hospitalized in the System's Rehab Unit by Year of Injury and Neurologic Category (Day-1s Only)

	Year of Injury									
Neurologic Category median (n)	1972-1979	1980-1984	1985-1989	1990-1994	1995-1999	2000-2004	2005-2009	2010-2014	2015-2017	Overall
Tetraplegia, complete	142.0 (293)	121.0 (349)	111.0 (289)	99.0 (308)	71.0 (327)	65.5 (244)	62.0 (165)	50.0 (103)	56.0 (87)	95.0 (2,165)
Tetraplegia, incomplete	104.0 (333)	95.0 (526)	85.0 (549)	75.0 (465)	51.0 (544)	44.0 (471)	36.0 (489)	36.0 (435)	35.0 (405)	56.0 (4,217)
Tetraplegia, minimal deficit	0.0 (0)	41.0 (5)	22.0 (41)	25.5 (78)	14.0 (59)	23.0 (29)	17.0 (8)	13.0 (14)	25.5 (2)	22.0 (236)
Paraplegia, complete	84.0 (347)	72.0 (423)	63.0 (429)	52.0 (523)	39.0 (492)	42.0 (338)	40.0 (293)	35.0 (199)	35.0 (163)	52.0 (3,207)
Paraplegia, incomplete	68.0 (218)	63.0 (322)	57.0 (394)	43.0 (378)	31.0 (364)	30.0 (267)	29.0 (296)	29.0 (237)	26.0 (185)	39.0 (2,661)
Paraplegia, minimal deficit	0.0 (0)	19.0 (7)	33.0 (28)	27.0 (66)	19.0 (41)	19.0 (23)	14.0 (12)	9.0 (7)	15.5 (2)	21.0 (186)
Normal, minimal deficit	38.5 (6)	43.0 (9)	10.0 (5)	12.5 (8)	10.0 (9)	15.0 (11)	19.0 (3)	8.5 (6)	7.5 (10)	13.0 (67)
Unkn	132.0 (1)	88.0 (4)	115.0 (8)	36.0 (15)	31.0 (67)	35.5 (66)	44.0 (59)	31.0 (59)	30.0 (63)	34.5 (342)
Total	98.0 (1,198)	86.0 (1,645)	73.0 (1,743)	58.0 (1,841)	44.0 (1,903)	42.0 (1,449)	38.0 (1,325)	35.0 (1,060)	34.0 (917)	53.0 (13,081)

Footnote 1: Paraplegia and tetraplegia minimal deficit categories were added in 1987. Some records have been updated.
Footnote 2: Neurologic category at discharge was used as the basis of comparison.

Table 63B. Median Days Hospitalized in the System's Rehab Unit by Year of Injury and Neurologic Category (All Rehab Admissions)

	Year of Injury									
Neurologic Category median (n)	**1972-1979**	**1980-1984**	**1985-1989**	**1990-1994**	**1995-1999**	**2000-2004**	**2005-2009**	**2010-2014**	**2015-2017**	**Overall**
Tetraplegia, complete	122.0 (1,097)	114.5 (1,038)	113.0 (683)	98.0 (579)	73.0 (671)	66.5 (608)	64.0 (542)	68.0 (379)	68.0 (263)	94.0 (5,860)
Tetraplegia, incomplete	96.0 (1,261)	94.0 (1,571)	87.0 (1,170)	77.0 (792)	51.0 (1,003)	50.0 (1,072)	45.0 (1,251)	47.0 (1,177)	45.0 (1,027)	64.0 (10,324)
Tetraplegia, minimal deficit	7.0 (1)	57.5 (12)	29.0 (60)	28.0 (110)	19.0 (89)	23.5 (50)	26.0 (42)	17.5 (22)	21.0 (22)	25.0 (408)
Paraplegia, complete	80.5 (1,252)	71.0 (1,221)	64.0 (948)	52.0 (929)	39.0 (968)	44.0 (772)	42.0 (743)	42.0 (520)	42.0 (458)	56.0 (7,811)
Paraplegia, incomplete	68.0 (794)	63.0 (922)	57.0 (792)	44.0 (627)	32.0 (627)	34.0 (540)	34.0 (691)	36.0 (562)	31.0 (432)	44.0 (5,987)
Paraplegia, minimal deficit	0.0 (0)	19.0 (17)	33.5 (48)	28.0 (87)	19.5 (54)	17.0 (49)	21.0 (37)	12.5 (14)	27.0 (13)	22.0 (319)
Normal, minimal deficit	36.0 (11)	34.0 (17)	10.0 (7)	14.0 (11)	15.5 (18)	17.0 (17)	12.0 (9)	9.0 (8)	10.0 (17)	15.0 (115)
Unkn	101.0 (3)	89.5 (14)	84.0 (14)	30.0 (24)	37.0 (123)	38.5 (120)	48.5 (160)	34.0 (233)	42.0 (197)	40.0 (888)
Total	91.0 (4,419)	86.0 (4,812)	77.0 (3,722)	59.0 (3,159)	45.0 (3,553)	46.0 (3,228)	44.0 (3,475)	44.0 (2,915)	43.0 (2,429)	60.0 (31,712)

Footnote 1: Paraplegia and tetraplegia minimal deficit categories were added in 1987. Some records have been updated.
Footnote 2: Neurologic category at discharge was used as the basis of comparison.

Table 64. Neurologic Level of Injury at Discharge by Cervical Lesions

	Cervical Neurologic Level									
n (% of all lesions)	**C01**	**C02**	**C03**	**C04**	**C05**	**C06**	**C07**	**C08**	**C Unkn**	**Sub-Total**
Total	343 (1.1)	656 (2.1)	1,063 (3.4)	4,674 (15.1)	4,678 (15.1)	3,134 (10.1)	1,556 (5.0)	589 (1.9)	79 (0.3)	16,772 (54.3)

Footnote 1: The neurologic level of injury is the most rostral (highest) sensory and motor level, left and right at discharge.
Footnote 2: (%) are calculated on Total of all levels (Cervical, Thoracic, Lumbar, Sacral).

Table 65. Neurologic Level of Injury at Discharge by Thoracic Lesions

	Thoracic Neurologic Level													
n (% of all lesions)	T01	T02	T03	T04	T05	T06	T07	T08	T09	T10	T11	T12	T Unkn	Sub-Total
Total	468 (1.5)	387 (1.3)	620 (2.0)	1,220 (3.9)	820 (2.7)	875 (2.8)	622 (2.0)	836 (2.7)	616 (2.0)	1,307 (4.2)	1,099 (3.6)	1,896 (6.1)	32 (0.1)	10,798 (34.9)

Footnote 1: The neurologic level of injury is the most rostral (highest) sensory and motor level, left and right at discharge.
Footnote 2: (%) are calculated on Total of all levels (Cervical, Thoracic, Lumbar, Sacral).

Table 66. Neurologic Level of Injury at Discharge by Lumbar Lesions

	Lumbar Neurologic Level						
n (% of all lesions)	L01	L02	L03	L04	L05	L Unkn	Sub-Total
Total	1,500(4.9)	801 (2.6)	535 (1.7)	250 (0.8)	112 (0.4)	9 (0.0)	3,207 (10.4)

Footnote 1: The neurologic level of injury is the most rostral (highest) sensory and motor level, left and right at discharge.
Footnote 2: (%) are calculated on Total of all levels (Cervical, Thoracic, Lumbar, Sacral).

Table 67. Neurologic Level of Injury at Discharge by Sacral Lesions

	Sacral Neurologic Level						
n (% of all lesions)	S01	S02	S03	S04	S05	S Unkn	Sub-Total
Total	56 (0.2)	33 (0.1)	8 (0.0)	12 (0.0)	11 (0.0)	1 (0.0)	121 (0.4)

Footnote 1: The neurologic level of injury is the most rostral (highest) sensory and motor level, left and right at discharge.
Footnote 2: (%) are calculated on Total of all levels (Cervical, Thoracic, Lumbar, Sacral).

Table 68. Neurologic Category at Discharge

	Neurologic Category at Discharge								
n (%)	Tetra Comp	Tetra Incomp	Tetra MinDef	Para Comp	Para Incomp	Para MinDef	Norm, MinDef	Unkn	Total
Total	6,146 (18.8)	10,545 (32.2)	436 (1.3)	7,917 (24.2)	6,083 (18.6)	337 (1.0)	192 (0.6)	1,071 (3.3)	32,727

Footnote 1: Paraplegia and tetraplegia minimal deficit categories were added in 1987. Some records have been updated.

Table 69. Neurologic Category at Discharge by Grouped Etiology

	Neurologic Category at Discharge								
Etiology n (%)	Tetra Comp	Tetra Incomp	Tetra MinDef	Para Comp	Para Incomp	Para MinDef	Norm, MinDef	Unkn	Total
Vehicular	2,841 (20.6)	4,530 (32.8)	191 (1.4)	3,396 (24.6)	2,262 (16.4)	111 (0.8)	78 (0.6)	387 (2.8)	13,796
Violence	831 (14.9)	744 (13.3)	36 (0.6)	2,360 (42.2)	1,357 (24.3)	80 (1.4)	11 (0.2)	172 (3.1)	5,591
Sports	1,192 (35.9)	1,583 (47.7)	42 (1.3)	188 (5.7)	215 (6.5)	16 (0.5)	20 (0.6)	60 (1.8)	3,316
Falls	970 (13.2)	3,017 (41.1)	143 (1.9)	1,322 (18.0)	1,396 (19.0)	97 (1.3)	66 (0.9)	328 (4.5)	7,339
Med/surg	41 (4.4)	209 (22.4)	7 (0.8)	157 (16.9)	443 (47.6)	11 (1.2)	7 (0.8)	56 (6.0)	931
Other	261 (15.3)	436 (25.6)	17 (1.0)	491 (28.8)	407 (23.9)	22 (1.3)	10 (0.6)	58 (3.4)	1,702
Unkn	10 (19.2)	26 (50.0)	0 (0.0)	3 (5.8)	3 (5.8)	0 (0.0)	0 (0.0)	10 (19.2)	52
Total	6,146	10,545	436	7,917	6,083	337	192	1,071	32,727

Footnote 1: Paraplegia and tetraplegia minimal deficit categories were added in 1987. Some records have been updated.
Footnote 2: Vehicular=codes 1-9; Violence=codes 10-15; Sports=codes 20-29, 70-78; Falls=code 30; Medical/surgical complication=code 50.

Table 70. Trend in Neurologic Category at Discharge by Year of Injury

	Year of Injury									
Neurologic Category n (%)	1972-1979	1980-1984	1985-1989	1990-1994	1995-1999	2000-2004	2005-2009	2010-2014	2015-2017	Total
Tetraplegia, complete	1,155 (25.3)	1,085 (21.9)	729 (19.0)	624 (18.9)	684 (18.9)	642 (18.6)	574 (15.9)	384 (13.0)	269 (10.9)	6,146
Tetraplegia, incomplete	1,282 (28.1)	1,598 (32.3)	1,198 (31.2)	821 (24.9)	1,020 (28.2)	1,120 (32.5)	1,278 (35.4)	1,192 (40.4)	1,036 (42.1)	10,545
Tetraplegia, minimal deficit	4 (0.1)	13 (0.3)	62 (1.6)	115 (3.5)	89 (2.5)	61 (1.8)	48 (1.3)	22 (0.7)	22 (0.9)	436
Paraplegia, complete	1,265 (27.7)	1,231 (24.9)	960 (25.0)	946 (28.7)	972 (26.8)	799 (23.2)	757 (21.0)	526 (17.8)	461 (18.7)	7,917
Paraplegia, incomplete	804 (17.6)	948 (19.2)	802 (20.9)	640 (19.4)	636 (17.6)	551 (16.0)	701 (19.4)	564 (19.1)	437 (17.8)	6,083
Paraplegia, minimal deficit	0 (0.0)	19 (0.4)	50 (1.3)	95 (2.9)	54 (1.5)	52 (1.5)	38 (1.1)	15 (0.5)	14 (0.6)	337
Normal	45 (1.0)	38 (0.8)	16 (0.4)	13 (0.4)	19 (0.5)	24 (0.7)	12 (0.3)	8 (0.3)	17 (0.7)	192
Unkn	7 (0.2)	17 (0.3)	25 (0.7)	41 (1.2)	149 (4.1)	194 (5.6)	199 (5.5)	236 (8.0)	203 (8.3)	1,071
Total	4,562	4,949	3,842	3,295	3,623	3,443	3,607	2,947	2,459	32,727

Footnote 1: Paraplegia and tetraplegia minimal deficit categories were added in 1987. Some records have been updated.

Table 71. Neurologic Category at 1 Year Post-Injury

	Neurologic Category								
n (%)	Tetra Comp	Tetra Incomp	Tetra MinDef	Para Comp	Para Incomp	Para MinDef	Norm, MinDef	Unkn	Total
Total	3,441 (13.9)	5,425 (22.0)	359 (1.5)	4,736 (19.2)	3,525 (14.3)	290 (1.2)	283 (1.1)	6,653 (26.9)	24,712

Footnote 1: Paraplegia and tetraplegia minimal deficit categories were added in 1987. Some records have been updated.

Table 72. ASIA Impairment Scale at Discharge

	ASIA Impairment Scale						
n (%)	Complete (A)	Sensory Only (B)	Non-functional Motor (C)	Functional Motor (D)	Recovered (E)	Unkn	Total
Total	14,063 (43.0)	3,510 (10.7)	4,000 (12.2)	9,549 (29.2)	192 (0.6)	1,413 (4.3)	32,727

Table 73. ASIA Impairment Scale at Acute Admission, Rehabilitation Admission, and System Discharge (Day-1s Only)

ASIA Impairment Scale n (%)	Acute Admit	Rehab Admit	System Discharge
Complete (A)	6,178 (44.8)	1,874 (14.3)	5,645 (41.0)
Sensory only (B)	1,670 (12.1)	566 (4.3)	1,366 (9.9)
Non-functional motor (C)	1,926 (14.0)	853 (6.5)	1,621 (11.8)
Functional motor (D)	2,608 (18.9)	1,362 (10.4)	4,386 (31.8)
Recovered (E)	0 (0.0)	3 (0.0)	132 (1.0)
Unkn	1,399 (10.2)	8,478 (64.5)	631 (4.6)
Total	13,781	13,136	13,781

Footnote 1: Rehabilitation admission data were required after October 31, 2000.

Table 74. ASIA Impairment Scale by Neurologic Level at Discharge - Cervical

	Neurologic Level at Discharge									
ASIA Impairment Scale n (%)	**C01**	**C02**	**C03**	**C04**	**C05**	**C06**	**C07**	**C08**	**C Unkn**	**Total**
Complete (A)	131 (38.2)	238 (36.3)	353 (33.2)	1,813 (38.8)	1,581 (33.8)	1,192 (38.0)	544 (35.0)	172 (29.2)	20 (25.3)	6,044 (36.0)
Sensory only (B)	13 (3.8)	43 (6.6)	86 (8.1)	588 (12.6)	607 (13.0)	522 (16.7)	247 (15.9)	99 (16.8)	7 (8.9)	2,212 (13.2)
Non-functional motor (C)	49 (14.3)	75 (11.4)	170 (16.0)	695 (14.9)	565 (12.1)	379 (12.1)	195 (12.5)	66 (11.2)	9 (11.4)	2,203 (13.1)
Functional motor (D)	149 (43.4)	293 (44.7)	437 (41.1)	1,535 (32.8)	1,869 (40.0)	1,012 (32.3)	546 (35.1)	246 (41.8)	23 (29.1)	6,110 (36.4)
Unkn	1 (0.3)	7 (1.1)	17 (1.6)	43 (0.9)	56 (1.2)	29 (0.9)	24 (1.5)	6 (1.0)	20 (25.3)	203 (1.2)
Total	343	656	1,063	4,674	4,678	3,134	1,556	589	79	16,772

Table 75. ASIA Impairment Scale by Neurologic Level at Discharge - Thoracic

	Neurologic Level at Discharge													
ASIA Impairment Scale n (%)	**T01**	**T02**	**T03**	**T04**	**T05**	**T06**	**T07**	**T08**	**T09**	**T10**	**T11**	**T12**	**T Unkn**	**Total**
Complete (A)	248 (53.0)	275 (71.1)	480 (77.4)	913 (74.8)	646 (78.8)	648 (74.1)	442 (71.1)	613 (73.3)	474 (76.9)	947 (72.5)	738 (67.2)	805 (42.5)	15 (46.9)	7,244 (67.1)
Sensory only (B)	64 (13.7)	36 (9.3)	52 (8.4)	104 (8.5)	56 (6.8)	79 (9.0)	56 (9.0)	63 (7.5)	32 (5.2)	59 (4.5)	94 (8.6)	199 (10.5)	2 (6.3)	896 (8.3)
Non-functional motor (C)	44 (9.4)	27 (7.0)	40 (6.5)	83 (6.8)	45 (5.5)	53 (6.1)	40 (6.4)	61 (7.3)	43 (7.0)	126 (9.6)	123 (11.2)	344 (18.1)	2 (6.3)	1,031 (9.5)
Functional motor (D)	110 (23.5)	48 (12.4)	44 (7.1)	114 (9.3)	69 (8.4)	90 (10.3)	81 (13.0)	95 (11.4)	64 (10.4)	167 (12.8)	137 (12.5)	532 (28.1)	4 (12.5)	1,555 (14.4)
Unkn	2 (0.4)	1 (0.3)	4 (0.6)	6 (0.5)	4 (0.5)	5 (0.6)	3 (0.5)	4 (0.5)	3 (0.5)	8 (0.6)	7 (0.6)	16 (0.8)	9 (28.1)	72 (0.7)
Total	468	387	620	1,220	820	875	622	836	616	1,307	1,099	1,896	32	10,798

Source: National Spinal Cord Injury Statistical Center, University of Alabama at Birmingham, 2017 Annual Statistical Report – Complete Public Version

Table 76. ASIA Impairment Scale by Neurologic Level at Discharge - Lumbar

	Neurologic Level at Discharge						
ASIA Impairment Scale n (%)	L01	L02	L03	L04	L05	Lumbar Unkn	Total
Complete (A)	361 (24.1)	94 (11.7)	82 (15.3)	15 (6.0)	10 (8.9)	1 (11.1)	563 (17.6)
Sensory only (B)	166 (11.1)	94 (11.7)	57 (10.7)	18 (7.2)	9 (8.0)	0 (0.0)	344 (10.7)
Non-functional motor (C)	379 (25.3)	147 (18.4)	122 (22.8)	28 (11.2)	9 (8.0)	0 (0.0)	685 (21.4)
Functional motor (D)	575 (38.3)	454 (56.7)	261 (48.8)	184 (73.6)	84 (75.0)	5 (55.6)	1,563 (48.7)
Unkn	19 (1.3)	12 (1.5)	13 (2.4)	5 (2.0)	0 (0.0)	3 (33.3)	52 (1.6)
Total	1,500	801	535	250	112	9	3,207

Table 77. ASIA Impairment Scale at 1 Year Post-Injury

	ASIA Impairment Scale						
n (%)	Complete (A)	Sensory Only (B)	Non-functional Motor (C)	Functional Motor (D)	Recovered (E)	Unkn	Total
Total	8,177 (33.1)	1,827 (7.4)	1,789 (7.2)	5,483 (22.2)	283 (1.1)	7,153 (28.9)	24,712

Table 78. ASIA Motor Index Score Total (Mean) at Acute Admission, Rehabilitation Admission and System Discharge (Day-1s Only)

Mean (n)	ASIA Motor Score Totals		
	Acute Admit	Rehab Admit	System Discharge
Total	44.1 (6,081)	48.1 (6,711)	55.8 (6,884)

Footnote 1: Form I Day-1s entered to the database since October 1, 1993.
Footnote 2: Motor Index Scores Totals range from 0 to 100.

Table 79. ASIA Motor Index Score Total at 1 Year Post-Injury

	ASIA Motor Score Total				
	N	Mean	Standard Deviation	Minimum	Maximum
Total	6,409	56.8	28.0	0	100

Footnote 1: Form IIs entered to the database since October 1, 1993.
Footnote 2: Motor Index Score Totals range from 0 to 100.

Table 80. Sensory Score for Light Touch Total (Mean) at Rehabilitation Admission and System Discharge

Mean (n)	Sensory Score for Light Touch Total	
	Rehab Admit	System Discharge
Total	65.8 (3,759)	71.1 (3,655)

Footnote 1: Data were required for all admissions to System since October 1, 2011.
Footnote 2: Sensory Score Light Touch Total ranges from 0 to 112.

Table 81. Sensory Score for Pin Prick Total (Mean) at Rehabilitation Admission and System Discharge

Mean (n)	Sensory Score for Pin Prick Total	
	Rehab Admit	System Discharge
Total	57.7 (3,769)	62.8 (3,671)

Footnote 1: Data were required for all admissions to System since October 1, 2011.
Footnote 2: Sensory Score Pin Prick Total ranges from 0 to 112.

Table 82. Sensory Score for Light Touch Total at 1 Year Post-Injury

	Sensory Score for Light Touch Total				
	N	Mean	Standard Deviation	Minimum	Maximum
Total	1,424	67.9	34.0	0	112

Footnote 1: Form IIs entered into the database since January 1, 2012.
Footnote 2: Sensory Score Light Touch Total ranges from 0 to 112.

Table 83. Sensory Score for Pin Prick Total at 1 Year Post-Injury

	Sensory Score for Pin Prick Total				
	N	Mean	Standard Deviation	Minimum	Maximum
Total	1,367	64.0	32.8	0	112

Footnote 1: Form IIs entered into the database since January 1, 2012.
Footnote 2: Sensory Score Pin Prick Total ranges from 0 to 112.

Table 84. Respirator Use (Para) at Rehabilitation Admission and System Discharge

	Respirator Use at Rehab Admit				Respirator Use at System Discharge			
n (%)	No	Yes	Unkn	Total	No	Yes	Unkn	Total
Total	12,496 (88.0)	788 (5.6)	909 (6.4)	14,193	14,227 (99.2)	65 (0.5)	44 (0.3)	14,336

Footnote 1: To determine paraplegia level, Neuro Category at Discharge was used.
Footnote 2: Paraplegia group includes complete, incomplete and minimal deficit categories.
Footnote 3: All three codes (plus the conversion code) for 'mechanical vent use' were included in the 'Yes' column.

Table 85. Respirator Use (Tetra) at Rehabilitation Admission and System Discharge

	Respirator Use at Rehab Admit				Respirator Use at System Discharge			
n (%)	No	Yes	Unkn	Total	No	Yes	Unkn	Total
Total	12,276 (73.4)	3,357 (20.1)	1,089 (6.5)	16,722	16,014 (93.5)	983 (5.7)	127 (0.7)	17,124

Footnote 1: To determine tetraplegia level, Neuro Category at Discharge was used.
Footnote 2: Tetraplegia group includes complete, incomplete and minimal deficit categories.
Footnote 3: All three codes (plus the conversion code) for 'mechanical vent use' were included in the 'Yes' column.

Table 86. Respirator Use (Paraplegia and Tetraplegia) at 1 Year Post-Injury

	Respirator Use - Tetraplegia				Respirator Use – Paraplegia			
n (%)	No	Yes	Unkn	Total	No	Yes	Unkn	Total
Total	8,663 (93.9)	322 (3.5)	237 (2.6)	9,222	8,321 (97.3)	19 (0.2)	211 (2.5)	8,551

Footnote 1: Paraplegia and tetraplegia groups include complete, incomplete and minimal deficit categories.
Footnote 2: All three codes (plus the conversion code) for 'mechanical vent use' were included in the 'Yes' column.

Table 87. FIM Motor Total (Mean) at Rehabilitation Admission and Discharge

	FIM Motor Total	
Mean (n)	Rehab Admit	Rehab Discharge
Total	25.2 (18,960)	54.3 (18,723)

Footnote 1: Form Is entered to the database since October 1, 1988.
Footnote 2: FIM Motor Score Total ranges from 13 to 91.

Table 88. FIM Motor Total (Mean) at Rehabilitation Admission and Discharge by Neurologic Category

	FIM Motor Total	
Neurologic Category at Discharge Mean (n)	Rehab Admit	Rehab Discharge
Tetraplegia, complete	15.0 (3,069)	28.5 (3,034)
Tetraplegia, incomplete	20.6 (6,440)	49.7 (6,374)
Tetraplegia, minimal deficit	35.7 (343)	77.3 (348)
Paraplegia, complete	30.0 (4,441)	64.5 (4,378)
Paraplegia, incomplete	33.8 (3,530)	69.0 (3,507)
Paraplegia, minimal deficit	41.1 (257)	78.0 (257)
Normal, minimal deficit	45.0 (76)	76.4 (77)
Unkn	24.2 (804)	49.0 (748)
Total	25.2 (18,960)	54.3 (18,723)

Footnote 1: Form Is entered to the database since October 1, 1988.
Footnote 2: FIM Motor Score Total ranges from 13 to 91.

Table 89. Method of Bladder Management at Discharge– Male

(continued)

	Bladder Management at Discharge							
n (%)	None (diapers, etc.)	Indwelling Cath	Indwelling Cath, stoma*	Catheter free with ext collector, no sphincterotomy*	Catheter free with ext collector and sphincterotomy*	Catheter free with ext collector, sphincterotomy unk	reflex stim, crede, external pressure	ICP only*
Total	581 (2.2)	3,763 (14.3)	11 (0.0)	291 (1.1)	10 (0.0)	2,803 (10.6)	569 (2.2)	5,935 (22.5)

	Bladder Management at Discharge								
n (%)	ICP with external collector*	ICP after augmentation or continent diversion*	ICP-external collector, augmentation or continent diversion unknown	Conduit	Suprapubic Cystostomy	Normal Micturition	Other	Unkn	Total
Total	298 (1.1)	6 (0.0)	5,491 (20.8)	18 (0.1)	1,664 (6.3)	4,494 (17.0)	86 (0.3)	345 (1.3)	26,365

Footnote 1: Codes were added in November 1995.*

Table 90. Method of Bladder Management at Discharge– Female

(continued)

	Bladder Management at Discharge					
n (%)	None (diapers, etc.)	Indwelling Cath	Indwelling Cath, stoma*	reflex stim, crede, external pressure	ICP only*	ICP-external collector, augmentation or continent diversion unkn
Total	233 (3.7)	1,773 (27.9)	4 (0.1)	159 (2.5)	1,302 (20.5)	1,225 (19.3)

	Bladder Management at Discharge					
n (%)	Conduit	Suprapubic Cystostomy	Normal Micturition	Other	Unkn	Total
Total	5 (0.1)	235 (3.7)	1,324 (20.8)	8 (0.1)	87 (1.4)	6,355

*Footnote 1: *Codes were added in November 1995.*

Table 91. Method of Bladder Management by Post-Injury Year – Male

	Post-Injury Year								
Bladder Management n (%)	**1**	**5**	**10**	**15**	**20**	**25**	**30**	**35**	**40**
None	493 (2.5)	253 (2.3)	129 (2.0)	76 (1.8)	44 (1.3)	23 (0.9)	13 (0.7)	15 (1.4)	5 (1.7)
Indwelling catheter	1,871 (9.4)	895 (8.1)	595 (9.4)	390 (9.2)	279 (8.5)	211 (8.4)	199 (10.0)	120 (11.4)	39 (12.9)
Indwelling catheter after augmentation*	32 (0.2)	46 (0.4)	48 (0.8)	62 (1.5)	44 (1.3)	38 (1.5)	33 (1.7)	14 (1.3)	5 (1.7)
Catheter free with external collector, no sphincterotomy*	390 (2.0)	334 (3.0)	331 (5.2)	323 (7.6)	326 (10.0)	286 (11.3)	163 (8.2)	70 (6.6)	21 (7.0)
Catheter free with external collector, with sphincterotomy*	25 (0.1)	67 (0.6)	78 (1.2)	102 (2.4)	115 (3.5)	127 (5.0)	97 (4.9)	58 (5.5)	21 (7.0)
Catheter free with external collector, sphincterotomy unkn	2,993 (15.0)	1,910 (17.4)	788 (12.4)	244 (5.8)	68 (2.1)	44 (1.7)	33 (1.7)	26 (2.5)	11 (3.6)
Crede, reflex stimulation, external pressure	467 (2.3)	222 (2.0)	92 (1.4)	59 (1.4)	44 (1.3)	45 (1.8)	28 (1.4)	21 (2.0)	7 (2.3)
ICP only*	3,521 (17.6)	2,077 (18.9)	1,409 (22.2)	1,025 (24.2)	756 (23.1)	513 (20.4)	389 (19.5)	201 (19.1)	51 (16.9)
ICP with external collector*	426 (2.1)	236 (2.1)	167 (2.6)	145 (3.4)	120 (3.7)	101 (4.0)	96 (4.8)	37 (3.5)	11 (3.6)
ICP after augmentation or continent diversion*	19 (0.1)	23 (0.2)	37 (0.6)	43 (1.0)	29 (0.9)	29 (1.2)	27 (1.4)	4 (0.4)	3 (1.0)
ICP unkn	2,865 (14.4)	875 (8.0)	314 (4.9)	102 (2.4)	35 (1.1)	18 (0.7)	17 (0.9)	7 (0.7)	0 (0.0)
Conduit	15 (0.1)	45 (0.4)	44 (0.7)	32 (0.8)	35 (1.1)	38 (1.5)	25 (1.3)	21 (2.0)	5 (1.7)
Suprapubic cystotomy	1,713 (8.6)	1,569 (14.3)	1,061 (16.7)	865 (20.4)	783 (24.0)	611 (24.2)	494 (24.8)	267 (25.3)	75 (24.8)
Normal micturition	4,513 (22.6)	2,120 (19.3)	1,105 (17.4)	667 (15.7)	527 (16.1)	384 (15.2)	336 (16.9)	179 (17.0)	45 (14.9)
Other	74 (0.4)	52 (0.5)	37 (0.6)	27 (0.6)	23 (0.7)	22 (0.9)	23 (1.2)	9 (0.9)	3 (1.0)
Unkn	535 (2.7)	261 (2.4)	119 (1.9)	76 (1.8)	41 (1.3)	30 (1.2)	17 (0.9)	6 (0.6)	0 (0.0)
Total	19,952	10,985	6,354	4,238	3,269	2,520	1,990	1,055	302

*Footnote 1: * Codes were added in November 1995*

Source: National Spinal Cord Injury Statistical Center, University of Alabama at Birmingham, 2017 Annual Statistical Report – Complete Public Version

Table 92. Method of Bladder Management by Post-Injury Year – Female

	Post-Injury Year								
Bladder Management n (%)	**1**	**5**	**10**	**15**	**20**	**25**	**30**	**35**	**40**
None	212 (4.5)	128 (4.7)	53 (3.3)	39 (3.7)	21 (2.7)	16 (2.5)	16 (3.3)	11 (3.7)	3 (3.5)
Indwelling catheter	1,076 (22.6)	614 (22.5)	338 (20.9)	223 (21.0)	170 (21.7)	138 (21.9)	115 (23.6)	65 (21.8)	19 (22.1)
Indwelling catheter after augmentation*	16 (0.3)	26 (1.0)	23 (1.4)	22 (2.1)	15 (1.9)	11 (1.7)	10 (2.1)	6 (2.0)	4 (4.7)
Crede, reflex stimulation, external pressure	128 (2.7)	81 (3.0)	34 (2.1)	21 (2.0)	21 (2.7)	14 (2.2)	13 (2.7)	16 (5.4)	3 (3.5)
ICP only*	779 (16.4)	488 (17.9)	386 (23.9)	299 (28.2)	265 (33.8)	214 (34.0)	153 (31.4)	85 (28.5)	26 (30.2)
ICP after augmentation or continent diversion*	9 (0.2)	27 (1.0)	27 (1.7)	29 (2.7)	16 (2.0)	14 (2.2)	12 (2.5)	8 (2.7)	1 (1.2)
ICP unkn	772 (16.2)	302 (11.1)	128 (7.9)	46 (4.3)	9 (1.1)	7 (1.1)	5 (1.0)	1 (0.3)	1 (1.2)
Conduit	11 (0.2)	28 (1.0)	23 (1.4)	18 (1.7)	16 (2.0)	12 (1.9)	8 (1.6)	9 (3.0)	5 (5.8)
Suprapubic cystotomy	285 (6.0)	280 (10.2)	180 (11.1)	123 (11.6)	91 (11.6)	76 (12.1)	54 (11.1)	35 (11.7)	10 (11.6)
Normal micturition	1,340 (28.2)	683 (25.0)	378 (23.4)	211 (19.9)	144 (18.3)	119 (18.9)	88 (18.1)	57 (19.1)	12 (14.0)
Other	15 (0.3)	20 (0.7)	14 (0.9)	17 (1.6)	8 (1.0)	4 (0.6)	10 (2.1)	2 (0.7)	1 (1.2)
Unkn	115 (2.4)	55 (2.0)	32 (2.0)	12 (1.1)	9 (1.1)	5 (0.8)	3 (0.6)	3 (1.0)	1 (1.2)
Total	4,758	2,732	1,616	1,060	785	630	487	298	86

*Footnote 1: *Codes were added in November 1995.*

Source: National Spinal Cord Injury Statistical Center, University of Alabama at Birmingham, 2017 Annual Statistical Report – Complete Public Version

Table 93. Reason for Change in Bladder Management by Post-Injury Year

	Post-Injury Year								
Reason for Change n (%)	**1**	**5**	**10**	**15**	**20**	**25**	**30**	**35**	**40**
No change	2,408 (69.3)	1,950 (78.0)	1,639 (83.7)	1,202 (83.1)	1,044 (82.3)	847 (82.6)	986 (78.9)	870 (79.9)	314 (80.9)
Regained bladder control	546 (15.7)	193 (7.7)	101 (5.2)	55 (3.8)	52 (4.1)	36 (3.5)	25 (2.0)	19 (1.7)	4 (1.0)
Completed ICP training	45 (1.3)	10 (0.4)	5 (0.3)	4 (0.3)	0 (0.0)	4 (0.4)	4 (0.3)	7 (0.6)	1 (0.3)
Medical complication/condition	107 (3.1)	127 (5.1)	71 (3.6)	72 (5.0)	64 (5.0)	55 (5.4)	92 (7.4)	89 (8.2)	34 (8.8)
Physician/nurse recommendation	130 (3.7)	50 (2.0)	30 (1.5)	26 (1.8)	19 (1.5)	19 (1.9)	34 (2.7)	14 (1.3)	7 (1.8)
Old method no longer effective	41 (1.2)	33 (1.3)	15 (0.8)	16 (1.1)	20 (1.6)	18 (1.8)	36 (2.9)	33 (3.0)	11 (2.8)
Accommodate work	3 (0.1)	0 (0.0)	1 (0.1)	5 (0.3)	2 (0.2)	2 (0.2)	0 (0.0)	1 (0.1)	2 (0.5)
Accommodate lifestyle	44 (1.3)	36 (1.4)	15 (0.8)	12 (0.8)	17 (1.3)	13 (1.3)	19 (1.5)	14 (1.3)	3 (0.8)
Personal choice	72 (2.1)	43 (1.7)	30 (1.5)	10 (0.7)	19 (1.5)	12 (1.2)	25 (2.0)	19 (1.7)	6 (1.5)
Other	20 (0.6)	14 (0.6)	12 (0.6)	9 (0.6)	6 (0.5)	7 (0.7)	11 (0.9)	3 (0.3)	3 (0.8)
Participant doesn't know	12 (0.3)	11 (0.4)	7 (0.4)	8 (0.6)	7 (0.6)	1 (0.1)	5 (0.4)	7 (0.6)	1 (0.3)
Unkn	46 (1.3)	34 (1.4)	33 (1.7)	27 (1.9)	19 (1.5)	11 (1.1)	12 (1.0)	13 (1.2)	2 (0.5)
Total	3,474	2,501	1,959	1,446	1,269	1,025	1,249	1,089	388

Footnote 1: Form IIs entered into the database since January 1, 2012.

Table 94. Body Mass Index (Mean) during Rehabilitation

	BMI (kg/m^2)				
	N	**Mean**	**Standard Deviation**	**Minimum**	**Maximum**
Total	7,528	26.6	6.4	10.72	94.31

Footnote 1: Data required for all admissions to System since October 1, 2006.

Table 95. Body Mass Index (Mean) by Post-Injury Year

	Post-Injury Year								
mean (n)	1	5	10	15	20	25	30	35	40
Total	26.0 (2,700)	26.9 (887)	26.5 (516)	26.4 (399)	26.0 (334)	26.1 (292)	25.6 (197)	25.5 (114)	26.4 (33)

Footnote 1: Form II entered to the database since January, 2007.

Table 96. Diabetes Diagnosis Prior to Injury

	Diabetes Diagnosis				
n (%)	No	Yes	Declined	Unkn	Total
Total	3,727 (88.5)	439 (10.4)	5 (0.1)	38 (0.9)	4,209

Footnote 1: Data were required for all admissions to System since October 1, 2011.

Table 97. Diabetes Diagnosis by Post-Injury Year

	Post-Injury Year								
Diabetes n (%)	1	5	10	15	20	25	30	35	40
No	3,024 (87.0)	2,153 (86.1)	1,689 (86.2)	1,249 (86.4)	1,090 (85.9)	879 (85.8)	1,049 (84.0)	952 (87.4)	331 (85.3)
Yes	360 (10.4)	280 (11.2)	230 (11.7)	153 (10.6)	161 (12.7)	129 (12.6)	182 (14.6)	126 (11.6)	54 (13.9)
Declined	14 (0.4)	15 (0.6)	5 (0.3)	4 (0.3)	5 (0.4)	2 (0.2)	6 (0.5)	2 (0.2)	0 (0.0)
Unkn	76 (2.2)	53 (2.1)	35 (1.8)	40 (2.8)	13 (1.0)	15 (1.5)	12 (1.0)	9 (0.8)	3 (0.8)
Total	3,474	2,501	1,959	1,446	1,269	1,025	1,249	1,089	388

Footnote 1: Form IIs entered into the database since January 1, 2012.

Table 98. Urinary Tract Infection Requiring Antibiotic Treatment in Past 12 Months by Post-Injury Year

	Post-Injury Year								
UTI n (%)	**1**	**5**	**10**	**15**	**20**	**25**	**30**	**35**	**40**
No	1,494 (43.0)	1,277 (51.1)	974 (49.7)	686 (47.4)	610 (48.1)	478 (46.6)	576 (46.1)	490 (45.0)	176 (45.4)
1 to 2 times*	144 (4.1)	103 (4.1)	74 (3.8)	66 (4.6)	54 (4.3)	64 (6.2)	49 (3.9)	44 (4.0)	43 (11.1)
3 to 5 times*	91 (2.6)	58 (2.3)	42 (2.1)	38 (2.6)	31 (2.4)	33 (3.2)	36 (2.9)	22 (2.0)	19 (4.9)
> 5 times*	43 (1.2)	33 (1.3)	40 (2.0)	24 (1.7)	10 (0.8)	16 (1.6)	18 (1.4)	20 (1.8)	6 (1.5)
UTI number unkn	1,606 (46.2)	952 (38.1)	791 (40.4)	585 (40.5)	540 (42.6)	417 (40.7)	554 (44.4)	500 (45.9)	139 (35.8)
Declined	16 (0.5)	18 (0.7)	6 (0.3)	8 (0.6)	7 (0.6)	2 (0.2)	4 (0.3)	3 (0.3)	0 (0.0)
Unkn	80 (2.3)	60 (2.4)	32 (1.6)	39 (2.7)	17 (1.3)	15 (1.5)	12 (1.0)	10 (0.9)	5 (1.3)
Total	3,474	2,501	1,959	1,446	1,269	1,025	1,249	1,089	388

Footnote 1: Form IIs entered into the database since January 1, 2012.
*Footnote 2: * codes were added in October 2016.*

Table 99. Pressure Ulcer Occurrence in Past 12 Months by Post-Injury Year

	Post-Injury Year								
Pressure Ulcer n (%)	**1**	**5**	**10**	**15**	**20**	**25**	**30**	**35**	**40**
No	2,538 (73.1)	1,763 (70.5)	1,350 (68.9)	1,002 (69.3)	856 (67.5)	674 (65.8)	838 (67.1)	720 (66.1)	248 (63.9)
Yes	853 (24.6)	671 (26.8)	563 (28.7)	402 (27.8)	394 (31.0)	335 (32.7)	397 (31.8)	360 (33.1)	136 (35.1)
Declined	17 (0.5)	15 (0.6)	10 (0.5)	5 (0.3)	3 (0.2)	1 (0.1)	2 (0.2)	1 (0.1)	0 (0.0)
Unkn	66 (1.9)	52 (2.1)	36 (1.8)	37 (2.6)	16 (1.3)	15 (1.5)	12 (1.0)	8 (0.7)	4 (1.0)
Total	3,474	2,501	1,959	1,446	1,269	1,025	1,249	1,089	388

Footnote 1: Form IIs entered into the database since January 1, 2012.

Table 100. Patients Rehospitalized by Post-Injury Year

	Post-Injury Year								
Total Number of Rehospitalizations n (%)	**1**	**5**	**10**	**15**	**20**	**25**	**30**	**35**	**40**
0	15,717 (63.6)	9,461 (69.0)	5,703 (71.6)	3,854 (72.7)	2,958 (73.0)	2,306 (73.2)	1,762 (71.1)	916 (67.7)	266 (68.6)
1	5,438 (22.0)	2,550 (18.6)	1,369 (17.2)	887 (16.7)	694 (17.1)	544 (17.3)	453 (18.3)	284 (21.0)	79 (20.4)
2	1,713 (6.9)	723 (5.3)	409 (5.1)	250 (4.7)	207 (5.1)	147 (4.7)	142 (5.7)	74 (5.5)	27 (7.0)
3	564 (2.3)	269 (2.0)	141 (1.8)	88 (1.7)	74 (1.8)	63 (2.0)	51 (2.1)	40 (3.0)	6 (1.5)
4	212 (0.9)	107 (0.8)	61 (0.8)	37 (0.7)	36 (0.9)	28 (0.9)	21 (0.8)	14 (1.0)	2 (0.5)
5	104 (0.4)	41 (0.3)	11 (0.1)	16 (0.3)	13 (0.3)	10 (0.3)	7 (0.3)	4 (0.3)	0 (0.0)
6	44 (0.2)	21 (0.2)	18 (0.2)	4 (0.1)	9 (0.2)	5 (0.2)	4 (0.2)	1 (0.1)	0 (0.0)
> 6	32 (0.1)	13 (0.1)	6 (0.1)	11 (0.2)	3 (0.1)	3 (0.1)	7 (0.3)	4 (0.3)	0 (0.0)
Yes, Unkn # of rehospitalizations	65 (0.3)	44 (0.3)	26 (0.3)	15 (0.3)	7 (0.2)	3 (0.1)	1 (0.0)	0 (0.0)	0 (0.0)
Unkn	823 (3.3)	489 (3.6)	226 (2.8)	136 (2.6)	53 (1.3)	41 (1.3)	29 (1.2)	16 (1.2)	8 (2.1)
Total	24,712	13,718	7,970	5,298	4,054	3,150	2,477	1,353	388

Table 101. Total Days Rehospitalized (Mean) by Post-Injury Year

	Post-Injury Year								
mean (n)	**1**	**5**	**10**	**15**	**20**	**25**	**30**	**35**	**40**
Total	23.4 (7,632)	20.5 (3,499)	20.4 (1,900)	20.4 (1,215)	19.8 (983)	21.9 (766)	20.9 (665)	21.0 (411)	20.8 (114)

Footnote 1: Exclude those with unknown number of days rehospitalized or with no/unknown rehospitalizations.

Table 102. Cause of Rehospitalization by Post-Injury Year

Cause of Rehospitalization n (%)	Post-Injury Year								
	1	5	10	15	20	25	30	35	40
Infectious and parasitic diseases	197 (6.8)	104 (6.2)	94 (7.8)	64 (7.3)	63 (7.6)	34 (4.5)	22 (3.3)	19 (4.6)	2 (1.8)
Cancer	20 (0.7)	20 (1.2)	15 (1.2)	16 (1.8)	8 (1.0)	14 (1.8)	8 (1.2)	6 (1.5)	1 (0.9)
Endocrine/nutrition diseases	33 (1.1)	30 (1.8)	12 (1.0)	7 (0.8)	7 (0.8)	12 (1.6)	14 (2.1)	7 (1.7)	1 (0.9)
Diseases of the blood	87 (3.0)	41 (2.5)	32 (2.6)	13 (1.5)	18 (2.2)	13 (1.7)	21 (3.1)	10 (2.4)	6 (5.3)
Mental disorders	69 (2.4)	42 (2.5)	23 (1.9)	12 (1.4)	8 (1.0)	22 (2.9)	4 (0.6)	8 (1.9)	0 (0.0)
Diseases of the nervous system	100 (3.4)	49 (2.9)	31 (2.6)	7 (0.8)	28 (3.4)	9 (1.2)	17 (2.5)	7 (1.7)	3 (2.6)
Diseases of the circulatory system	328 (11.3)	133 (7.9)	99 (8.2)	76 (8.6)	57 (6.9)	54 (7.1)	67 (9.9)	47 (11.4)	12 (10.5)
Diseases of the respiratory system	407 (14.0)	184 (11.0)	139 (11.5)	72 (8.2)	91 (11.0)	91 (12.0)	82 (12.2)	51 (12.4)	16 (14.0)
Diseases of the digestive system	239 (8.2)	217 (13.0)	146 (12.0)	83 (9.4)	110 (13.3)	96 (12.6)	81 (12.0)	46 (11.2)	12 (10.5)
Diseases of the genitourinary system	1,373 (47.3)	706 (42.2)	477 (39.4)	396 (44.9)	311 (37.6)	330 (43.5)	275 (40.8)	152 (37.0)	37 (32.5)
Childbirth and/or complications of childbirth	25 (0.9)	36 (2.2)	36 (3.0)	27 (3.1)	13 (1.6)	4 (0.5)	2 (0.3)	1 (0.2)	0 (0.0)
Diseases of the skin	542 (18.7)	376 (22.5)	327 (27.0)	270 (30.6)	283 (34.2)	242 (31.9)	216 (32.0)	126 (30.7)	32 (28.1)
Disease of the musculoskeletal system	260 (9.0)	146 (8.7)	129 (10.6)	70 (7.9)	65 (7.9)	77 (10.1)	81 (12.0)	54 (13.1)	15 (13.2)
Congenital anomalies	2 (0.1)	0 (0.0)	1 (0.1)	0 (0.0)	1 (0.1)	4 (0.5)	0 (0.0)	0 (0.0)	0 (0.0)
Symptoms and ill-defined conditions	120 (4.1	55 (3.3)	31 (2.6)	25 (2.8)	19 (2.3)	18 (2.4)	18 (2.7)	15 (3.6)	0 (0.0)
Injuries and poisonings	192 (6.6)	131 (7.8)	103 (8.5)	62 (7.0)	60 (7.2)	62 (8.2)	68 (10.1)	53 (12.9)	15 (13.2)
Inpatient rehab services	526 (18.1)	249 (14.9)	197 (16.3)	143 (16.2)	117 (14.1)	77 (10.1)	72 (10.7)	28 (6.8)	2 (1.8)
Other, unclassified	240 (8.3)	68 (4.1)	20 (1.7)	18 (2.0)	18 (2.2)	17 (2.2)	24 (3.6)	23 (5.6)	3 (2.6)
Total Participants	2,904	1,673	1,212	881	828	759	674	411	114

Footnote 1: Percentage may total more than 100% because some participants had more than one rehospitalization.
Footnote 2: Form IIs entered into the database since March 1, 2001.
Footnote 3: Those with no/unknown rehospitalizations are excluded.

Table 103. Anxiety Diagnosis Prior to Injury

	Anxiety Diagnosis							
n (%)	No	Post-traumatic stress disorder	Panic disorder	Generalized anxiety disorder	Multiple diagnoses, first diagnosis unk	Declined	Unkn	Total
Total	3,713 (88.2)	116 (2.8)	28 (0.7)	270 (6.4)	23 (0.5)	8 (0.2)	51 (1.2)	4,209

Footnote 1: Data were required for all Admissions to System since October 1, 2011.
Footnote 2: If more than 1 disorder, the first diagnosis was coded.

Table 104. Depression Diagnosis Prior to Injury

	Depression Diagnosis				
n (%)	No	Yes	Declined	Unkn	Total
Total	3,552 (84.4)	593 (14.1)	13 (0.3)	51 (1.2)	4,209

Footnote 1: Data were required for all admissions to System since October 1, 2011.

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Table 105. Major Depressive Syndrome by Post-Injury Year

	Post-Injury Year								
Depressive Syndrome n (%)	1	5	10	15	20	25	30	35	40
No depressive syndrome	4,115 (44.5)	2,906 (48.3)	2,117 (46.9)	1,708 (49.8)	1,635 (51.8)	1,731 (58.1)	1,100 (44.4)	329 (24.4)	94 (24.2)
Major depressive syndrome	608 (6.6)	328 (5.4)	240 (5.3)	143 (4.2)	115 (3.6)	129 (4.3)	86 (3.5)	27 (2.0)	13 (3.4)
Other depressive syndrome	570 (6.2)	298 (5.0)	207 (4.6)	159 (4.6)	152 (4.8)	171 (5.7)	147 (5.9)	41 (3.0)	11 (2.8)
Unkn/interview not done/under18	3,945 (42.7)	2,487 (41.3)	1,951 (43.2)	1,420 (41.4)	1,257 (39.8)	947 (31.8)	1,143 (46.2)	954 (70.6)	270 (69.6)
Total	9,238	6,019	4,515	3,430	3,159	2,978	2,476	1,351	388

Footnote 1: Form IIs entered into the database since March 1, 2001.
Footnote 2: PHQ-9 was not collected between 2011 and 2016.

Table 106. PHQ-9 Severity of Depression Score by Post-Injury Year

	Post-Injury Year								
mean (n)	**1**	**5**	**10**	**15**	**20**	**25**	**30**	**35**	**40**
Total	5.4 (5,271)	4.8 (3,518)	4.6 (2,550)	4.2 (2,006)	3.9 (1,899)	4.1 (2,027)	4.6 (1,330)	4.7 (396)	4.9 (114)

Footnote 1: Form IIs entered into the database since March 1, 2001.
Footnote 2: Total ranges from 0 to 27.
Footnote 3: PHQ-9 was not collected between 2011 and 2016.

Table 107. Severity of Pain Score by Post-Injury Year

	Post-Injury Year								
mean (n)	**1**	**5**	**10**	**15**	**20**	**25**	**30**	**35**	**40**
Total	4.2 (8,387)	4.4 (5,654)	4.5 (4,264)	4.4 (3,238)	4.3 (3,009)	4.2 (2,879)	4.3 (2,429)	4.3 (1,323)	4.2 (377)

Footnote 1: Form IIs entered into the database since March 1, 2001.
Footnote 2: Total ranges from 0 to 10.

Table 108. Pain Interfering with Work by Post-Injury Year

	Post-Injury Year								
Pain Interference n (%)	**1**	**5**	**10**	**15**	**20**	**25**	**30**	**35**	**40**
Not at all	1,980 (18.2)	1,385 (19.9)	1,166 (22.8)	1,064 (25.4)	996 (27.1)	929 (29.5)	695 (28.1)	360 (26.6)	101 (26.0)
A little bit	2,309 (21.3)	1,539 (22.1)	1,079 (21.1)	866 (20.7)	767 (20.9)	610 (19.4)	482 (19.5)	296 (21.9)	84 (21.6)
Moderately	1,536 (14.1)	1,070 (15.4)	746 (14.6)	602 (14.4)	534 (14.5)	479 (15.2)	411 (16.6)	231 (17.1)	73 (18.8)
Quite a bit	1,390 (12.8)	881 (12.7)	660 (12.9)	509 (12.1)	406 (11.1)	372 (11.8)	324 (13.1)	190 (14.0)	49 (12.6)
Extremely	697 (6.4)	499 (7.2)	338 (6.6)	242 (5.8)	201 (5.5)	157 (5.0)	127 (5.1)	68 (5.0)	19 (4.9)
Don't know	21 (0.2)	7 (0.1)	4 (0.1)	5 (0.1)	7 (0.2)	1 (0.0)	4 (0.2)	1 (0.1)	0 (0.0)
Refuses	92 (0.8)	45 (0.6)	43 (0.8)	55 (1.3)	26 (0.7)	19 (0.6)	5 (0.2)	3 (0.2)	1 (0.3)
N/A, no pain	1,425 (13.1)	875 (12.6)	648 (12.7)	515 (12.3)	505 (13.7)	486 (15.4)	380 (15.3)	176 (13.0)	53 (13.7)
Unkn/not done/under 18	1,413 (13.0)	649 (9.3)	420 (8.2)	334 (8.0)	232 (6.3)	97 (3.1)	49 (2.0)	28 (2.1)	8 (2.1)
Total	10,863	6,950	5,104	4,192	3,674	3,150	2,477	1,353	388

Footnote 1: Form IIs entered into the database since January 1, 1998.

Table 109. Self-Perceived Health Status by Post-Injury Year

	Post-Injury Year								
Self-Perceived Health n (%)	**1**	**5**	**10**	**15**	**20**	**25**	**30**	**35**	**40**
Excellent	1,180 (9.9)	948 (12.4)	668 (11.9)	577 (12.6)	537 (13.6)	406 (12.9)	311 (12.6)	159 (11.8)	38 (9.8)
Very good	2,582 (21.6)	1,822 (23.7)	1,405 (25.1)	1,192 (25.9)	1,053 (26.6)	907 (28.8)	682 (27.5)	332 (24.5)	111 (28.6)
Good	3,803 (31.9)	2,570 (33.5)	1,860 (33.2)	1,612 (35.1)	1,369 (34.6)	1,122 (35.6)	872 (35.2)	492 (36.4)	132 (34.0)
Fair	2,044 (17.1)	1,302 (17.0)	971 (17.4)	721 (15.7)	649 (16.4)	499 (15.8)	423 (17.1)	274 (20.3)	69 (17.8)
Poor	677 (5.7)	351 (4.6)	236 (4.2)	157 (3.4)	142 (3.6)	108 (3.4)	135 (5.5)	74 (5.5)	28 (7.2)
Don't know	34 (0.3)	21 (0.3)	11 (0.2)	8 (0.2)	7 (0.2)	3 (0.1)	5 (0.2)	0 (0.0)	3 (0.8)
Refuses	106 (0.9)	53 (0.7)	43 (0.8)	55 (1.2)	22 (0.6)	19 (0.6)	3 (0.1)	2 (0.1)	0 (0.0)
Unkn/not done/under 18	1,514 (12.7)	607 (7.9)	400 (7.2)	274 (6.0)	173 (4.4)	86 (2.7)	46 (1.9)	20 (1.5)	7 (1.8)
Total	11,940	7,674	5,594	4,596	3,952	3,150	2,477	1,353	388

Footnote 1: Form IIs entered into the database since January 1, 1998.

Table 110. 'Compared to one year ago, how would you rate your Health?' by Post-Injury Year

	Post-Injury Year								
Rate Health n (%)	1	5	10	15	20	25	30	35	40
Much better	3,568 (32.8)	808 (11.6)	427 (8.4)	376 (9.0)	338 (9.2)	289 (9.2)	260 (10.5)	140 (10.3)	36 (9.3)
Somewhat better	2,505 (23.1)	1,262 (18.2)	701 (13.7)	492 (11.7)	447 (12.2)	388 (12.3)	309 (12.5)	153 (11.3)	57 (14.7)
About the same	1,976 (18.2)	3,362 (48.4)	2,784 (54.5)	2,339 (55.8)	2,016 (54.9)	1,803 (57.2)	1,341 (54.1)	676 (50.0)	191 (49.2)
Somewhat worse	821 (7.6)	694 (10.0)	650 (12.7)	519 (12.4)	523 (14.2)	472 (15.0)	434 (17.5)	300 (22.2)	79 (20.4)
Much worse	456 (4.2)	160 (2.3)	114 (2.2)	98 (2.3)	108 (2.9)	81 (2.6)	84 (3.4)	56 (4.1)	16 (4.1)
Don't know	18 (0.2)	13 (0.2)	8 (0.2)	8 (0.2)	6 (0.2)	3 (0.1)	1 (0.0)	3 (0.2)	0 (0.0)
Refuses	113 (1.0)	55 (0.8)	46 (0.9)	57 (1.4)	29 (0.8)	23 (0.7)	2 (0.1)	4 (0.3)	1 (0.3)
Unkn/not done/under 18	1,406 (12.9)	596 (8.6)	374 (7.3)	303 (7.2)	207 (5.6)	91 (2.9)	46 (1.9)	21 (1.6)	8 (2.1)
Total	10,863	6,950	5,104	4,192	3,674	3,150	2,477	1,353	388

Footnote 1: Form IIs entered into the database since January 1, 1998.

Table 111. Alcohol Use Prior to Injury – How Often Having a Drink

	How Often Having a Drink							
n (%)	None	Once a month or less	2 to 4 times a month	2 to 3 times a week	4 or more times a week	Declined	Unkn /under 18	Total
Total	1,082 (25.7)	758 (18.0)	908 (21.6)	708 (16.8)	557 (13.2)	44 (1.0)	152 (3.6)	4,209

Footnote 1: Data were required for all admissions to System since October 1, 2011.

Table 112. Alcohol Use by Post-Injury Year – How Often Having a Drink

	Post-Injury Year								
Alcohol Use n (%)	**1**	**5**	**10**	**15**	**20**	**25**	**30**	**35**	**40**
None	1,558 (44.8)	978 (39.1)	825 (42.1)	561 (38.8)	501 (39.5)	398 (38.8)	523 (41.9)	412 (37.8)	134 (34.5)
Once a month or less	690 (19.9)	590 (23.6)	467 (23.8)	367 (25.4)	336 (26.5)	236 (23.0)	280 (22.4)	244 (22.4)	92 (23.7)
2 to 4 times a month	510 (14.7)	447 (17.9)	303 (15.5)	232 (16.0)	219 (17.3)	172 (16.8)	190 (15.2)	167 (15.3)	61 (15.7)
2 to 3 times a week	313 (9.0)	248 (9.9)	187 (9.5)	122 (8.4)	103 (8.1)	106 (10.3)	129 (10.3)	147 (13.5)	44 (11.3)
4 or more times a week	182 (5.2)	138 (5.5)	113 (5.8)	107 (7.4)	83 (6.5)	88 (8.6)	110 (8.8)	107 (9.8)	51 (13.1)
Declined	30 (0.9)	25 (1.0)	9 (0.5)	6 (0.4)	9 (0.7)	1 (0.1)	4 (0.3)	2 (0.2)	1 (0.3)
Unkn/under 18	191 (5.5)	75 (3.0)	55 (2.8)	51 (3.5)	18 (1.4)	24 (2.3)	13 (1.0)	10 (0.9)	5 (1.3)
Total	3,474	2,501	1,959	1,446	1,269	1,025	1,249	1,089	388

Footnote 1: Form IIs entered into the database since January 1, 2012.

Table 113. Alcohol Use Prior to Injury– Typical Number of Drinks a Day When Drinking

	Typical Number of Drinks a Day When Drinking								
n (%)	**None**	**1 or 2**	**3 or 4**	**5 or 6**	**7 or 9**	**10 or more**	**Declined**	**Unkn /under 18**	**Total**
Total	1,205 (28.6)	1,534 (36.4)	758 (18.0)	321 (7.6)	91 (2.2)	81 (1.9)	64 (1.5)	155 (3.7)	4,209

Footnote 1: Data were required for all admissions to System since October 1, 2011.

Table 114. Alcohol Use by Post-Injury Year – Typical Number of Drinks a Day When Drinking

	Post-Injury Year								
Drinks per Day n (%)	**1**	**5**	**10**	**15**	**20**	**25**	**30**	**35**	**40**
None	1,598 (46.0)	1,019 (40.7)	849 (43.3)	585 (40.5)	518 (40.8)	410 (40.0)	541 (43.3)	428 (39.3)	142 (36.6)
1 or 2	1,179 (33.9)	923 (36.9)	726 (37.1)	549 (38.0)	479 (37.7)	396 (38.6)	494 (39.6)	490 (45.0)	195 (50.3)
3 or 4	359 (10.3)	322 (12.9)	232 (11.8)	165 (11.4)	152 (12.0)	127 (12.4)	152 (12.2)	105 (9.6)	38 (9.8)
5 or 6	71 (2.0)	82 (3.3)	68 (3.5)	66 (4.6)	65 (5.1)	54 (5.3)	29 (2.3)	35 (3.2)	5 (1.3)
7 to 9	30 (0.9)	32 (1.3)	10 (0.5)	15 (1.0)	13 (1.0)	8 (0.8)	9 (0.7)	8 (0.7)	2 (0.5)
10 or more	10 (0.3)	19 (0.8)	6 (0.3)	11 (0.8)	13 (1.0)	4 (0.4)	7 (0.6)	8 (0.7)	0 (0.0)
Declined	34 (1.0)	28 (1.1)	12 (0.6)	5 (0.3)	11 (0.9)	3 (0.3)	4 (0.3)	5 (0.5)	1 (0.3)
Unkn/under 18	193 (5.6)	76 (3.0)	56 (2.9)	50 (3.5)	18 (1.4)	23 (2.2)	13 (1.0)	10 (0.9)	5 (1.3)
Total	3,474	2,501	1,959	1,446	1,269	1,025	1,249	1,089	388

Footnote 1: Form IIs entered into the database since January 1, 2012.

Table 115. Alcohol Use Prior to Injury– How Often Having 6 or More Drinks on One Occasion

	How Often Having 6 or More Drinks on One Occasion							
n (%)	None	Less than monthly	Monthly	Weekly	Daily or almost daily	Declined	Unkn /under 18	Total
Total	2,445 (58.1)	749 (17.8)	385 (9.1)	297 (7.1)	98 (2.3)	72 (1.7)	163 (3.9)	4,209

Footnote 1: Data were required for all admissions to System since October 1, 2011.

Table 116. Alcohol Use by Post-Injury Year – How Often Having 6 or More Drinks on One Occasion

	Post-Injury Year								
6 or More Drinks n (%)	1	5	10	15	20	25	30	35	40
None	2,823 (81.3)	1,963 (78.5)	1,553 (79.3)	1,144 (79.1)	1,011 (79.7)	828 (80.8)	1,052 (84.2)	928 (85.2)	342 (88.1)
Less than monthly	274 (7.9)	292 (11.7)	215 (11.0)	146 (10.1)	133 (10.5)	96 (9.4)	110 (8.8)	88 (8.1)	26 (6.7)
Monthly	105 (3.0)	85 (3.4)	74 (3.8)	59 (4.1)	52 (4.1)	34 (3.3)	35 (2.8)	32 (2.9)	6 (1.5)
Weekly	34 (1.0)	43 (1.7)	38 (1.9)	31 (2.1)	32 (2.5)	32 (3.1)	25 (2.0)	25 (2.3)	3 (0.8)
Daily or almost daily	14 (0.4)	15 (0.6)	10 (0.5)	9 (0.6)	13 (1.0)	8 (0.8)	9 (0.7)	3 (0.3)	4 (1.0)
Declined	32 (0.9)	27 (1.1)	13 (0.7)	6 (0.4)	10 (0.8)	3 (0.3)	5 (0.4)	3 (0.3)	1 (0.3)
Unkn/under 18	192 (5.5)	76 (3.0)	56 (2.9)	51 (3.5)	18 (1.4)	24 (2.3)	13 (1.0)	10 (0.9)	6 (1.5)
Total	3,474	2,501	1,959	1,446	1,269	1,025	1,249	1,089	388

Footnote 1: Form IIs entered into the database since January 1, 2012.

Table 117. Satisfaction with Life Scale – Total Score by Post-Injury Year

	Post-Injury Year								
mean (n)	1	5	10	15	20	25	30	35	40
Total	19.1 (10,057)	20.8 (6,832)	21.4 (5,053)	22.1 (4,173)	22.5 (3,669)	22.9 (3,015)	23.2 (2,398)	23.4 (1,308)	24.3 (376)

Footnote 1: Form IIs entered into the database since January 1, 1996.
Footnote 2: Total ranges from 5 to 35.

Table 118. CHART Physical Independence Subscale Score by Post-Injury Year

	Post-Injury Year								
mean (n)	1	5	10	15	20	25	30	35	40
Total	71.5 (10,504)	76.8 (7,078)	78.5 (5,200)	80.7 (4,294)	83.2 (3,780)	83.3 (3,056)	84.1 (2,434)	87.0 (1,329)	87.9 (378)

Footnote 1: Form IIs entered into the database since January 1, 1996.
Footnote 2: Total ranges from 0 to 100.

Table 119. CHART Mobility Subscale Score by Post-Injury Year

	Post-Injury Year								
mean (n)	1	5	10	15	20	25	30	35	40
Total	73.5 (10,435)	77.2 (7,041)	78.0 (5,173)	78.9 (4,280)	78.8 (3,767)	78.8 (3,046)	76.2 (2,429)	76.3 (1,324)	75.6 (374)

Footnote 1: Form IIs entered into the database since January 1, 1996.

Table 120. CHART Occupation Subscale Score by Post-Injury Year

	Post-Injury Year								
mean (n)	1	5	10	15	20	25	30	35	40
Total	49.2 (10,314)	58.3 (6,978)	59.7 (5,147)	62.3 (4,243)	63.7 (3,739)	65.6 (3,029)	63.2 (2,407)	60.8 (1,316)	58.5 (378)

Footnote 1: Form IIs entered into the database since January 1, 1996.
Footnote 2: Total ranges from 0 to 100.

Table 121. CHART Social Integration Subscale Score by Post-Injury Year

	Post-Injury Year								
mean (n)	1	5	10	15	20	25	30	35	40
Total	86.5 (10,243)	86.1 (6,917)	86.1 (5,136)	87.1 (4,241)	86.8 (3,729)	87.2 (3,012)	86.0 (2,398)	86.5 (1,315)	85.1 (375)

Footnote 1: Form IIs entered into the database since January 1, 1996.
Footnote 2: Total ranges from 0 to 100.

Table 122. Ambulation Ability-Walk for 150 Feet by Post-Injury Year

	Post-Injury Year								
Walk 150 Feet n (%)	**1**	**5**	**10**	**15**	**20**	**25**	**30**	**35**	**40**
No	4,272 (55.4)	3,084 (60.6)	2,581 (67.4)	2,077 (71.6)	1,917 (75.4)	1,989 (79.5)	1,990 (80.7)	1,093 (80.8)	319 (82.2)
Yes	2,915 (37.8)	1,790 (35.2)	1,123 (29.3)	686 (23.7)	521 (20.5)	444 (17.7)	437 (17.7)	250 (18.5)	67 (17.3)
Unkn/not done	518 (6.7)	218 (4.3)	128 (3.3)	136 (4.7)	105 (4.1)	69 (2.8)	40 (1.6)	10 (0.7)	2 (0.5)
Total	7,705	5,092	3,832	2,899	2,543	2,502	2,467	1,353	388

Footnote 1: Form IIs entered into the database since May 1, 2004

Table 123. Ambulation Ability-Walk for 1 Street Block by Post-Injury Year

	Post-Injury Year								
Walk 1 Street Block n (%)	**1**	**5**	**10**	**15**	**20**	**25**	**30**	**35**	**40**
No	4,661 (60.5)	3,307 (64.9)	2,745 (71.6)	2,170 (74.9)	1,984 (78.0)	2,040 (81.5)	2,041 (82.7)	1,126 (83.2)	335 (86.3)
Yes	2,521 (32.7)	1,565 (30.7)	958 (25.0)	589 (20.3)	454 (17.9)	392 (15.7)	386 (15.6)	216 (16.0)	51 (13.1)
Unkn/not done	523 (6.8)	220 (4.3)	129 (3.4)	140 (4.8)	105 (4.1)	70 (2.8)	40 (1.6)	11 (0.8)	2 (0.5)
Total	7,705	5,092	3,832	2,899	2,543	2,502	2,467	1,353	388

Footnote 1: Form IIs entered into the database since May 1, 2004.

Table 124. Ambulation Ability-Walk Up 1 Flight of Stairs by Post-Injury Year

	Post-Injury Year								
Walk 1 Fight n (%)	**1**	**5**	**10**	**15**	**20**	**25**	**30**	**35**	**40**
No	4,693 (60.9)	3,277 (64.4)	2,670 (69.7)	2,131 (73.5)	1,952 (76.8)	2,014 (80.5)	2,013 (81.6)	1,123 (83.0)	327 (84.3)
Yes	2,488 (32.3)	1,596 (31.3)	1,034 (27.0)	626 (21.6)	483 (19.0)	419 (16.7)	412 (16.7)	219 (16.2)	59 (15.2)
Unkn/not done	524 (6.8)	219 (4.3)	128 (3.3)	142 (4.9)	108 (4.2)	69 (2.8)	42 (1.7)	11 (0.8)	2 (0.5)
Total	7,705	5,092	3,832	2,899	2,543	2,502	2,467	1,353	388

Footnote 1: Form IIs entered into the database since May 1, 2004.

Table 125. Type of Mobility Aid by Post-Injury Year

	Post-Injury Year								
Type of Mobility Aid n (%)	**1**	**5**	**10**	**15**	**20**	**25**	**30**	**35**	**40**
None	1,367 (17.7)	806 (15.8)	576 (15.0)	315 (10.9)	199 (7.8)	186 (7.4)	181 (7. 3)	79 (5.8)	18 (4.6)
Straight cane	732 (9.5)	483 (9.5)	356 (9.3)	212 (7.3)	195 (7.7)	157 (6.3)	161 (6.5)	98 (7.2)	35 (9.0)
Quad cane	141 (1.8)	77 (1.5)	34 (0.9)	27 (0.9)	20 (0.8)	14 (0.6)	12 (0.5)	9 (0.7)	0 (0.0)
Walker	913 (11.8)	489 (9.6)	263 (6.9)	137 (4.7)	90 (3.5)	68 (2.7)	77 (3.1)	51 (3.8)	18 (4.6)
Crutches	260 (3.4)	178 (3.5)	123 (3.2)	102 (3.5)	94 (3.7)	86 (3.4)	102 (4.1)	58 (4.3)	13 (3.4)
Ankle-foot orthotic	277 (3.6)	162 (3.2)	137 (3.6)	115 (4.0)	87 (3.4)	65 (2.6)	81 (3.3)	48 (3.5)	17 (4.4)
Knee-ankle-foot orthotic	224 (2.9)	124 (2.4)	80 (2.1)	61 (2.1)	47 (1.8)	48 (1.9)	38 (1.5)	21 (1.6)	10 (2.6)
Other	108 (1.4)	73 (1.4)	54 (1.4)	42 (1.4)	28 (1.1)	23 (0.9)	17 (0.7)	19 (1.4)	8 (2.1)
N/A, patient not ambulatory	3,981 (51.7)	2,892 (56.8)	2,367 (61.8)	1,947 (67.2)	1,840 (72.4)	1,911 (76.4)	1,908 (77.3)	1,061 (78.4)	305 (78.6)
Unkn/not done	517 (6.7)	222 (4.4)	125 (3.3)	137 (4.7)	104 (4.1)	70 (2.8)	43 (1.7)	10 (0.7)	1 (0.3)
Total Participants	7,705	5,092	3,832	2,899	2,543	2,502	2,467	1,353	388

Footnote 1: Percentages may total more than 100% because some participants used more than one mobility aid.

Footnote 2: Form IIs entered into the database since May 1, 2004.

Table 126. Wheelchair or Scooter Use by Post-Injury Year

	Post-Injury Year								
Wheelchair or Scooter Use n (%)	**1**	**5**	**10**	**15**	**20**	**25**	**30**	**35**	**40**
No	2,650 (34.4)	1,635 (32.1)	1,053 (27.5)	675 (23.3)	520 (20.4)	445 (17.8)	455 (18.4)	290 (21.4)	87 (22.4)
Yes	4,539 (58.9)	3,253 (63.9)	2,652 (69.2)	2,091 (72.1)	1,917 (75.4)	1,990 (79.5)	1,974 (80.0)	1,052 (77.8)	299 (77.1)
Unkn/not done	516 (6.7)	204 (4.0)	127 (3.3)	133 (4.6)	106 (4.2)	67 (2.7)	38 (1.5)	11 (0.8)	2 (0.5)
Total	7,705	5,092	3,832	2,899	2,543	2,502	2,467	1,353	388

Footnote 1: Form IIs entered into the database since May 1, 2004.

Table 127. Type of Wheelchair or Scooter Used Most Often by Post-Injury Year

	Post-Injury Year								
Type Wheelchair Used Most n (%)	**1**	**5**	**10**	**15**	**20**	**25**	**30**	**35**	**40**
Manual wheelchair	2,687 (34.9)	1,785 (35.1)	1,493 (39.0)	1,261 (43.5)	1,171 (46.0)	1,230 (49.2)	1,156 (46.9)	612 (45.2)	145 (37.4)
Power wheelchair	1,724 (22.4)	1,359 (26.7)	1,071 (27.9)	788 (27.2)	700 (27.5)	714 (28.5)	757 (30.7)	409 (30.2)	143 (36.9)
Power-assist wheelchair	89 (1.2)	75 (1.5)	46 (1.2)	27 (0.9)	23 (0.9)	26 (1.0)	36 (1.5)	20 (1.5)	11 (2.8)
Scooter	15 (0.2)	19 (0.4)	27 (0.7)	11 (0.4)	17 (0.7)	17 (0.7)	22 (0.9)	8 (0.6)	0 (0.0)
Hoveround*	0 (0.0)	1 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Other	5 (0.1)	3 (0.1)	3 (0.1)	1 (0.0)	1 (0.0)	0 (0.0)	1 (0.0)	1 (0.1)	0 (0.0)
Non-user	2,650 (34.4)	1,635 (32.1)	1,053 (27.5)	675 (23.3)	520 (20.4)	445 (17.8)	455 (18.4)	290 (21.4)	87 (22.4)
Unkn/not done	535 (6.9)	215 (4.2)	139 (3.6)	136 (4.7)	111 (4.4)	70 (2.8)	40 (1.6)	13 (1.0)	2 (0.5)
Total	7,705	5,092	3,832	2,899	2,543	2,502	2,467	1,353	388

Footnote 1: Form IIs entered into the database since May 1, 2004.
*Footnote 2: * code was added in October 2016.*

Table 128. Computer Use by Post-Injury Year

	Post-Injury Year								
Computer Use n (%)	**1**	**5**	**10**	**15**	**20**	**25**	**30**	**35**	**40**
No	1,773 (23.0)	1,020 (20.0)	760 (19.8)	530 (18.3)	493 (19.4)	496 (19.8)	482 (19.5)	267 (19.7)	53 (13.7)
Home only	2,690 (34.9)	1,837 (36.1)	1,404 (36.6)	1,034 (35.7)	885 (34.8)	935 (37.4)	942 (38.2)	475 (35.1)	110 (28.4)
Outside home only	222 (2.9)	162 (3.2)	119 (3.1)	92 (3.2)	89 (3.5)	72 (2.9)	68 (2.8)	41 (3.0)	6 (1.5)
Both	2,392 (31.0)	1,842 (36.2)	1,403 (36.6)	1,096 (37.8)	977 (38.4)	923 (36.9)	934 (37.9)	561 (41.5)	216 (55.7)
Unkn/not done	628 (8.2)	231 (4.5)	146 (3.8)	147 (5.1)	99 (3.9)	76 (3.0)	41 (1.7)	9 (0.7)	3 (0.8)
Total	7,705	5,092	3,832	2,899	2,543	2,502	2,467	1,353	388

Footnote 1: Form IIs entered into the database since May 1, 2004.

Table 129. Computer Use with Assistance from Another Person by Post-Injury Year

	Post-Injury Year								
Computer Use with Assistance n (%)	**1**	**5**	**10**	**15**	**20**	**25**	**30**	**35**	**40**
No assistance	2,398 (69.0)	1,798 (71.9)	1,457 (74.4)	1,086 (75.1)	948 (74.7)	780 (76.1)	938 (75.1)	816 (74.9)	308 (79.4)
With assistance	346 (10.0)	239 (9.6)	159 (8.1)	97 (6.7)	97 (7.6)	64 (6.2)	84 (6.7)	60 (5.5)	26 (6.7)
N/A, doesn't use computer	597 (17.2)	412 (16.5)	302 (15.4)	222 (15.4)	212 (16.7)	164 (16.0)	214 (17.1)	205 (18.8)	51 (13.1)
Unkn/not done	133 (3.8)	52 (2.1)	41 (2.1)	41 (2.8)	12 (0.9)	17 (1.7)	13 (1.0)	8 (0.7)	3 (0.8)
Total	3,474	2,501	1,959	1,446	1,269	1,025	1,249	1,089	388

Footnote 1: Form IIs entered into the database since January 1, 2012.

Table 130. Utilization of Assistive Devices for Computer Use by Post-Injury Year

	Post-Injury Year								
Type of Assistive Device n (%)	**1**	**5**	**10**	**15**	**20**	**25**	**30**	**35**	**40**
No assistive device(s)	2,228 (64.1)	1,693 (67.7)	1,328 (67.8)	976 (67.5)	859 (67.7)	698 (68.1)	809 (64.8)	705 (64.7)	268 (69.1)
Brace or splint	162 (4.7)	89 (3.6)	84 (4.3)	59 (4.1)	54 (4.3)	51 (5.0)	55 (4.4)	64 (5.9)	17 (4.4)
Modified or onscreen keyboard	48 (1.4)	31 (1.2)	37 (1.9)	22 (1.5)	19 (1.5)	14 (1.4)	16 (1.3)	15 (1.4)	5 (1.3)
Adapted mouse	81 (2.3)	56 (2.2)	42 (2.1)	31 (2.1)	26 (2.0)	21 (2.0)	32 (2.6)	19 (1.7)	4 (1.0)
Trackball	51 (1.5)	46 (1.8)	61 (3.1)	38 (2.6)	40 (3.2)	39 (3.8)	56 (4.5)	51 (4.7)	19 (4.9)
Bluetooth joystick	28 (0.8)	18 (0.7)	10 (0.5)	11 (0.8)	3 (0.2)	4 (0.4)	2 (0.2)	1 (0.1)	0 (0.0)
Speech recognition	234 (6.7)	148 (5.9)	119 (6.1)	78 (5.4)	51 (4.0)	34 (3.3)	78 (6.2)	47 (4.3)	27 (7.0)
Head pointing infrared device/tech	22 (0.6)	16 (0.6)	19 (1.0)	12 (0.8)	11 (0.9)	8 (0.8)	5 (0.4)	3 (0.3)	2 (0.5)
Other	146 (4.2)	88 (3.5)	72 (3.7)	50 (3.5)	55 (4.3)	49 (4.8)	90 (7.2)	60 (5.5)	23 (5.9)
Eye tracking device*	5 (0.1)	2 (0.1)	0 (0.0)	2 (0.1)	1 (0.1)	1 (0.1)	0 (0.0)	0 (0.0)	0 (0.0)
N/A, doesn't use computer	610 (17.6)	419 (16.8)	310 (15.8)	227 (15.7)	218 (17.2)	169 (16.5)	214 (17.1)	208 (19.1)	52 (13.4)
Unkn/not done	132 (3.8)	54 (2.2)	43 (2.2)	42 (2.9)	12 (0.9)	18 (1.8)	14 (1.1)	10 (0.9)	3 (0.8)
Total Participants	3,474	2,501	1,959	1,446	1,269	1,025	1,249	1,089	388

Footnote 1: Form IIs entered into the database since January 1, 2012.
Footnote 2: Percentage may total more than 100% because some participants used more than one assistive device.
*Footnote 3: * code was added in October 2016.*

Table 131. Internet or Email Usage by Post-Injury Year

	Post-Injury Year								
Internet/Email Use n (%)	**1**	**5**	**10**	**15**	**20**	**25**	**30**	**35**	**40**
Owns computer only	168 (2.2)	126 (2.5)	80 (2.1)	64 (2.2)	74 (2.9)	76 (3.0)	54 (2.2)	16 (1.2)	5 (1.3)
Daily	3,990 (51.8)	2,970 (58.3)	2,241 (58.5)	1,748 (60.3)	1,525 (60.0)	1,516 (60.6)	1,584 (64.2)	896 (66.2)	291 (75.0)
Weekly	830 (10.8)	546 (10.7)	446 (11.6)	280 (9.7)	251 (9.9)	243 (9.7)	216 (8.8)	122 (9.0)	27 (7.0)
Monthly	299 (3.9)	203 (4.0)	149 (3.9)	110 (3.8)	91 (3.6)	87 (3.5)	88 (3.6)	41 (3.0)	8 (2.1)
N/A, doesn't own computer	1,776 (23.0)	1,011 (19.9)	767 (20.0)	547 (18.9)	500 (19.7)	502 (20.1)	482 (19.5)	269 (19.9)	53 (13.7)
Unkn/not done	642 (8.3)	236 (4.6)	149 (3.9)	150 (5.2)	102 (4.0)	78 (3.1)	43 (1.7)	9 (0.7)	4 (1.0)
Total	7,705	5,092	3,832	2,899	2,543	2,502	2,467	1,353	388

Footnote 1: Form IIs entered into the database since May 1, 2004.

Source: National Spinal Cord Injury Statistical Center, University of Alabama at Birmingham, 2017 Annual Statistical Report – Complete Public Version

Table 132. Type of Modified Vehicle by Post-Injury Year

	Post-Injury Year								
Type Modified Vehicle n (%)	**1**	**5**	**10**	**15**	**20**	**25**	**30**	**35**	**40**
Doesn't own	5,101 (66.2)	2,654 (52.1)	1,796 (46.9)	1,223 (42.2)	958 (37.7)	825 (33.0)	796 (32.3)	425 (31.4)	107 (27.6)
Car	567 (7.4)	615 (12.1)	544 (14.2)	447 (15.4)	451 (17.7)	479 (19.1)	423 (17.1)	233 (17.2)	57 (14.7)
Van	1,219 (15.8)	1,269 (24.9)	1,089 (28.4)	856 (29.5)	808 (31.8)	914 (36.5)	971 (39.4)	542 (40.1)	183 (47.2)
Other	204 (2.6)	263 (5.2)	186 (4.9)	172 (5.9)	162 (6.4)	159 (6.4)	149 (6.0)	79 (5.8)	26 (6.7)
Combination	19 (0.2)	40 (0.8)	64 (1.7)	52 (1.8)	55 (2.2)	51 (2.0)	86 (3.5)	61 (4.5)	12 (3.1)
Unkn/not done	595 (7.7)	251 (4.9)	153 (4.0)	149 (5.1)	109 (4.3)	74 (3.0)	42 (1.7)	13 (1.0)	3 (0.8)
Total	7,705	5,092	3,832	2,899	2,543	2,502	2,467	1,353	388

Footnote 1: Form IIs entered into the database since May 1, 2004.

Table 133. Driving Modified Vehicle by Post-Injury Year

	Post-Injury Year								
Drive Modified Vehicle n (%)	**1**	**5**	**10**	**15**	**20**	**25**	**30**	**35**	**40**
No	1,162 (15.1)	880 (17.3)	635 (16.6)	408 (14.1)	356 (14.0)	389 (15.5)	398 (16.1)	208 (15.4)	70 (18.0)
Yes, from wheelchair	108 (1.4)	227 (4.5)	259 (6.8)	204 (7.0)	233 (9.2)	289 (11.6)	318 (12.9)	181 (13.4)	74 (19.1)
Yes, not from wheelchair	732 (9.5)	1,076 (21.1)	987 (25.8)	910 (31.4)	884 (34.8)	924 (36.9)	912 (37.0)	525 (38.8)	134 (34.5)
N/A, doesn't own	5,101 (66.2)	2,654 (52.1)	1,796 (46.9)	1,223 (42.2)	958 (37.7)	825 (33.0)	796 (32.3)	425 (31.4)	107 (27.6)
Unkn/not done	602 (7.8)	255 (5.0)	155 (4.0)	154 (5.3)	112 (4.4)	75 (3.0)	43 (1.7)	14 (1.0)	3 (0.8)
Total	7,705	5,092	3,832	2,899	2,543	2,502	2,467	1,353	388

Footnote 1: Form IIs entered into the database since May 1, 2004.

Table 134. Cell Phone Usage by Post-Injury Year

	Post-Injury Year								
Cell Phone Use n (%)	**1**	**5**	**10**	**15**	**20**	**25**	**30**	**35**	**40**
No	1,104 (14.3)	799 (15.7)	662 (17.3)	498 (17.2)	454 (17.9)	484 (19.3)	478 (19.4)	234 (17.3)	52 (13.4)
Yes	6,009 (78.0)	4,061 (79.8)	3,023 (78.9)	2,256 (77.8)	1,986 (78.1)	1,943 (77.7)	1,948 (79.0)	1,110 (82.0)	333 (85.8)
Unkn/not done	592 (7.7)	232 (4.6)	147 (3.8)	145 (5.0)	103 (4.1)	75 (3.0)	41 (1.7)	9 (0.7)	3 (0.8)
Total	7,705	5,092	3,832	2,899	2,543	2,502	2,467	1,353	388

Footnote 1: Form IIs entered into the database since May 1, 2004.

Table 135. Source for Health and Disability Information by Post-Injury Year

	Post-Injury Year								
Primary Source n (%)	**1**	**5**	**10**	**15**	**20**	**25**	**30**	**35**	**40**
Newspaper	933 (14.7)	697 (16.2)	573 (17.2)	422 (17.1)	365 (18.5)	427 (21.2)	475 (21.6)	296 (21.9)	65 (16.8)
TV	2,167 (34.1)	1,771 (41.2)	1,492 (44.9)	1,068 (43.2)	855 (43.2)	987 (49.0)	1,108 (50.3)	629 (46.5)	131 (33.8)
Radio	449 (7.1)	380 (8.8)	372 (11.2)	275 (11.1)	222 (11.2)	254 (12.6)	300 (13.6)	171 (12.6)	35 (9.0)
Internet	2,945 (46.4)	2,267 (52.8)	1,740 (52.3)	1,296 (52.5)	1,075 (54.3)	1,055 (52.3)	1,198 (54.4)	791 (58.5)	255 (65.7)
Other print	1,196 (18.8)	970 (22.6)	738 (22.2)	554 (22.4)	437 (22.1)	436 (21.6)	475 (21.6)	366 (27.1)	101 (26.0)
Educational video, DVD/CDs	212 (3.3)	132 (3.1)	100 (3.0)	75 (3.0)	52 (2.6)	60 (3.0)	53 (2.4)	45 (3.3)	15 (3.9)
Others	1,550 (24.4)	916 (21.3)	634 (19.1)	457 (18.5)	333 (16.8)	319 (15.8)	348 (15.8)	120 (8.9)	11 (2.8)
Conversations with family or friends*	1,325 (20.9)	876 (20.4)	614 (18.5)	462 (18.7)	407 (20.6)	344 (17.1)	410 (18.6)	441 (32.6)	127 (32.7)
Conversations with health professionals*	2,283 (36.0)	1,389 (32.3)	999 (30.0)	779 (31.5)	638 (32.3)	566 (28.1)	671 (30.5)	589 (43.5)	230 (59.3)
Health related app	28 (0.4)	16 (0.4)	15 (0.5)	6 (0.2)	16 (0.8)	12 (0.6)	7 (0.3)	11 (0.8)	6 (1.5)
No access	216 (3.4)	160 (3.7)	140 (4.2)	111 (4.5)	95 (4.8)	63 (3.1)	89 (4.0)	57 (4.2)	21 (5.4)
Unkn	387 (6.1)	174 (4.0)	114 (3.4)	102 (4.1)	49 (2.5)	43 (2.1)	31 (1.4)	13 (1.0)	6 (1.5)
Total Participants	6,350	4,297	3,325	2,470	1,978	2,016	2,202	1,353	388

Footnote 1: Percentages may total more than 100% because some participants used more than one source.
Footnote 2: Form IIs entered into the database since January 1, 2007.
*Footnote 3: *Codes were added in October 2011.*

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