



Keynote Presentation

Saturday, March 11, 2023

Philip S. Requejo, PhD
Co-Director – Southern California Spinal Cord
Injury Model System (SoCal-SCIMS)
CEO – Rancho Research Institute





Sara J. Mulroy, PhD, PT

- Director of the Pathokinesiology Lab (1996-2022)
- Co-Director and Research Director of the Southern California SCIMS (2011-2021)
- Director of the Southern California SCIMS (SoCal-SCIMS) (2021-2022)



Objectives

- To honor her professional legacy of excellence and dedication to Spinal Cord Injury rehabilitation research and the SoCal-SCIMS.
- Provide increased awareness for the role of Spinal Cord Injury Model Systems in recovery (and rehabilitation) for individuals with spinal cord injury.

Southern California Spinal Cord Injury Model System “SoCal-SCIMS”

RANCHO
Research Institute



SCIMS

Spinal Cord Injury Model System

Since 1970



RANCHO LOS AMIGOS
NATIONAL REHABILITATION CENTER



2022 Advisory Board Meeting

Thursday, January 6, 2022



Sara's Contributions to Rancho's SCIMS

- She had over 30 years of clinical and research experience in SCI rehabilitation and have served as Co-Director of Rancho's Model System and principal investigator of its site-specific studies for the past two cycles (2011-2021).
- Principal investigator (PI) or co-investigator or on multiple NIH and NIDILRR-funded research grants documenting the shoulder demands of wheelchair propulsion, ambulation with assistive devices, activities of daily living, and car transfers for individuals with SCI.
- Her research initially focused on the biomechanics of the weight-bearing shoulder and development of interventions to prevent and treat shoulder pain after SCI and more recently has shifted to the identification of contributors to and management of chronic pain after SCI.
- PI on a highly successful RCT of an exercise program to treat shoulder pain in persons with SCI – called STOMPS.
- PI on a 3-year longitudinal NIH study of shoulder pain and physical function after SCI. We identified significant risk factors for shoulder pain onset including weakness in critical shoulder muscles.



Sara's Contributions to Rancho's SCIMS (cont...)

- We then evaluated two different programs designed to **prevent** shoulder pain onset in a clinical trial as part of our SCI Model System (2011-2016). We identified that the prevention programs significantly reduced the rate of shoulder onset regardless of intervention delivery format.
- Using an RCT, we evaluated the outcomes and sustainability of two programs for promotion of physical activity (PA) after SCI: a novel, whole of day activity accumulation (WODAA) approach to increase overall PA and decrease sedentary time versus a more traditional planned aerobic exercise program (2016-2021).
- Utilized remote activity monitoring and an electronic smartphone app to query individuals throughout the day on their current activities and moods (ecological momentary assessment) to understand the contexts of physical activity and pain management strategies in the lives of persons with SCI.
- Developed and pilot-tested a community-based pain management program for individuals with paraplegia from SCI who have neuropathic pain utilizing a participatory research design.
- Current research focuses on identifying contributors to chronic pain after SCI and development of effective pain management interventions.



What is SCIMS?

A network of rehabilitation facilities throughout the United States that provide **continuous, comprehensive, multidisciplinary care** for persons with SCI

- designated by National Institute on Disability, Independent Living and Rehabilitation Research



John Young, MD (1919-1990)



SCIMS Center	Years Funded*
Alabama, Birmingham	1972–2016 2016-2026;
Arizona, Phoenix	1970–1985; 2006–2011†
California, Downey	1980–2006; 2006–2011†; 2011–2016
California, Northridge†	1982
California, San Jose	1972–1985; 1990–2006; 2006–2016†
Colorado, Denver	1974–2016
District of Columbia, Washington	2006–2011
Florida, Miami	1979–1985; 2000–2006; 2011–2016
Georgia, Atlanta	1982–2016
Illinois, Chicago	1972–2000; 2006–2016
Kentucky, Louisville	2011–2016
Louisiana, New Orleans	1982–1985
Massachusetts, Boston, Boston University	1975–1990; 1995–2016
Massachusetts, Boston, Spaulding-Harvard	2011–2016 2016-2026
Michigan, Ann Arbor	1985–2016
Michigan, Detroit	1983–2000
Minnesota, Minneapolis†	1982
Missouri, Columbia	1979–1981; 1995–2006; 2006–2016†
New Jersey, West Orange	1990–2016
New York, New York, Mt Sinai	1990–2011; 2011–2016†
New York, New York, New York University	1972–1990; 2006–2011†
New York, Rochester	1982–1990
Ohio, Cleveland	1995–2000; 2006–2011
Pennsylvania, Philadelphia	1979–2016 2016-2021
Pennsylvania, Pittsburgh	2000–2016
Texas, Houston	1972–2011; 2011–2016† 2016-2026
Virginia, Fishersville	1972–1990; 2006–2016†
Virginia, Richmond	1995–2006; 2006–2011†
Washington, Seattle	1974–1985; 1990–2016
Wisconsin, Milwaukee	1995–2000

Ohio State, Columbia 2016-2021

Baylor, Texas, 2021-2026 *New Center - Baylor

2016-2026 (Out 1 cycle since 1980) - Rancho

2021-2026 *New Center – Santa Clara

2016-2026 **Continuously Funded since 1974 – Craig Hospital

2021-2026 *New Center - DC

2016-2026 (Out multiple cycles since 1979) - Miami

2016-2026 **Continuously Funded since 1982 – Shepherd Center

2016-2026 **Continuously Funded since 1974 – Shirley Ryan

2021-2026 *New Center - Minnesota

2016-2026 **Continuously Funded since 1990 - Kessler

2016-2026 (Out 1 cycle since 1990) – Mt. Sinai

2016-2026 (Out multiple cycles since 1995) - Ohio

NF – Philly, Magee Rehab

2016-2026 **Continuously Funded since 2000 - Pittsburgh

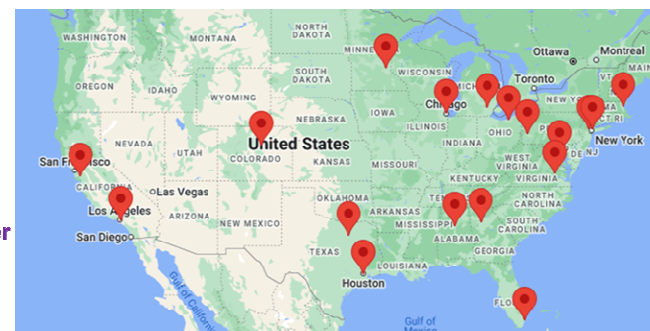
2021-2026 *New Center, VCU

NF - OSU

33 Institutions have been designated as an SCI Model System at some point since 1972

Currently, 18 institutions have this designation

Active Centers 2016 - 2026





SCI Model System Activities

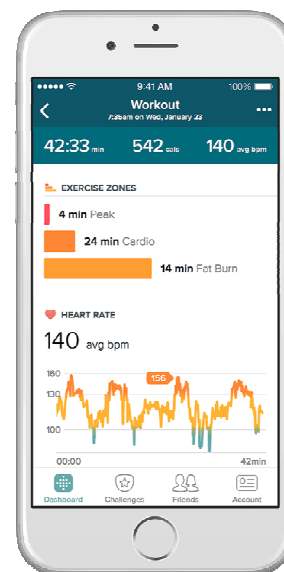
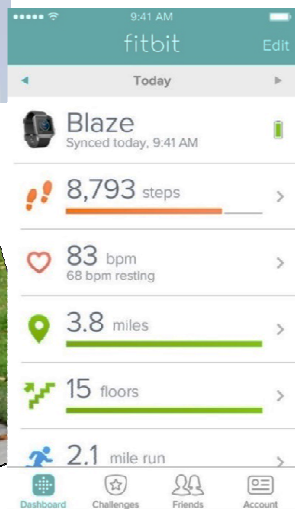
- Deliver high-quality system of care for patients with SCI
Emergency Care through Post-Rehab
- * Enter 30-40 newly-injured individuals with traumatic SCI into the National SCI Database
In-person follow-up at 1-year post-injury
Phone follow-up questionnaires at 5 years post-injury and every 5 years thereafter
Currently following approx. 1700 individuals
- * Conduct a site-specific research study designed to improve health/function of individuals with SCI
- * Conduct/Lead a multi-site research module (usually questionnaire-based) in collaboration with other centers
- Participate in multi-site research modules lead by other centers.
- Participate in Model System knowledge translation activities (committees, papers, presentations, fact sheets, research using data base, etc.)



Rancho's SCI Model System Site-Specific Research Study

Comparing Two Approaches to Increasing Physical Activity 2016-2021

Shoulder Pain Prevention 2011-2016



Principal Investigator: Sara Mulroy (smulroy@dhs.lacounty.gov)



Site-Specific Research Project 2021-2026



Pathokinesiology Laboratory

“A Randomized Clinical Trial to Evaluate a Community-based, Non-pharmacologic Program to Enhance Active Pain-Management Strategies for Individuals with SCI”

Principal Investigator: Sara Mulroy, PT, PhD

Co-Investigator: Lisa Lighthall Haubert, MPT, DPT

Co-Investigator: Rebecca Lewthwaite, PhD



Site-Specific Research Project 2021-2026



Pathokinesiology Laboratory

Primary Specific Aims

Phase I – Development

- 1. To further develop, refine, and expand our recently piloted community-based, non-pharmacologic intervention program designed for individuals with paraplegia who have neuropathic (NeuP) *to also serve individuals with nociceptive musculoskeletal pain (NocP-M) and those with tetraplegia.***
- 2. To evaluate the feasibility, acceptability, and impact of the community-based, non-pharmacologic intervention program developed in Aim 1 for individuals with NocP-M and those with tetraplegia.**

PAIN MANAGEMENT PROGRAM

Week 1:

- Introduction/Understanding pain
- Options for managing pain – Benefits of Relaxation

Week 2, 3, 4 :

- Relaxation Classes, 2x/week
- Meditation/Education vs Meditation/Heart-Rate Variability Biofeedback

Weeks, 5:

- Active Pain Coping - Task Persistence, Pacing
- Exercise Benefits and Management Strategies

Week 6:

- Prevention of Shoulder (STOMPS ex) and Back Pain (Seating/Posture Evaluation)

Weeks 7, 8, 9:

- Exercise Classes, 2x/week at Wellness Center

Week 10:

- Review & Set Goals for Future



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Site-Specific Research Project 2021-2026



Pathokinesiology Laboratory

Phase I – Development Methods

- 1. Convene a **Development Team**** for adapting the program to also address nociceptive (Musculoskeletal) pain. This team will include clinicians with expertise in treatment/prevention of shoulder and low back pain in persons with SCI and individuals with paraplegia who have chronic musculoskeletal pain. They will draft the additions to the program.
- 2. A **Beta-Test Team**** of four individuals with paraplegia and chronic musculoskeletal pain will participate in the adapted program and provided feedback to the Development Team.
- 3. We will repeat the process to modify the program to be appropriate for individuals with tetraplegia who have upper extremity weakness to ensure that the modules (primarily exercise) are appropriate or can be adapted for lower levels of upper extremity strength.**



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Site-Specific Research Project 2021-2026



Pathokinesiology Laboratory

Phase II – Randomized Clinical Trial (RCT)

- 1.** To compare changes in pain interference (*our primary outcome measure*) at program end between individuals who enrolled immediately in the pain management program and those who were delayed in enrollment.
- 2.** To compare changes in pain interference between individuals who participate in Meditation+HRVBT compared to those who receive Meditation+Sham Education for the relaxation module.

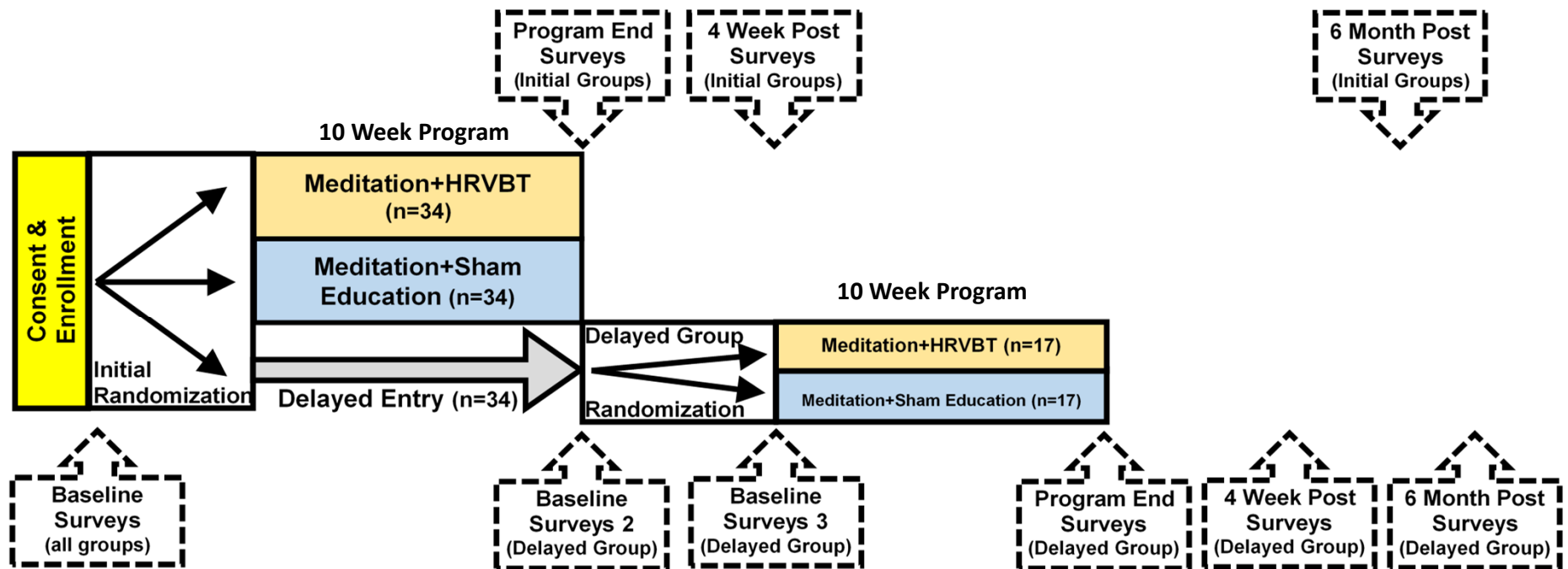


Site-Specific Research Project 2021-2026



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Pathokinesiology Laboratory



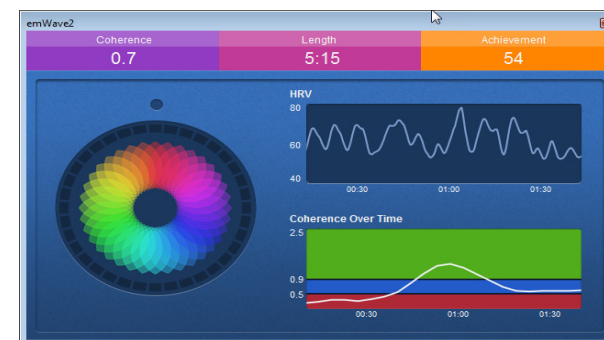
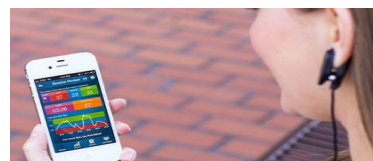
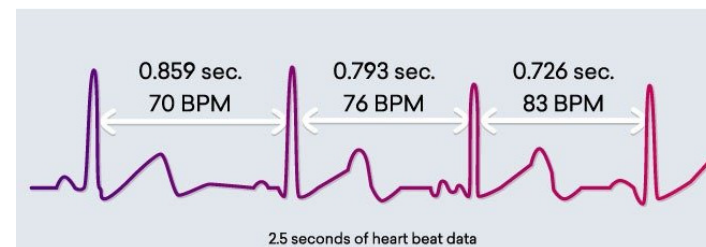
Background

Heart rate variability (HRV) (i.e., variability of R-R intervals of the EKG):

- HR increases during inspiration, slows during expiration (via reflexes linked to respiration)
- Reflects autonomic ns balance: decreased HRV reflects indicates sympathetic drive and/or decreased parasympathetic function
- Associated with stress and various illnesses including chronic pain

HRV biofeedback training (HRVBT): HR recorded with sensor (ear or fingertip), providing real-time HRV feedback with instruction in paced, deep breathing at resonance frequency and positive thoughts to maximize HRV peaks

- Improves vagal HR regulation, reduces anxiety and psychological stress, and used successfully to reduce chronic pain in multiple populations.
- ***Not yet been evaluated as a treatment for chronic pain in the SCI population.***



Outcome Measures

The International Spinal Cord Injury Pain Basic Data Set (ISCI-Pain BDS) questionnaire and recording of HRV at rest and during paced deep breathing conducted at baseline and at program end.

Variables of interest included:

Pain Intensity and Pain Interference scores from the ISCI-Pain BDS

Heart Rate

HRV

SDNN – Standard Deviation of the time between R-R peaks, a measure of

age

Coherence – the synchronization of breathing with heartrate, normalized by

Other measures of the frequency content of HRV

Progress – Phase I

- **Modification/Expansion of 9-Week Pilot Program to 10-Weeks:**
 - New Week 6 - Prevention of Shoulder (STOMPS ex) and Back Pain (Seating/Posture Evaluation)
- **Participant Recruitment:**
 - 4 / 4 - Design Team 1 (Paraplegia, NocP-M)
 - 3 / 4 - Pilot Test Team 1 (Paraplegia, NocP-M)
 - 3 / 4 - Design Team 2 (Tetraplegia, NocP-M and/or NeuP)
 - 2 / 4 - Pilot Test Team 2 (Tetraplegia, NocP-M and/or NeuP)
- **Design Team 1, Meeting #1:** Completed February 24th
 - Program Revision, Based on Feedback: Ongoing – March 28
- **Pilot Test Team 1:**
 - Baseline Evaluations: March 21st – 25th
 - 10-Week Program: March 28th – June 3rd (Feedback with Design Team following Weeks 5 & 10)



SCIMS Database

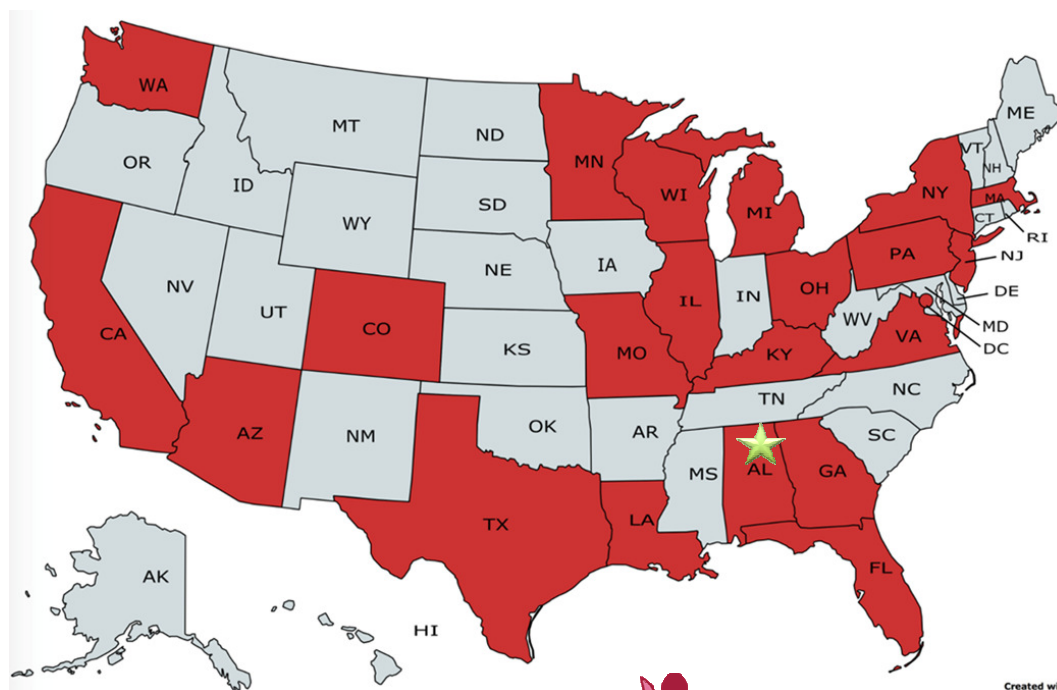
- 1970: First SCIMS center designated in Phoenix, AZ
- Started in 1975 with 10 centers
 - Retrospective data collection back to 1973
- 32 centers have ever contributed data to database

★ National SCI Statistical Center at UAB since 1983

Visit the SCI Model Systems Database:

<https://www.nscisc.uab.edu/>

1970 – 2026: 32 SCIMS Centers
across 21 States and District of Columbia





Scope of Database

Originally, store information on patients with SCI treated at SCIMS centers across the country to demonstrate the efficacy of a comprehensive multidisciplinary care system



Research & Knowledge Translation

- **Trends over time since 1970s**
 - Who (get SCI), How, What
 - Uses: Prevention, health care needs projection, etc.
- **Longitudinal course living with SCI**
 - Physical & psychosocial well-being, life expectancy, costs of care
 - Uses: Knowledge building to improve care & services, set rehabilitation standards, inform policy and best practices, etc.
- **Infrastructure for collaboration**



SCIMS Database Structure



Form I or Registry	Form II
<ul style="list-style-type: none"> • Initial hospital care data • Registry (vs Form I) started in 1986: People residing outside catchment area are enrolled in the Registry, less detailed data collection than Form I, and no longitudinal follow-up data are collected for Registry cases 	<p>Follow-up data obtained currently in post-injury years 1, 5, and every 5 years thereafter</p>



Definition of SCI

- Occurrence of an acute traumatic lesion of neural elements in the spinal canal (spinal cord and cauda equina), resulting in temporary or permanent sensory and/or motor deficit
- **Exclusions:**
 - Intervertebral disc disease
 - Vertebral injuries in the absence of spinal cord injury
 - Nerve root avulsions and injuries to nerve roots and peripheral nerves outside the spinal canal
 - Cancer, spinal cord vascular disease, and other non-traumatic spinal cord diseases

National Spinal Cord Injury Model Sys Database

The National SCIMS Database has been in existence since 1973 and captures new SCI cases in the U.S. Since its inception, 31 federally funded SCI Model Systems have contributed to the National SCIMS Database. As of June 3, 2022, the database contains information on 10,000 individuals who sustained traumatic spinal cord injuries. To assure comparability of information entered into the database, rigid scientific criteria have been established for the collection and reporting of information. National Spinal Cord Injury Statistics Center implements rigorous quality control procedures that further enhance the reliability and validity of the data.

[What Is The National SCIMS Database - 2022](#)

[Using National SCIMS Database - 2022](#)

[Definition and Eligibility](#)

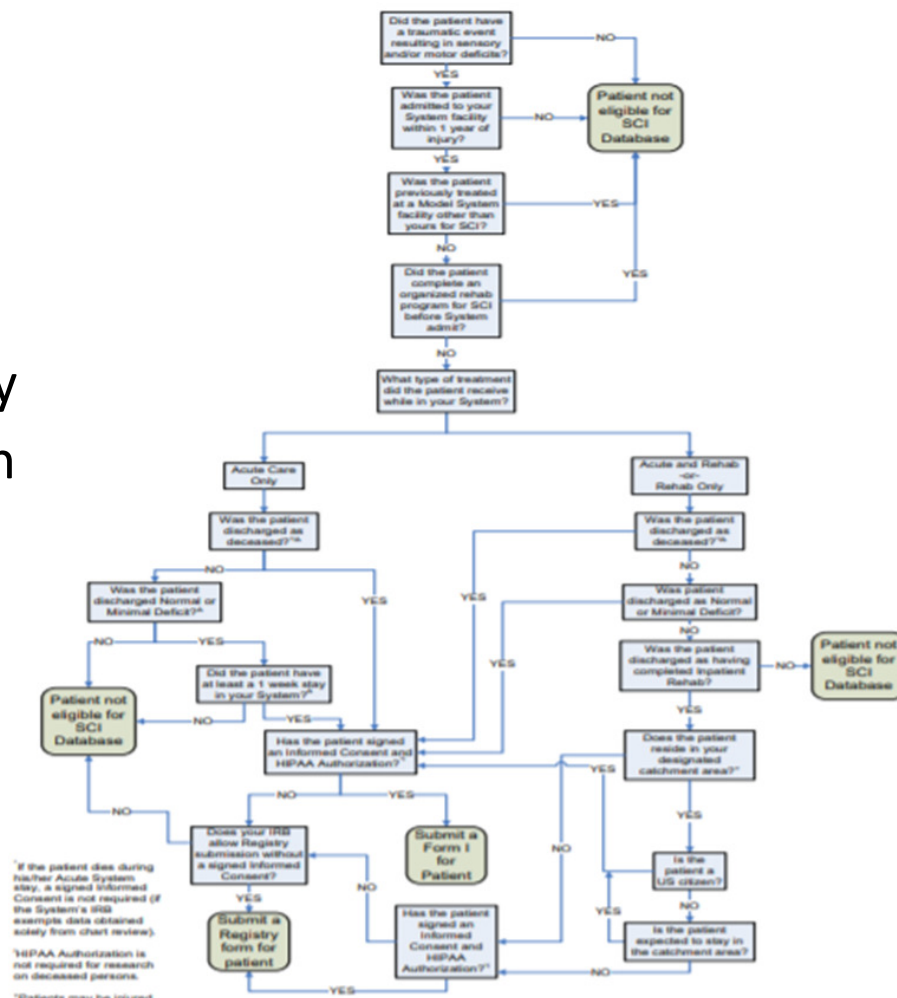
Public De-Identified Data

[Access to De-Identified Data](#)



Eligibility Criteria

- Presence of an external traumatic event (including iatrogenic injury)
- Sensory or motor impairment
- Admission to SCIMS within 1 year of injury
- Not completed an organized rehabilitation program before admission to SCIMS
- Residing in SCIMS' catchment area
- Completed rehabilitation or deceased at discharge





National Database Status as of November 11, 2022

Form	N	Timeframe
Form I	36,275	1972-2022
Form II (not lost)*	130,681	1975-2022
Registry	15,515	1986-2022

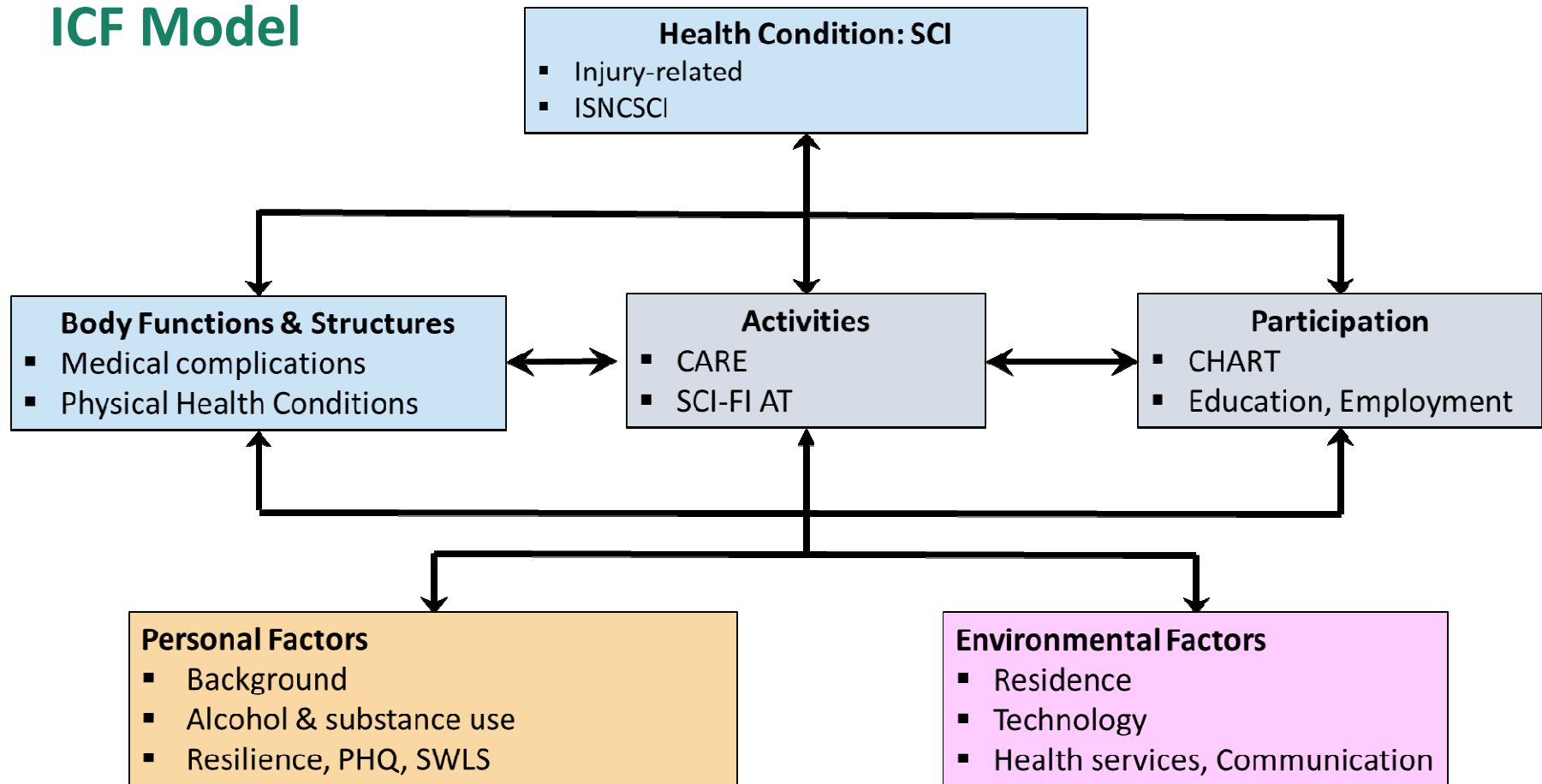


Status	N	%
Deceased	12,562	34.6
Neuro recovery	2,444	6.7
Withdrawn	1,328	3.7
ID Unknown	845	2.3
Eligible-FU	12,461	34.4
Eligible-Lost	6,635	18.3

* Total 30,245 participants;
Longest follow-up, 45 years (n=210)



SCIMS Database Variables: ICF Model





Sources of Data



**Medical
record
review**



**Direct exam: neuro &
weight**

Typically conducted as part of
routine SCI care



**Participants' self-
reports**

Telephone, in-person interview,
online or mailed questionnaire



**Death
records**



Data Quality Assurance

- Data collection guidelines
- Training and technical assistance
- On-site QA every 6 months
 - Form I re-abstraction
 - Data entry accuracy
 - Form II interview coding consistency
 - Form II interviews verification
- Data quality monitoring
- Web-based data management system
 - Software QC error checks
 - Data management tools

Reinforcement

- Data collector's certification
- Site support visit to each center
- Benchmark management plan

Refinement

- Data Committee meeting quarterly
- Project Directors' meeting biannually



Web Resources

What Is The National SCIMS Database - 2022

Using National SCIMS Database - 2022

Definition and Eligibility

Public De-Identified Data



[Access to De-Identified Data](#)

Database Research

Database Publications

Updated July 2022

Approved Data Access Requests

Updated July 2022

Data Collection Forms

SCIMS Data Collection Forms 2021-2026

SCIMS Data Collection Forms 2016-2021

SCIMS Data Collection Forms 2011-2016

SCIMS Data Collection Forms 2006-2011

SCIMS Data Collection Forms 2000-2006

Data Dictionary

Data Dictionary 2016 - 2021

Data Dictionary 2011 - 2016

Data Dictionary 2000 - 2006



[DeVivo Award 2024](#)



[Annual Statistical Report](#)



Fact Sheets, Data Sheets, Reports



Traumatic Spinal Cord Injury Facts and Figures at a Glance



2022 SCI Data Sheet

The Spinal Cord Injury Model Systems was created in 1970 as a prospective longitudinal multicenter study on demographics and the use of services by people with traumatic spinal cord injury in the United States.

This data sheet is a quick reference on demographic and condition statuses for 35,675 persons with SCI. Data were collected through 2021 by federally funded SCI Model Systems and five Form II



Recent Trends in Causes of Spinal Cord Injury



2021 SCI Data Sheet

Vehicular accidents accounted for 2,956 (38.09%) of spinal cord injuries and rank 1st in causes of spinal cord injury.

NSCISC National Spinal Cord Injury Statistical Center

Spinal Cord Injury Model Systems

2021 Annual Report – Complete Public Version



Download our De-Identified Data!

Freely use our data for your own research or projects.

De-Identified Data collected before September 1, 2021 are freely available for download. De-Identified Data are stripped of all HIPAA-defined identifiers, including names, geographic subdivisions smaller than a state, elements of dates (except year) related to an individual, telephone numbers, fax numbers, email addresses, social security numbers, and medical record numbers.

[Download](#)

Just fill out the short form and you'll have access to download.

Version 2021 AR

De-identified data collected before September 1, 2021 are available for request, including during initial hospital care (Form I); data obtained at post-injury years 1, 5, 10, 15, 20, 25, 50 (Form II); and mortality data (Record Status).

Dataset	No. Observations	No. Observations coded as Lost	No. Persons	No. Variables	Data Collection Period
Form I	35,675	NA	35,675	658	1972-2021
Form II	131,217	58,377	32,541*	325	1973-2021
Record Status	35,675	NA	35,675	12	NA

I Medici

Version 2016 AR

De-identified data collected before October 1, 2016 are available for request, including during initial hospital care (Form I); data obtained at post-injury years 1, 5, 10, 15, 20, 25, 30, 35 and mortality data (Record Status).

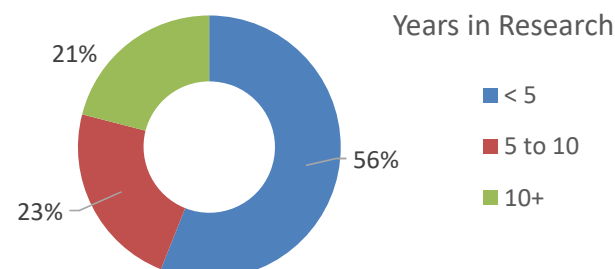
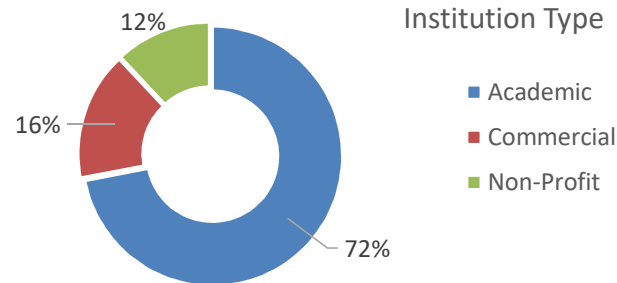
Dataset	No. Observations	No. Observations coded as Lost	No. Persons	No. Variables	Data Collection Period
Form I	32,159	NA	32,159	417	1972-2016
Form II	113,360	52,645	29,202*	276	1973-2016
Record Status	32,159	NA	32,159	12	NA

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Public Data Download

- 258 requests, Dec 2018 – Dec 2022
- Research: Neuro/Motor recovery, Technology use, Quality of life, Cluster analysis, Exploratory, Prediction models, Value based care solutions
- Education: Teaching SCI, Student capstone project, Statistics lecture
- Others: Comparable data, Commercial viability of a new drug



89.2% US

10.8% Other –Australia, Brazil, Canada, China, Czech, Finland, Germany, Iceland, India, Iran, Israel, Japan, Malaysia, Mexico, Romania, Spain, Switzerland, UK



Public Tools

NSCISC National Spinal Cord Injury Statistical Center

Home Database Reports and Stats SCI Model Systems Cultural Competency **Quick Search Tools** FAQ Contact Us

NSCISC Quick Search Public Tools

Causes of SCI

The National Spinal Cord Injury Statistical Center has created this quick search tool to find the leading causes of spinal cord injury over time. You can sort by type of report (full or condensed), multiple timeframes dating back to 1973, race/ethnicity, and gender. The total numbers found on each table are for causes of injury reported by 28 Spinal Cord Injury Model Systems and do not include causes of all injuries that occurred in the US.

Life Expectancy

The National Spinal Cord Injury Statistical Center has created this 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.



SCIMS Database

Strengths

- Long history, longitudinal follow-up, large sample size, and geographic and participant diversity
- Excellent case identification procedures
- Standardization of data collection methods and measures
- Multi-level and comprehensive data quality control procedures

Limitations

- Limited representation: database does not include persons who are never treated at SCIMS centers
- Hospital-based (not population-based) study sample: data not appropriate for incidence and prevalence estimates
- Loss to follow-up issues



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Model Systems Knowledge Translation Center Spinal Cord Injury Resource Inventory

Model Systems Knowledge Translation Center

<http://www.msktc.org/>



A project funded by the National Institute on Disability, Independent Living, and
Rehabilitation Research
(NIDILRR grant number 90DP0082)



Model Systems
Knowledge Translation
Center



MSKTC Goals

Three overarching goals guide the work of the MSKTC:

- **Goal 1:** Enhance the understanding of the quality and relevance of knowledge among researchers and multiple users on the topics of SCI, traumatic brain injury (TBI), and burn injury (Burn).
- **Goal 2:** Enhance the knowledge of advances in SCI, TBI, and Burn research among diverse audience members who need this information.
- **Goal 3:** Create a centralized repository of empirical information and resources on research in SCI, TBI, and Burn areas and actively conduct outreach and dissemination activities to communicate this knowledge.



Spinal Cord Injury Resources

<https://msktc.org/sci/sci-resources>

Factsheets



Slideshows



Hot Topics



Quick Reviews



Videos






Living with Spinal Cord Injury (SCI)

<https://msktc.org/sci>

ALL TOPICS



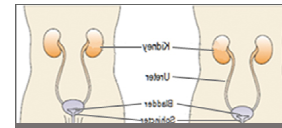
Adjusting to Life



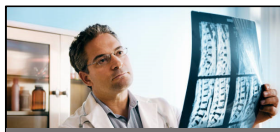
Aging and SCI



Autonomic Dysreflexia



Bladder Management



Bone Loss after SCI



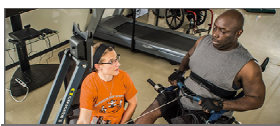
Depression and SCI



Driving after SCI



Employment after SCI




Exercise and Fitness after SCI



Gait Training and SCI



Managing Bowel Function



Managing Pain after SCI



Living with Spinal Cord Injury (SCI)

<https://msktc.org/sci>

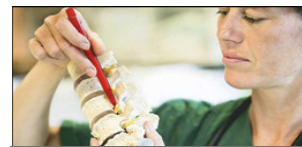
ALL TOPICS



Personal Care Attendants



Pregnancy and SCI



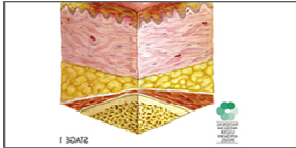
Respiratory Health and SCI



Safe Transfer Techniques



Sexuality after SCI



Skin Care and Pressure Sores



Spasticity and SCI



Surgical and Reconstructive Treatment of Pressure Injuries



Understanding SCI



Urinary Tract Infection and SCI



Wheelchair Information





Major Accomplishments of the SCIMS

- Provides trends in SCI demographics, causes, and severity
 - Crucial for the design of preventive measures
 - Useful for projecting health care needs and allocating resources
- Provides information about the course of recovery, health service delivery and costs, treatment, and rehabilitation outcomes
 - Benchmark for the judicial system to determine awards for life care needs
- Sets standards for the assessment, treatment, and management of persons with SCI nationally and internationally
 - Development of the Clinical Practice Guidelines in collaboration with American Spinal Injury Association and the Paralyzed Veterans of America

Ditunno et al., 2003

Chen et al., 2016



Major Accomplishments of the SCIMS

- Research agenda has broadened from emphasis on acute care to include social determinants of health, physical and psychological functioning, and technology
 - Rapid expansion propelled by consumer involvement and advances in research methodology
- Clinical excellence of the SCIMS provided the foundation from which clinical research focusing on key issues about the health of persons with SCI grew dramatically in the last five decades
 - Development of new measurement tools to capture neurological, psychosocial, and emotional functioning

Ditunno et al., 2003

Chen et al., 2016



Major Accomplishments of the SCIMS

- National SCI Database—the largest and longest in the world
 - The SCI statistics have been widely used and referenced
 - Google search for “SCI statistics”—NSCISC website ranked first
- Produced specific life-expectancy estimates for court cases in the United States and also countries outside the United States, such as Canada, Australia, England, Scotland, Northern Ireland, Ireland, and Hong Kong





תודה
Dankie Gracias شكراً
Спасибо Merci Takk
Köszönjük Terima kasih
Grazie Dziękujemy Dékojame
Ďakujeme Vielen Dank Paldies
Kiitos Täname teid 谢谢
Thank You Tak
感謝您 Obrigado Teşekkür Ederiz
Σας ευχαριστούμε 감사합니다
Bedankt Дěkujeme vám
ありがとうございます
Tack