National Database: 2024 Profile of Adults Included in the Burn Injury Model System

This factsheet is a quick reference on demographics, length of hospital stay, and the health and well-being of adults with burn injury.

The data in this factsheet are from the Burn Injury Model System National Database, a prospective, longitudinal, multicenter research study that examines functional and psychosocial outcomes following burns. Researchers collect data at 6 months, 12 months, 24 months, and every 5 years after injury.

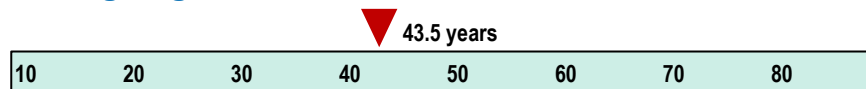As of January 2024, the database included information on 4,918 adults aged 18 and older with burn injury. For more information, visit https://msktc.org/burn.

The majority of individuals in the database are men and White/Caucasian.

Demographics at Time of Injury

Sex

Women 26.8%	Men 73.2%

Average Age

▼ 43.5 years

10	20	30	40	50	60	70	80

Average Age by Gender

Women 45.7 Years

Men 42.7 Years

Race/Ethnicity

- American Indian/Alaska Native, 2%
- Native Hawaiian or Other Pacific Islander, 1%
- Black or African American, 15%
- Asian, 2%
- Caucasian (White), 77%

- Hispanic or Latino, 14%
- Not Hispanic or Latino, 86%
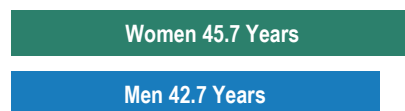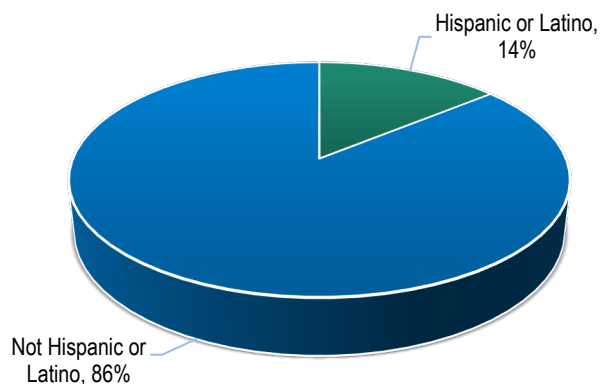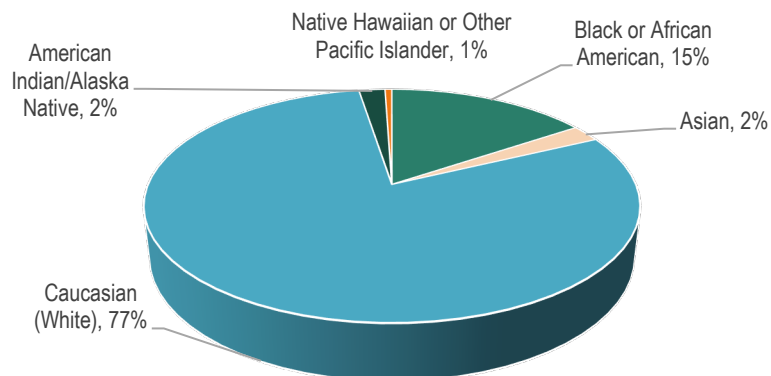
The most common cause of burn is fire or flame.

Cause of Burn Injury

Electricity, 6%
Other burn, 6%
Chemical, 2%
Grease, 10%
Hot object, 5%
Scald, 11%
Fire/flame, 60%
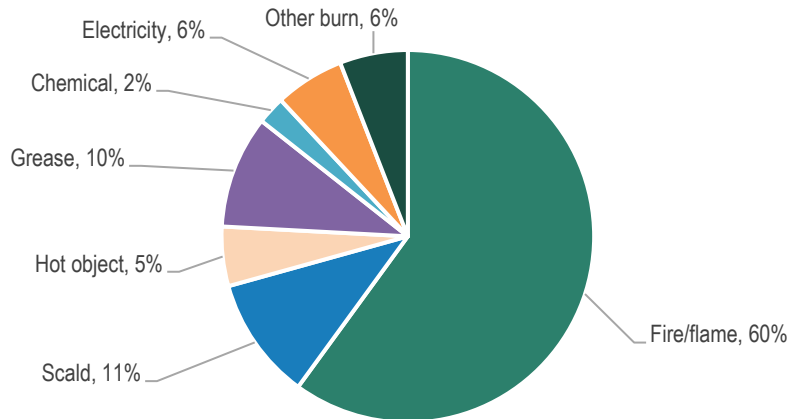
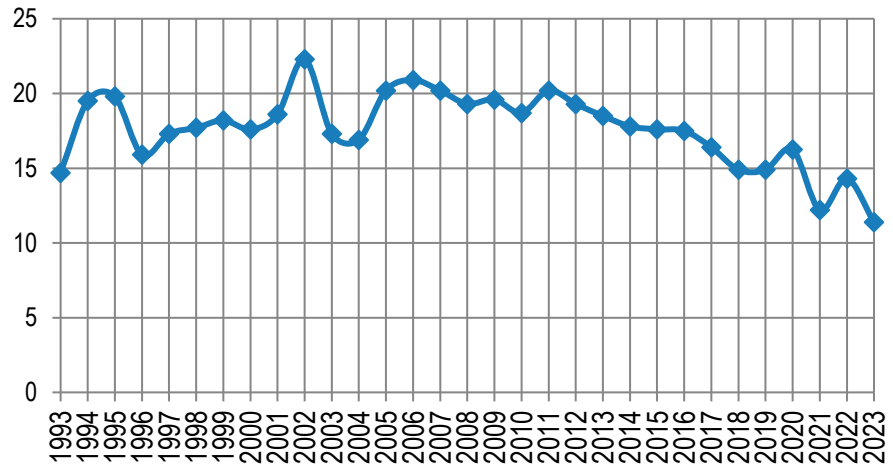*The yearly average total body surface area burned for adults varies and has ranged from 11% to 22% since 1993.*
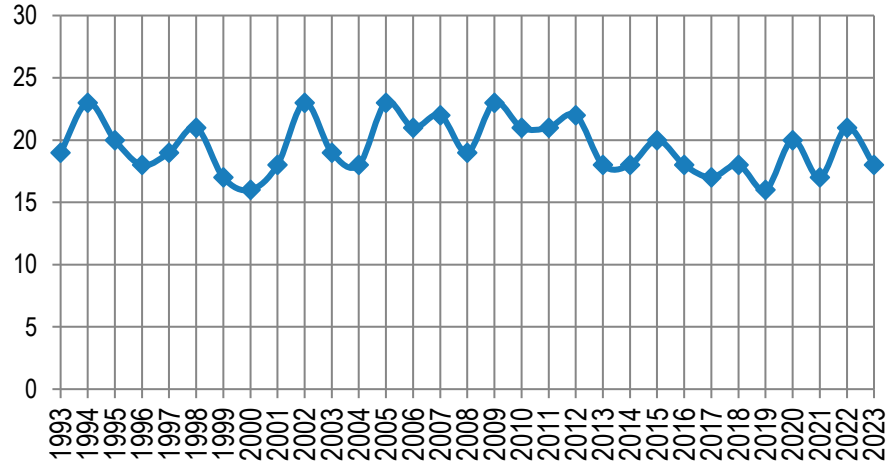
Extent of Injury

Total Mean Percentage of Body Area Burned

The yearly median length of stay in the hospital has ranged from 16 to 23 days since 1993.

Median Length of Stay in the Hospital

BURN MODEL SYSTEM
BMS
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Mental and physical health is lowest for people at the time of discharge from the hospital. Both physical and mental health improve over time; however, mental health scores change very little in general.

The PROMIS© Global Health is a set of questions that clinicians ask patients to understand how they are doing physically and mentally. Possible scores range from 0 to 100, and higher scores mean better health. The average mental and physical health score across the U.S. population is 50.0. The BMS moved from the SF-12 to the VR-12 in 2015 and to the PROMIS Global in 2022. The VR-12 and SF-12 scores were converted to PROMIS Global scores.

The BMS National Data and Statistical Center currently supports the four model system sites funded by the National Institute on Disability, Independent Living, and Rehabilitation Research (NIDILRR) shown below:*

Boston-Harvard Burn Injury Model System, Boston, MA

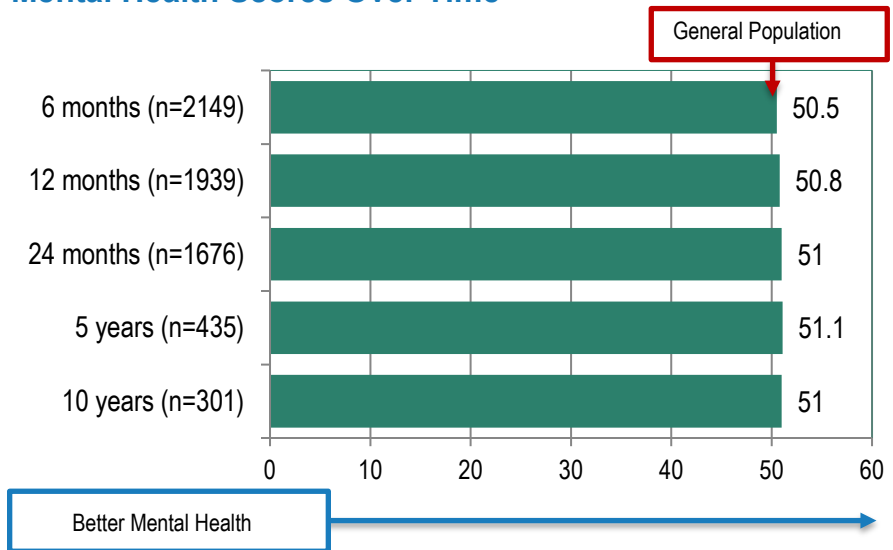North Texas Burn Rehabilitation Model System, Dallas, TX

Southern California Burn Model System, Los Angeles, CA

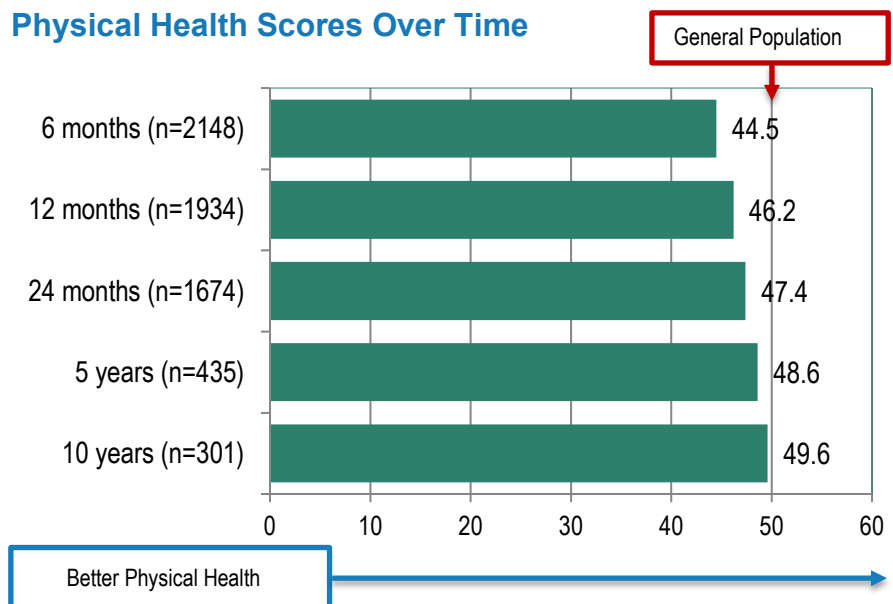Northwest Regional Burn Model System, Seattle, WA

*Johns Hopkins Burn Model System in Baltimore, Maryland, was funded from 1993 to 2012; the Pediatric Burn Injury Rehabilitation Model System, in Galveston, Texas, was funded from 1998 to 2022.

Health and Well-Being of People With Burn Injury

Mental Health Scores Over Time

General Population

Time	Score
6 months (n=2149)	50.5
12 months (n=1939)	50.8
24 months (n=1676)	51
5 years (n=435)	51.1
10 years (n=301)	51

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Physical Health Scores Over Time

General Population

Time	Score
6 months (n=2148)	44.5
12 months (n=1934)	46.2
24 months (n=1674)	47.4
5 years (n=435)	48.6
10 years (n=301)	49.6

Better Physical Health →

Source

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