

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

March 2024

<https://msktc.org/burn/factsheets>

BURN Factsheet

This factsheet is a quick reference on demographics, length of hospital stay, and the health and well-being of children 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 the functional and psychosocial outcomes of children following burns. Researchers collect data at 6 months, 12 months, 24 months, and every 5 years after injury.

As of January 2024, the database includes information on 2,407 children (<18 years) with burn injury. For more information, visit <http://www.msktc.org/burn>.

*The majority of children in the database are boys and Hispanic.*

## Demographics at Time of Injury

### Gender



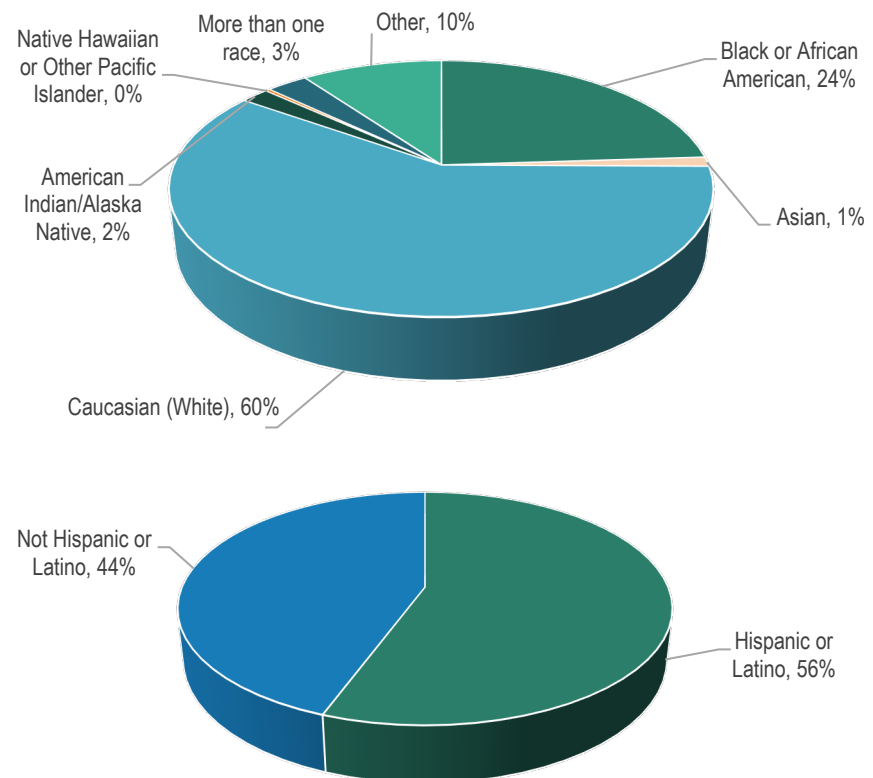
### Average Age



### Average Age by Gender



### Race/Ethnicity



Children are most often burned by fire or flame.

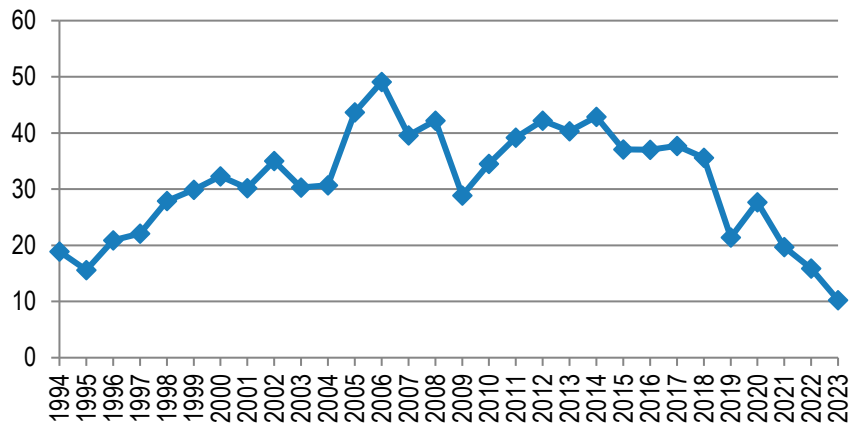
## Cause of Burn Injury

Cause of injury	Number of participants	%
Fire/flame	1,371	58%
Scald	640	27%
Hot object	85	4%
Grease	103	4%
Chemical	7	0%
Electricity	142	6%
Other burn	33	1%
<b>TOTAL</b>	<b>2,381</b>	<b>100%</b>

The yearly average total body surface area burned for children varies and has ranged from 10% to 49% since 1994.

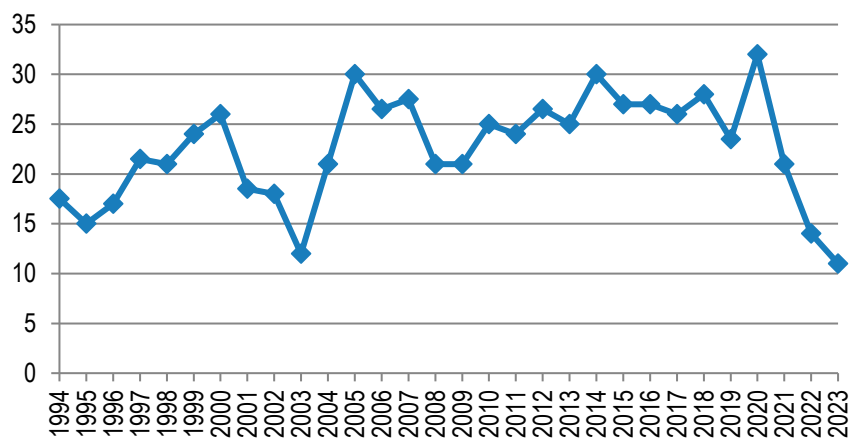
## Extent of Injury

### Total Percentage of Body Area Burned



The median length of stay in the hospital has ranged from 11 to 32 days since 1994.

## Median Length of Stay in the Hospital



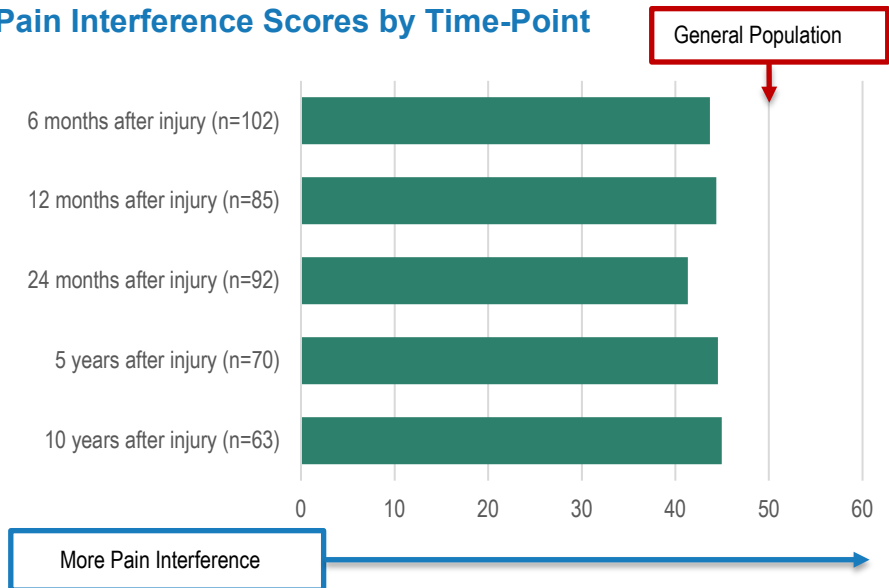
The PROMIS-25 is a measure that assesses pediatric mental and physical health by measuring things like anxiety, depression, and physical function. Scores of 50 on PROMIS-25 domains represent scores in a combined sample of children from the general population and those with chronic illnesses. The BMS began collecting PROMIS-25 data in 2015.

On average, pain does not seem to interfere with activities for pediatric burn survivors.

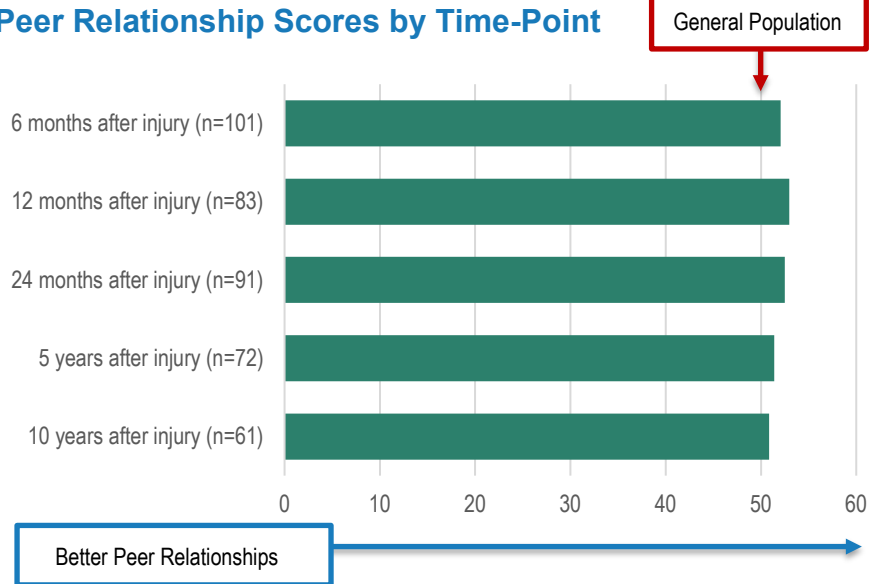
Peer relationships are an important indicator of social health in children and youth. Our sample reports peer relationship scores similar to the PROMIS sample, indicating good relationships with friends and peers in spite of burn injury.

## Health and Well-Being of Children With Burn Injury

### Pain Interference Scores by Time-Point



### Peer Relationship Scores by Time-Point



*Understanding the mental health of children with burn injuries is also important. On average, our sample reports anxiety and depression levels lower (i.e., better) than the PROMIS sample, indicating anxiety and depression are not a big problem for many pediatric burn survivors.*

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

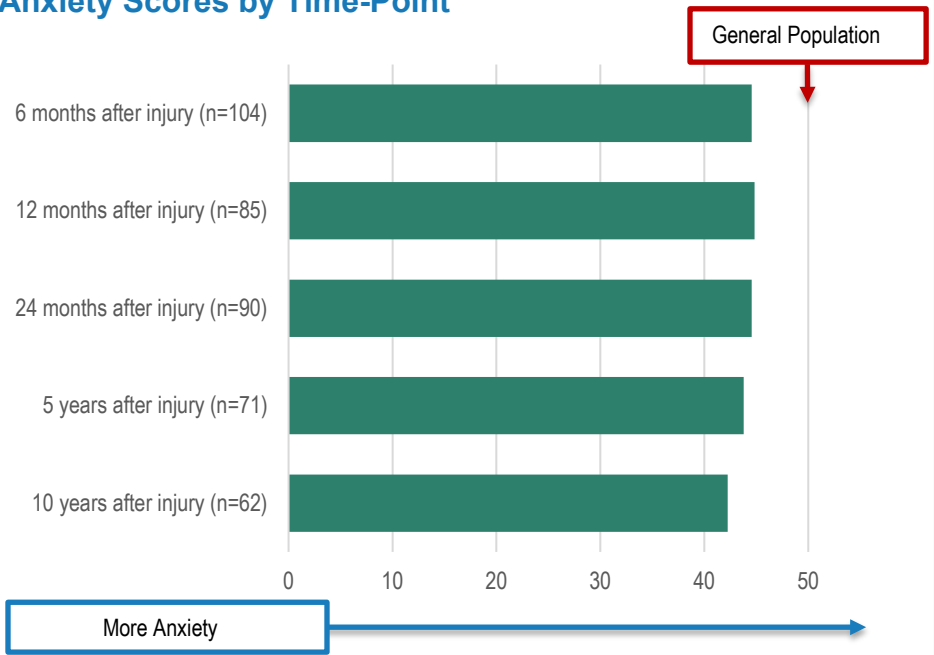
North Texas Burn Rehabilitation Model System, Dallas, TX

Southern California Burn Model System, Los Angeles, CA

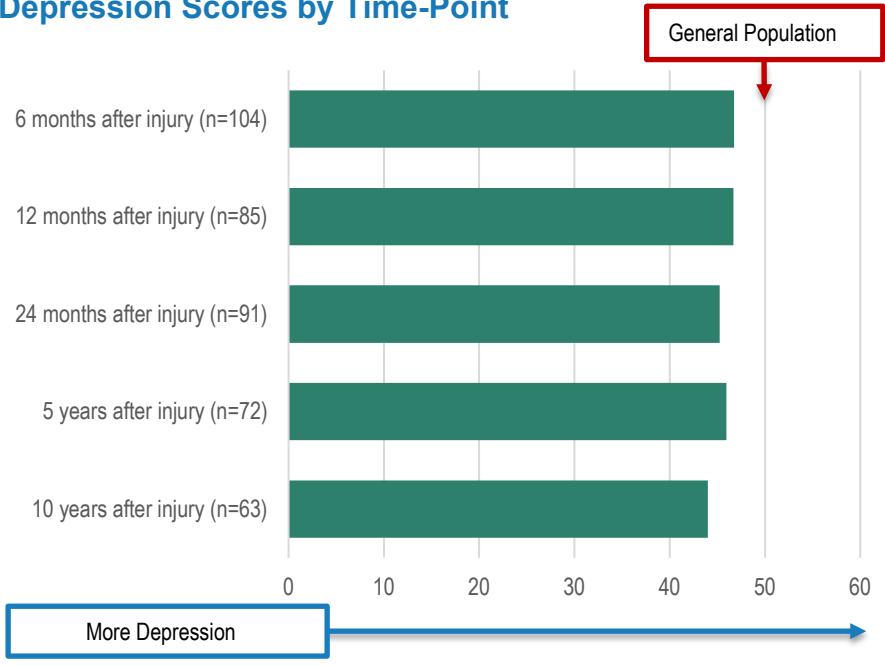
Northwest Regional Burn Model System, Seattle, WA

\*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.

### Anxiety Scores by Time-Point



### Depression Scores by Time-Point



### Source

This is a publication of the Burn Model Systems National Data and Statistical Center, University of Washington, Seattle, WA (Grant Number 90DPGE0004) and the Model Systems Knowledge Translation Center at American Institutes for Research, Arlington, VA (Grant Number 90DPKT0009). Both are funded by the National Institute on Disability, Independent Living, and Rehabilitation Research (NIDILRR), Administration for Community Living, U.S. Department of Health and Human Services, Washington, DC.

