

# National Database: 2023 Profile of Children Included in the Burn Injury Model System

April 2023

<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 multi-center 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 2023, the database included information on 2,386 children (<18) 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



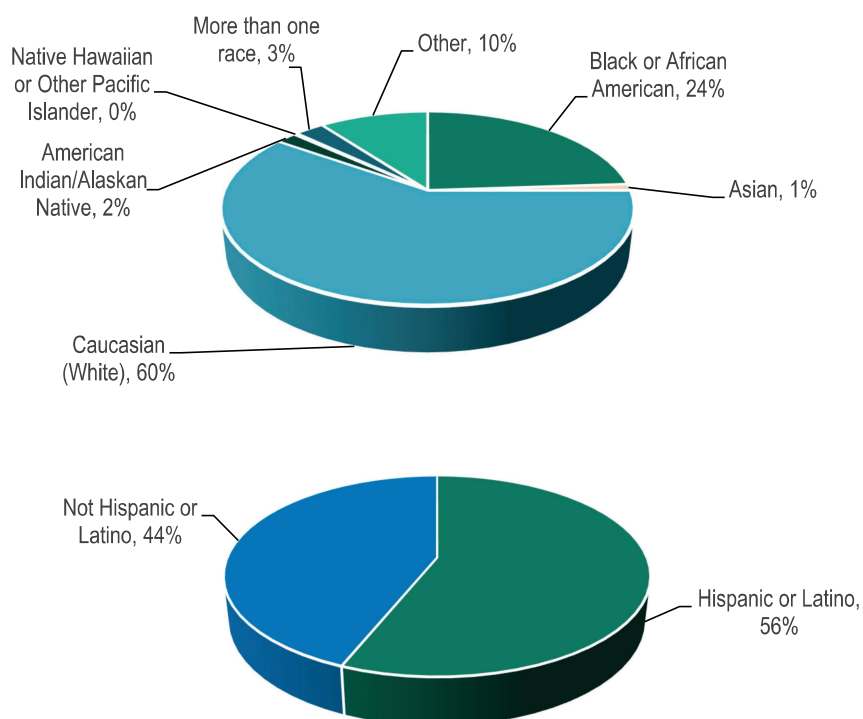
### Average Age



### Average Age by Gender



### Race/Ethnicity



Children are most often burned by fire or flame.

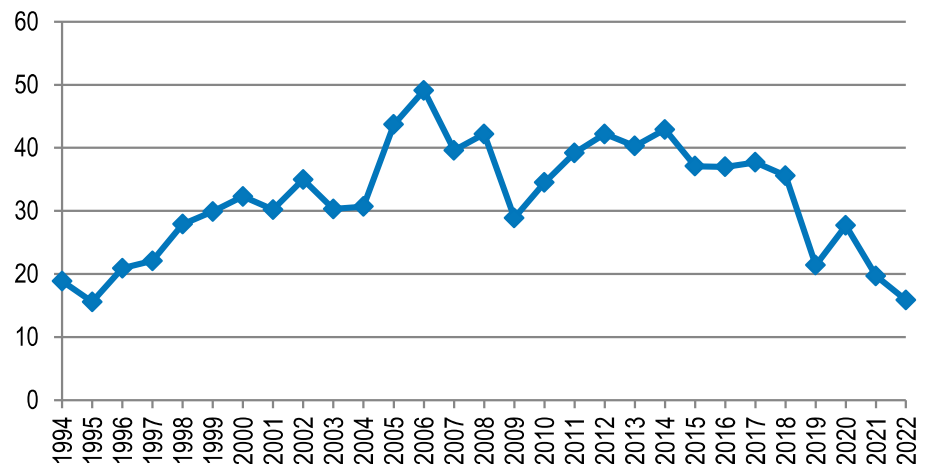
The yearly average total body surface area burned for children varies, and has ranged from 16% to 49% since 1994.

The yearly average length of stay in the hospital has ranged from 16 to 41 days since 1994.

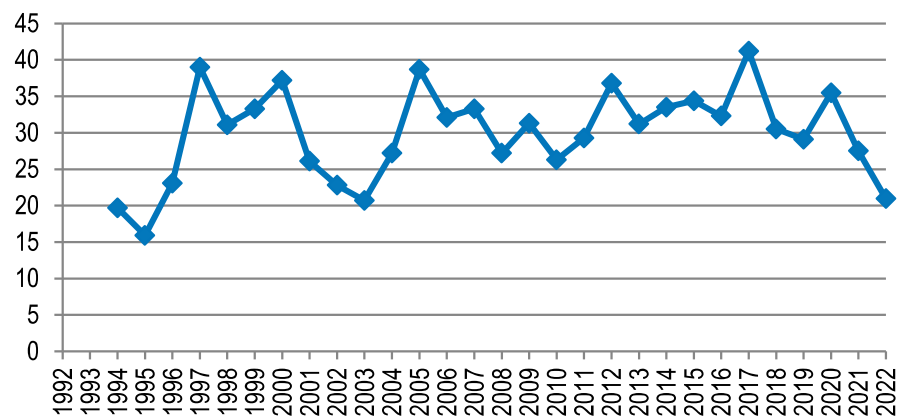
## Cause of Burn Injury

Cause of Injury	Number of Participants	%
Fire/flame	1,363	58%
Scald	632	27%
Hot object	82	3%
Grease	99	4%
Chemical	7	0%
Electricity	142	6%
Other burn	31	1%
<b>TOTAL</b>	<b>2,356</b>	<b>100%</b>

## Extent of Injury: Total Percentage of Body Area Burned



## Average Length of Stay in the Hospital



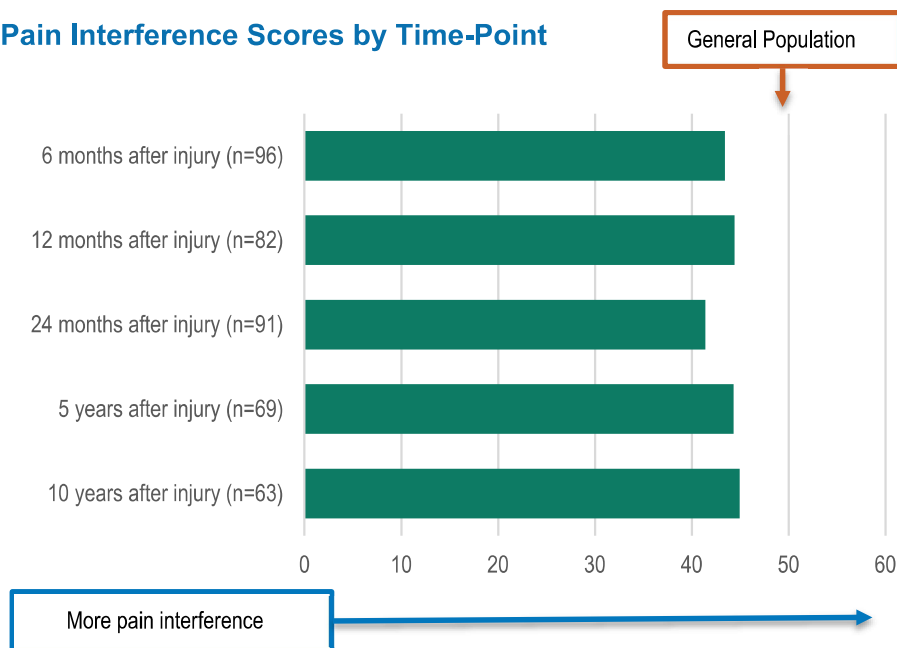
*The PROMIS-25 is a measure that assesses pediatric mental and physical health by measuring things like anxiety, depression, and physical function. Scores of 50 on PROMIS-25 domains represent scores in a combined sample of children from the general population and those with chronic illnesses. The BMS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

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

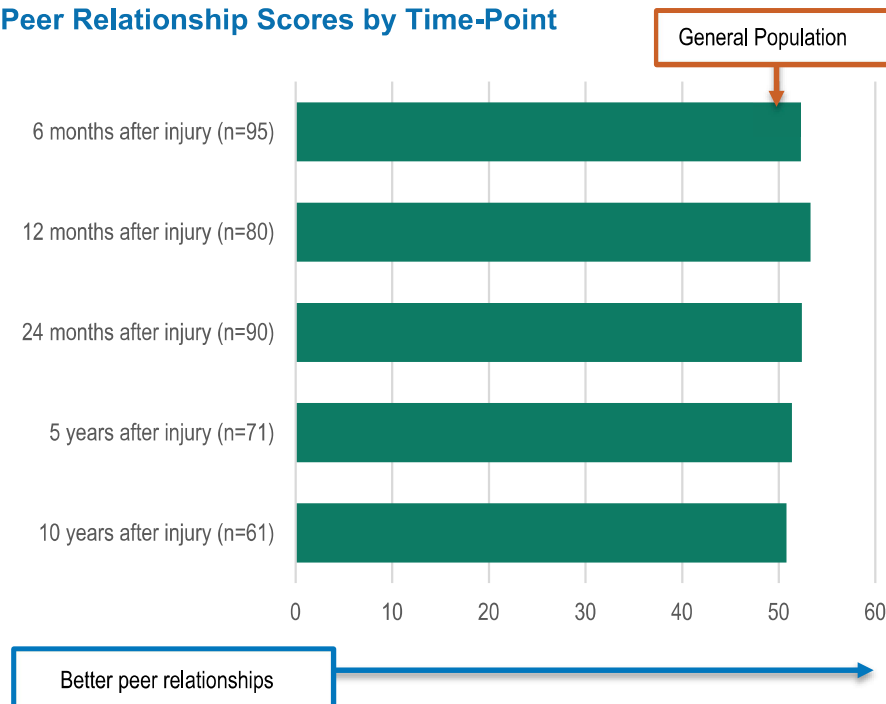
*Peer relationships are an important indicator of social health in children and youth. Our sample reports peer relationship scores similar to the PROMIS sample, indicating good relationships with friends and peers in spite of burn injury.*

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

### Pain Interference Scores by Time-Point



### Peer Relationship Scores by Time-Point



*Understanding 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 & Statistical Center currently supports the four model system sites funded by NIDILRR shown below\*:

Boston-Harvard Burn Injury Model System, Boston, MA

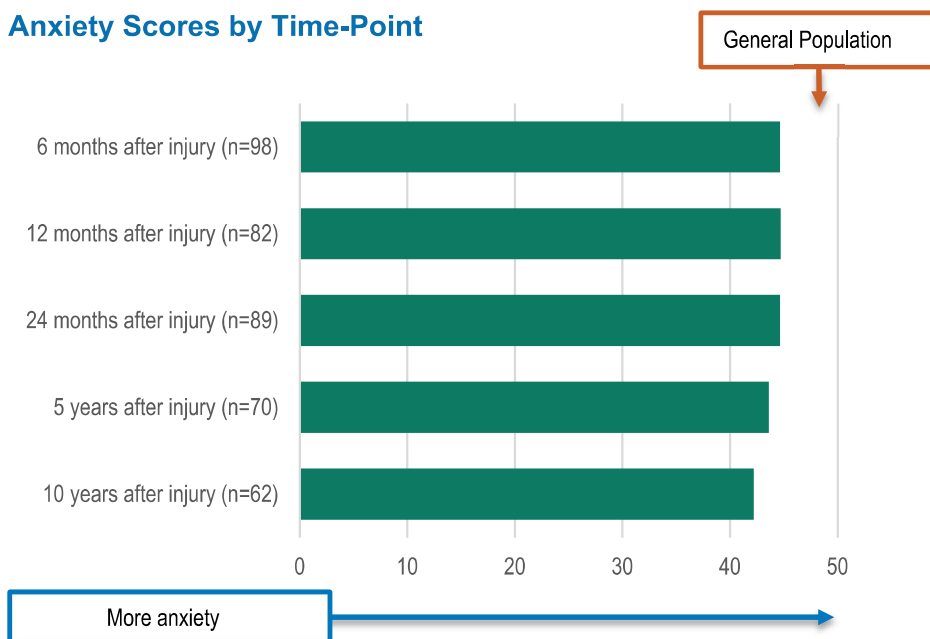
The North Texas Burn Rehabilitation Model System, Dallas, TX

Southern California Burn Model System, Los Angeles, CA

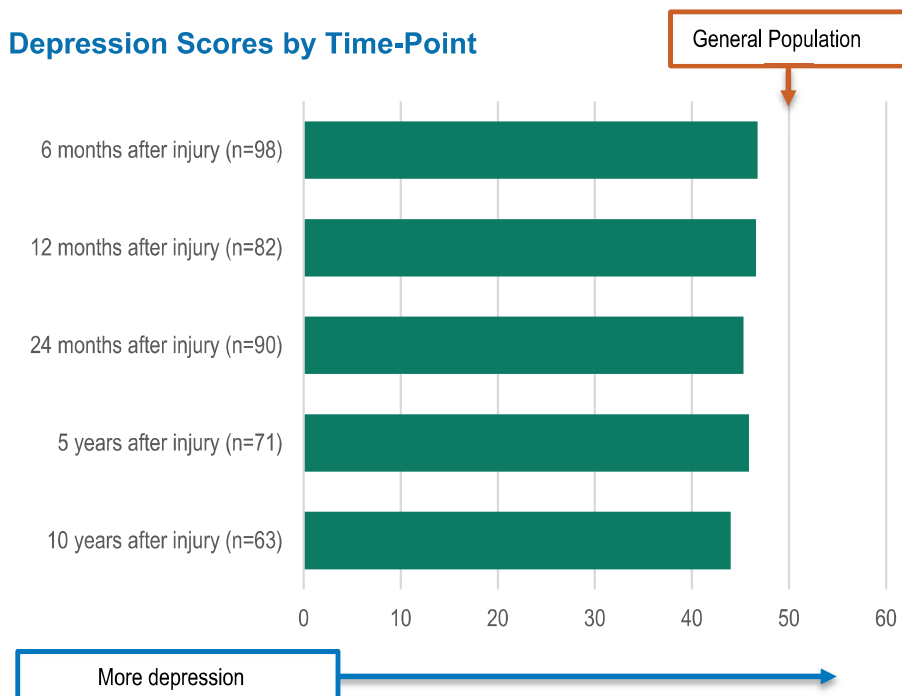
Northwest Regional Burn Model System, Seattle, WA

\*Johns Hopkins Burn Model System in Baltimore, MD, was funded from 1993–2012; Pediatric Burn Injury Rehabilitation Model System in Galveston, TX, was funded from 1998–2022.

## Anxiety Scores by Time-Point



## Depression Scores by Time-Point



## Source

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Model Systems  
Knowledge Translation  
Center