

National Database: 2021 Profile of Children Included in the Burn Injury Model System

January 2022

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 2022, the database included information on 2,349 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



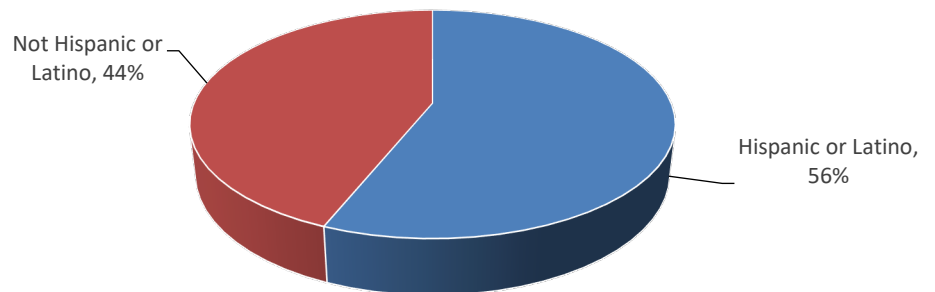
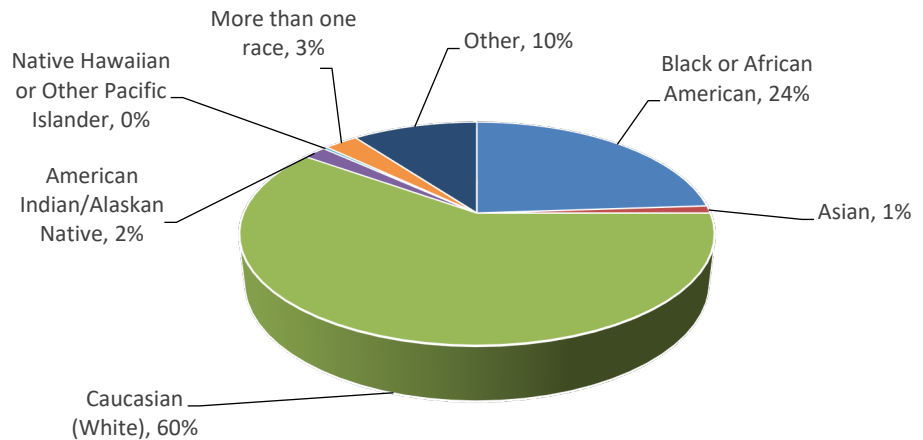
Average Age



Average Age by Gender



Race/Ethnicity



Children are most often burned by fire or flame.

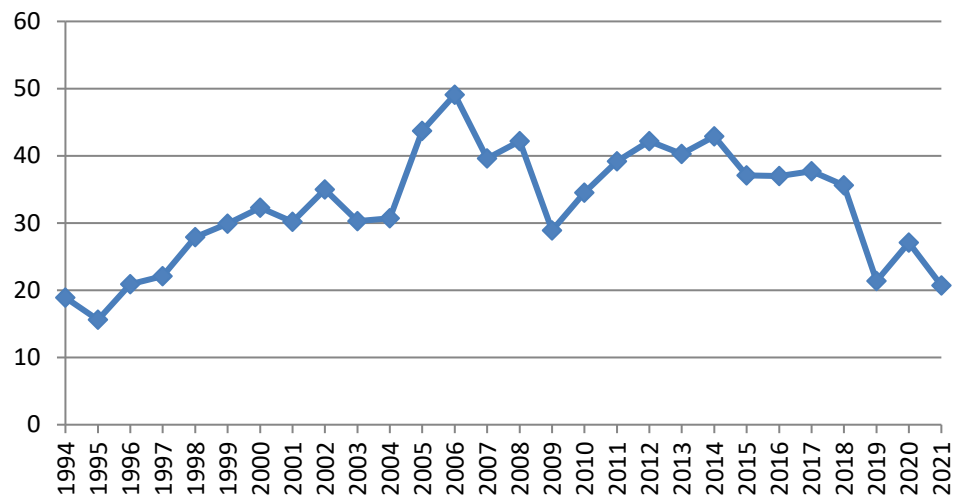
Cause of Burn Injury

Cause of Injury	Number of Participants	%
Fire/flame	1,349	58%
Scald	622	27%
Hot object	79	3%
Grease	94	4%
Chemical	7	0%
Electricity	142	6%
Other burn	30	1%
TOTAL	2,323	100%

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

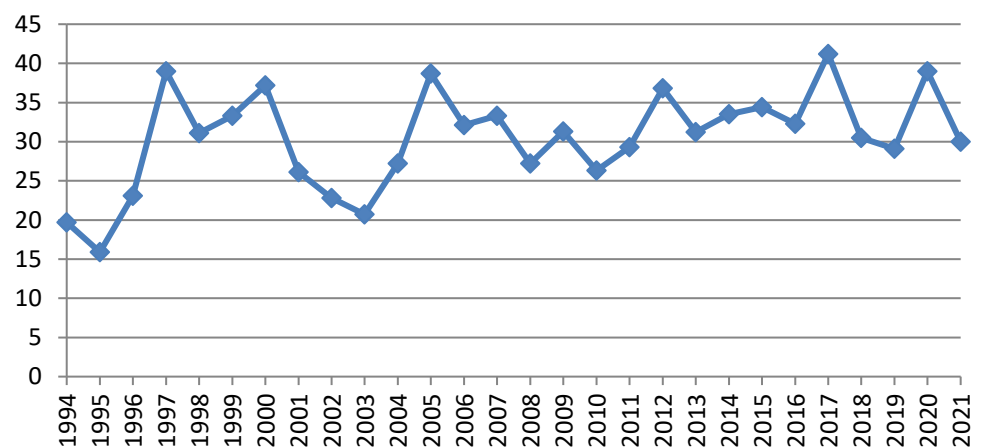
Extent of Injury

Total Percentage of Body Area Burned



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

Average Length of Stay in the Hospital

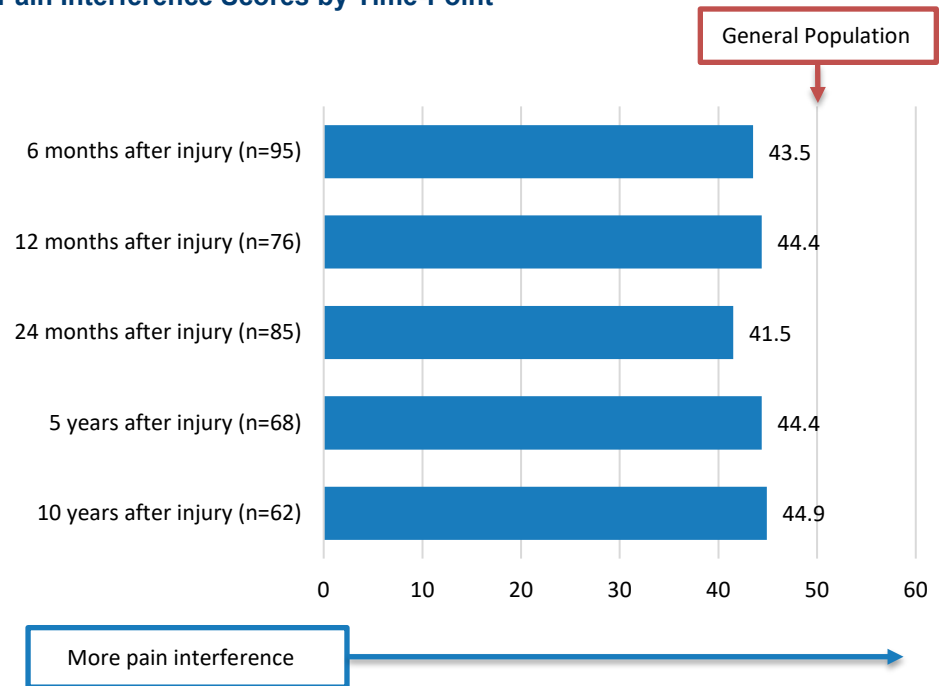


The PROMIS-25 is a measure that assesses pediatric mental and physical health by measuring things like anxiety, depression, and physical function. Scores of 50 on PROMIS-25 domains represent scores in a combined sample of children from the general population and those with chronic illnesses. The BMS began collecting PROMIS-25 data in 2015. On average, pain does not seem to interfere with activities for pediatric burn survivors.

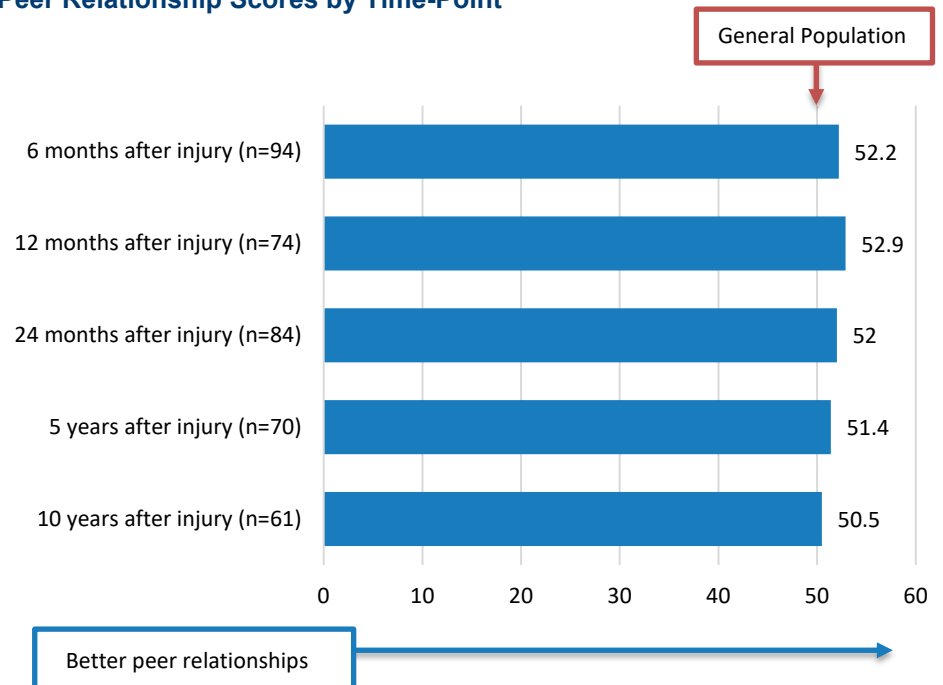
Peer relationships are an important indicator of social health in children and youth. Our sample reports peer relationship scores similar to the PROMIS sample, indicating good relationships with friends and peers in spite of burn injury.

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

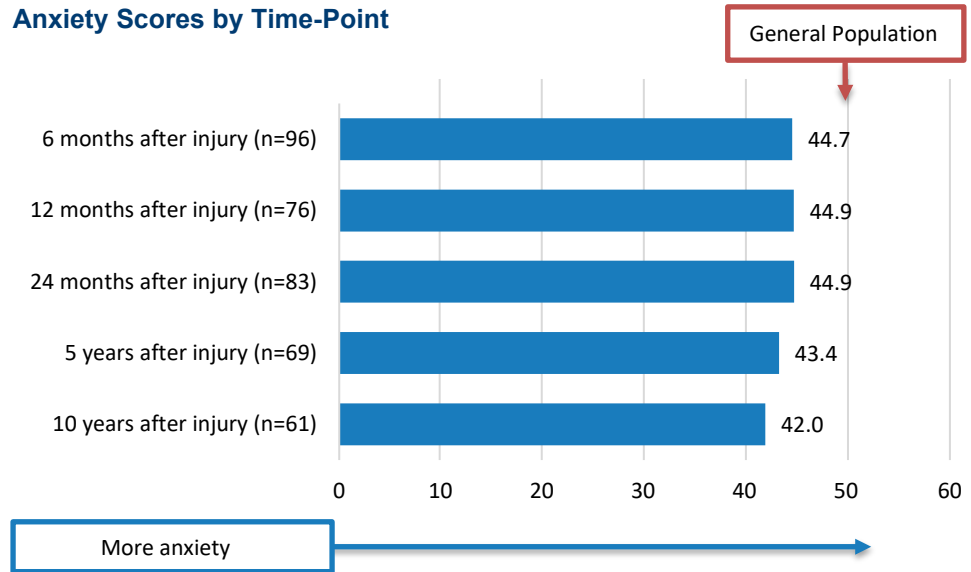
The North Texas Burn Rehabilitation Model System, Dallas, TX

Pediatric Burn Injury Rehabilitation Model System, Galveston, TX

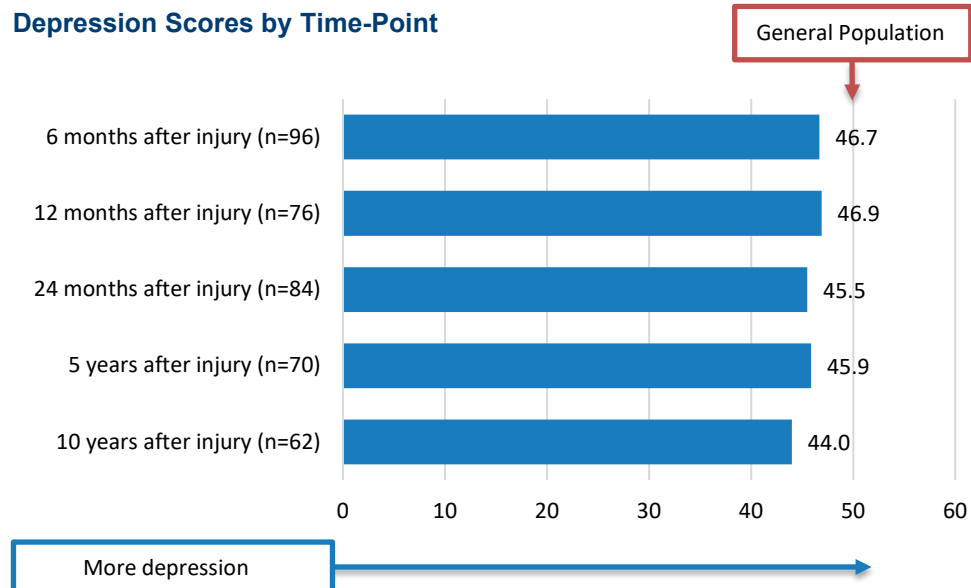
Northwest Regional Burn Model System, Seattle, WA

*Johns Hopkins was funded from 1993–2012.

Anxiety Scores by Time-Point



Depression Scores by Time-Point



Source

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