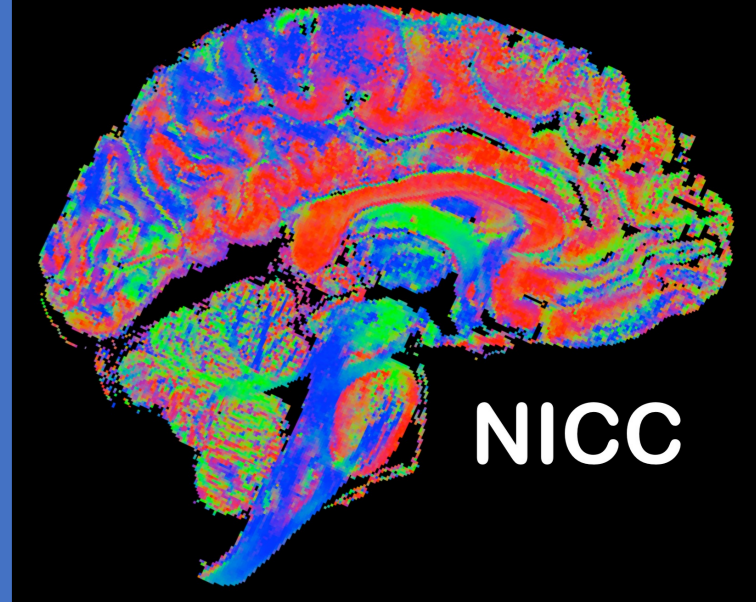


Withdrawal of Life-Sustaining Therapy in Patients with Severe Traumatic Brain Injury (sTBI) in Massachusetts General Hospital Intensive Care Units

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PURPOSE

Characterize MGH patients with acute severe TBI who die after withdrawal of life sustaining therapy (WLST)

INTRODUCTION & BACKGROUND

- 64% of deaths that occur within the first three days after sTBI are due to WLST¹ → high rate despite potential for meaningful recovery²
- Factors such as age, SES, race, and insurance affect WLST rates³
- There are no established guidelines to inform decision making regarding WLST
- Matched cohort study showed WLST after cardiac arrest results in excess mortality⁴

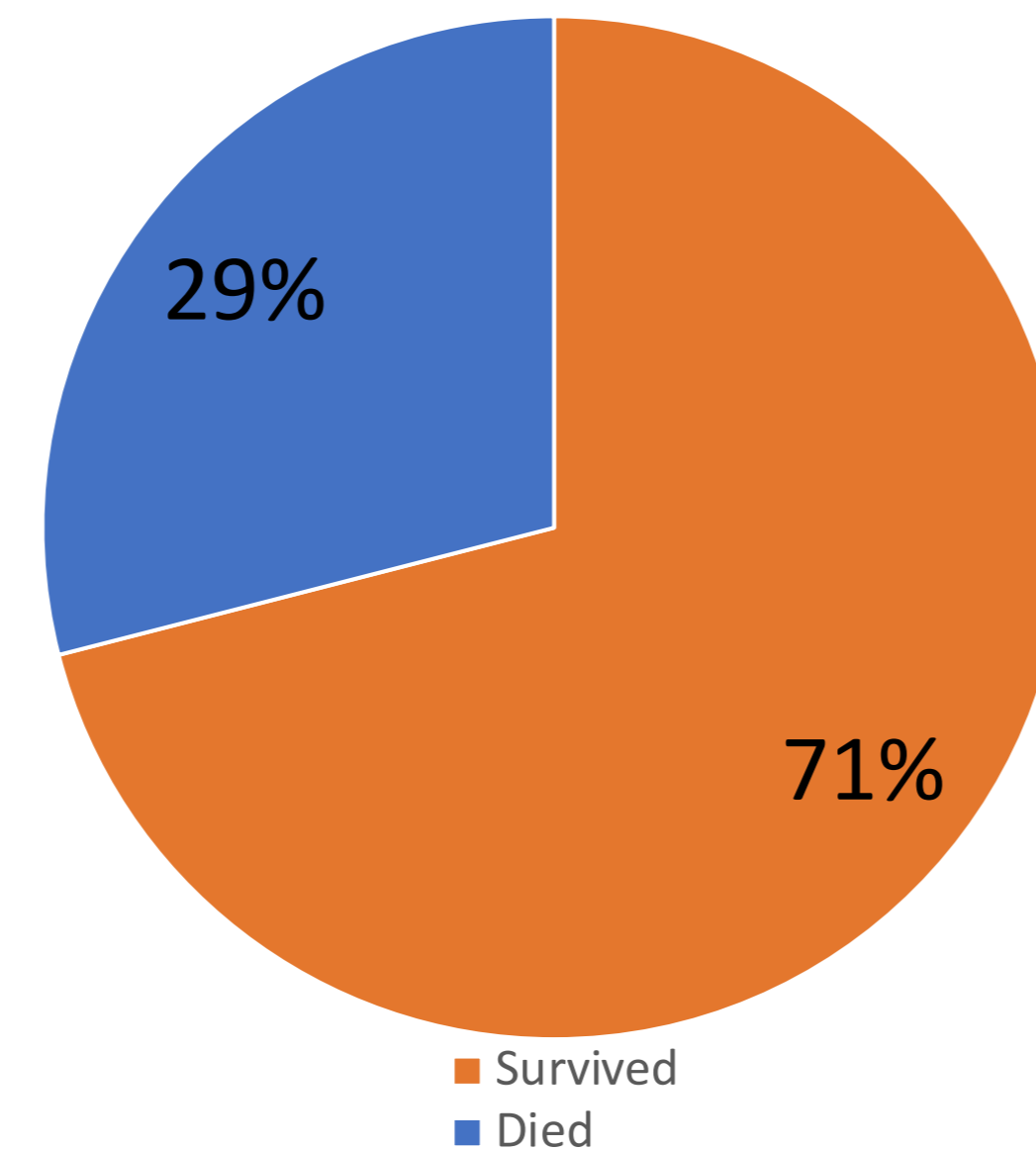
METHODS

- Abstracted data from EPIC into REDCap database
- Inclusion: patients with sTBI admitted to Lunder 6, Ellison 4, Blake 12 from 2016-present (N=1,044)
- Analyzed data on first 133 patients with sTBI (4/2016 – 4/2018).
- Data elements: date of injury, age, gender, Glasgow Coma Scale (GCS) score, TBI mechanism, cause of death, date of death.

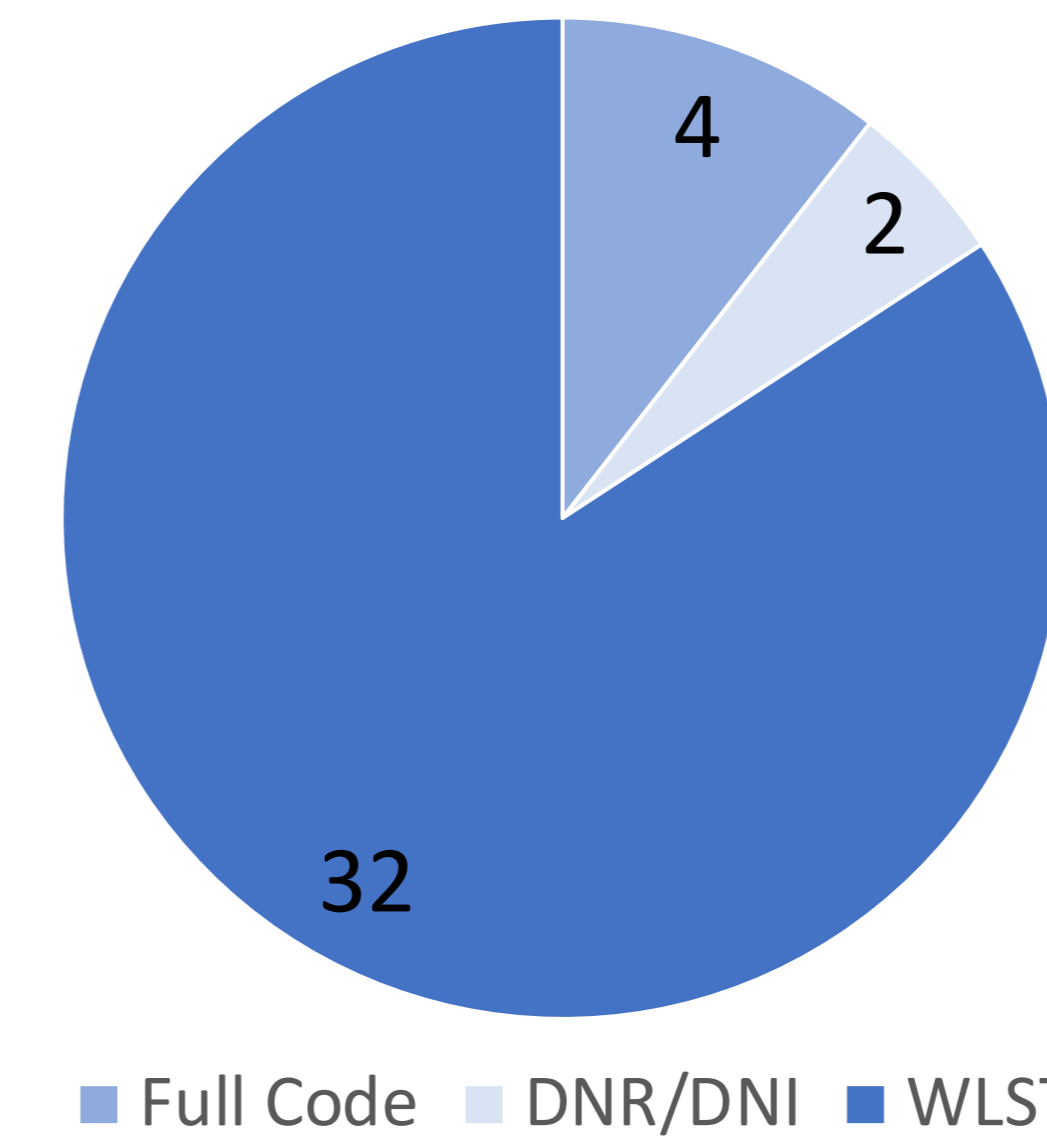


RESULTS

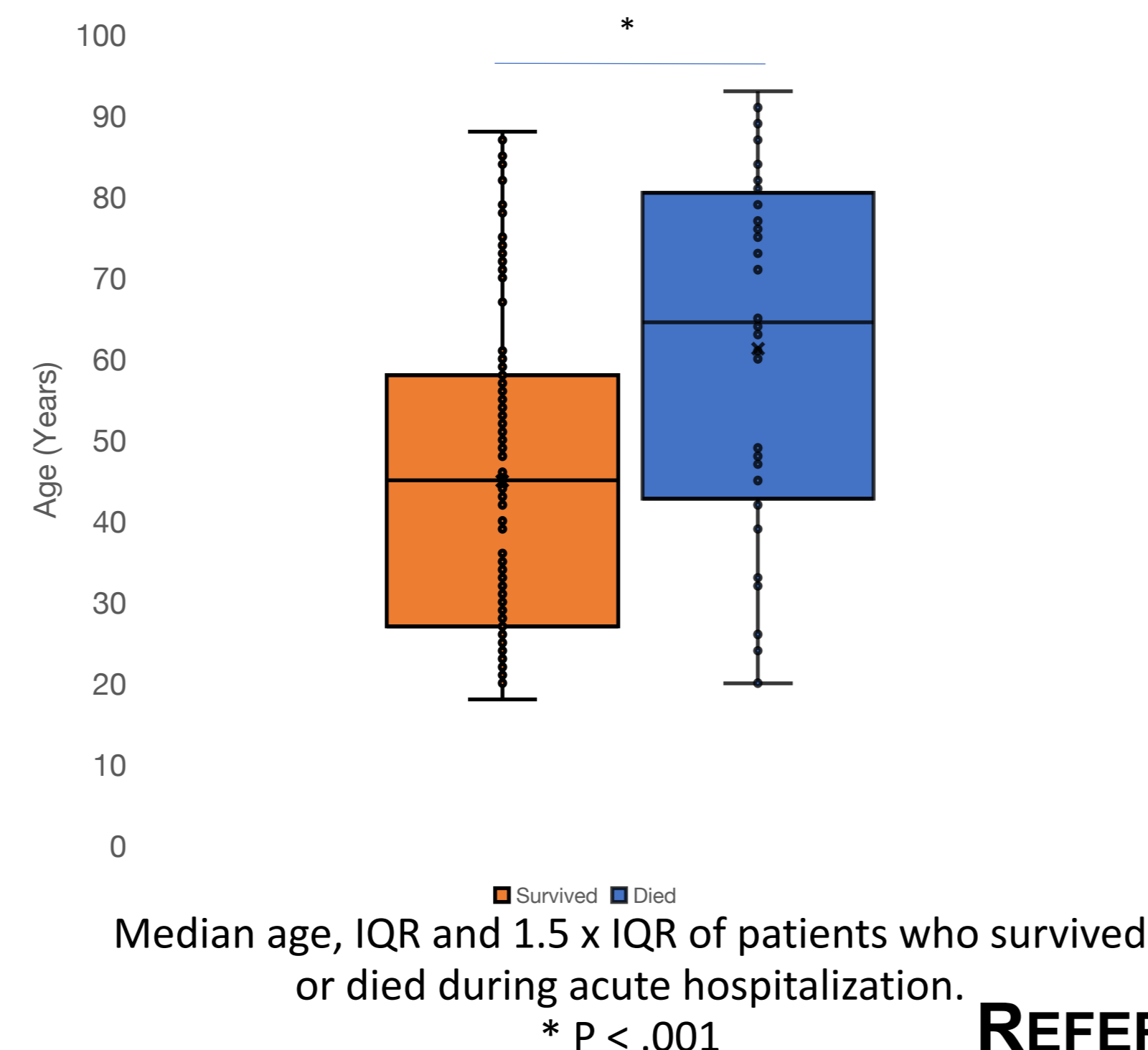
1 Rate of Acute Hospitalization Survival After Severe TBI



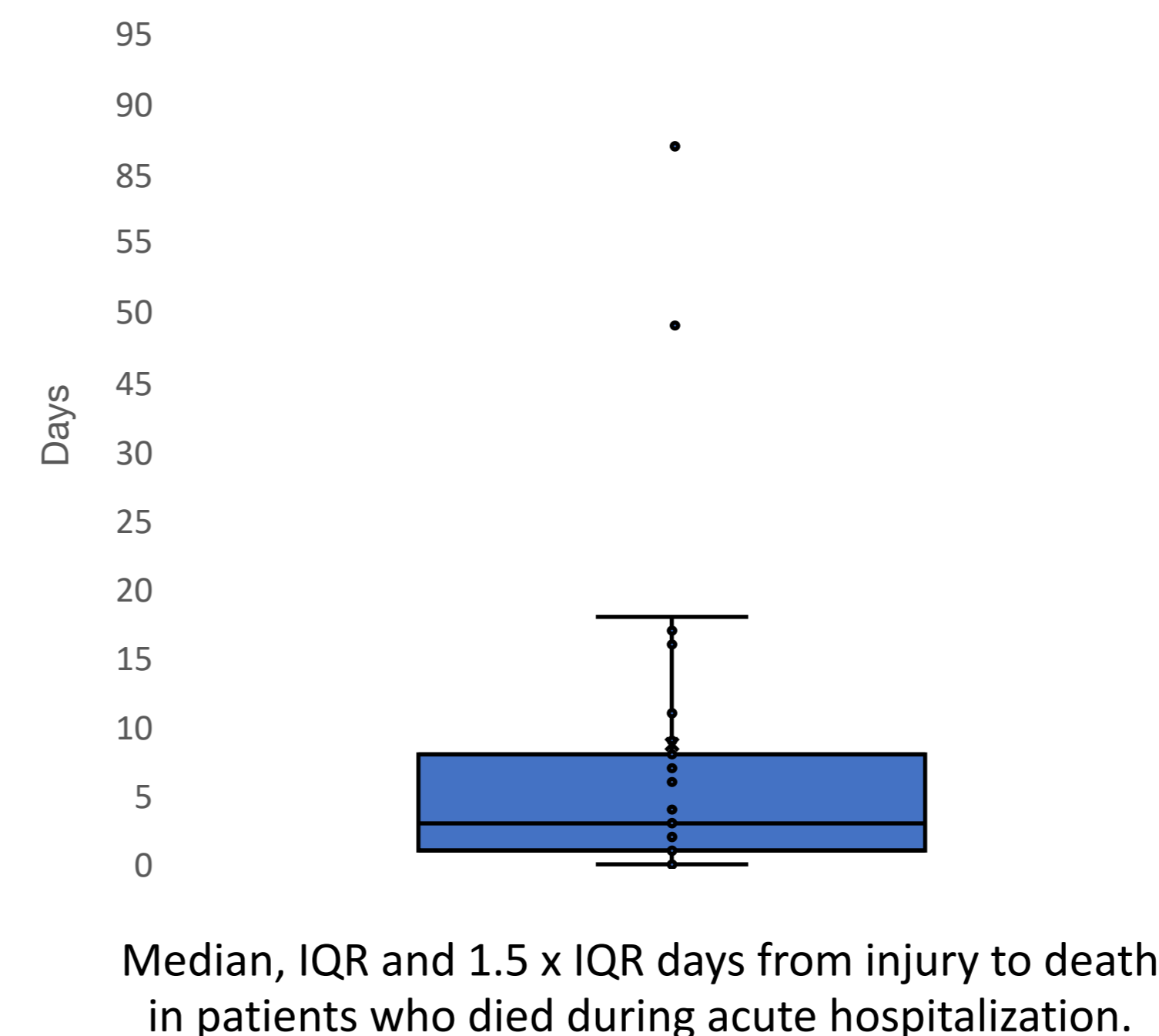
2 Code Status at Time of Death



3 Age of Patients Hospitalized for Severe TBI



4 Days Between Injury and Death



	All Patients (n = 133)	Survived (n = 95)	Died (n = 38)
Age; Median [IQR]	49.0 [28.5-68.5]	45.0 [27.0-58.0]	64.5 [41.3-81.0]
Sex; (% Male)	74.4	75.8	71.1
Highest ICU GCS; Median [IQR], (Range)	14 [7.0-15.0] (3-15)	15 [12.0-15.0] (3-15)	5.5 [3.0-7.0] (3-15)
Cause of TBI; (%)			
Road Traffic	38.3	44.2	23.7
Incidental Fall	40.6	32.6	60.5
Other non-intentional injury	2.3	2.1	2.6
Violence/Assault	12.8	13.7	10.5
Suicide Attempt	4.5	5.3	2.6
Other	1.5	2.1	0.0

CONCLUSIONS & FUTURE DIRECTIONS

- Most patients with sTBI survive hospitalization
- WLST is the most common cause of death for patients with TBI in an MGH ICU
- Age and injury severity may influence decisions about continuation of treatment
- WLST typically occurs within one week of injury

A more nuanced understanding of the potential for recovery after severe TBI and factors influencing WLST is needed.

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