

## Supplemental Material

### *Determination of mechanism of injury categories*

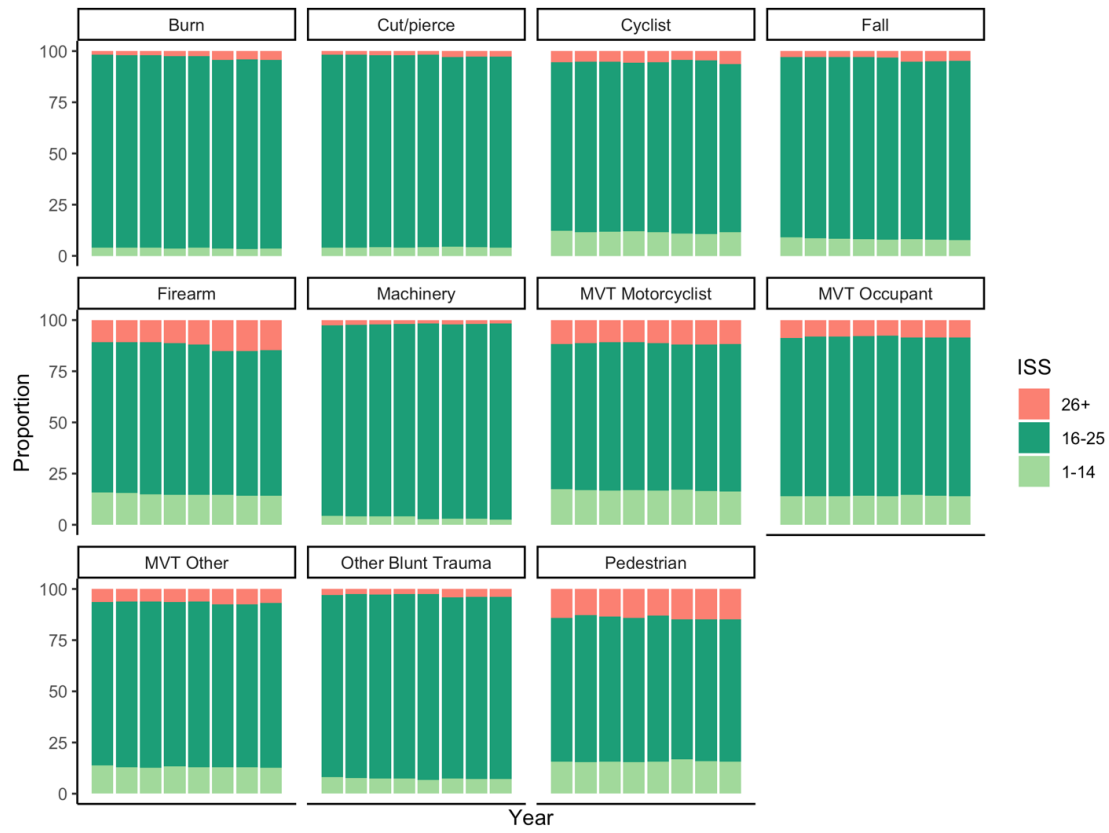
The National Trauma Data Bank<sup>®</sup> (NTDB) is the largest aggregation of trauma registry data in the U.S. and is maintained by the American College of Surgeons (ACS) for the purposes of injury surveillance, hospital benchmarking, research, and quality improvement (1). The NTDB includes patient characteristics, injury data, treatment, and discharge disposition, among other variables, entered by designated and trained data registrars using consistent and established data definitions. Inclusion in the NTDB is based on clinical coding for traumatic injuries. The data are audited as part of the ACS trauma center verification program, which ensures data integrity and quality. Data from the NTDB from 2012-2019 for adult patients 18 years and older were considered for analysis (N=7,555,334). The timeframe 2012-2019 was chosen as it represents a contemporary dataset prior to the onset and subsequent influence of the COVID-19 pandemic. Only traumatic injuries were extracted, defined as injuries sustained from a physical force outside the body, and designated by International Classification of Disease (ICD) external cause codes. ICD-9 codes were used from 2012-2015, and ICD-10 codes were used from 2016-2019. MOI and intent of injury were determined according to categories outlined in respective ICD injury matrices (2).

There were 16 MOI categories designated as “traumatic”: cut/pierce, fall, fire/flare, firearm, hot object/substance, machinery, MVT motorcyclist, MVT occupant, MVT other, MVT pedal cyclist, MVT pedestrian, MVT unspecified, Pedal cyclist other, pedestrian other, struck by/against, transport other. The 11 MOI categories included in the current analysis were obtained by condensing fire/flare and hot object/substance into “burn”; MVT pedestrian and pedestrian other were condensed into “pedestrian”; MVT pedal cyclist and pedal cyclist, other were

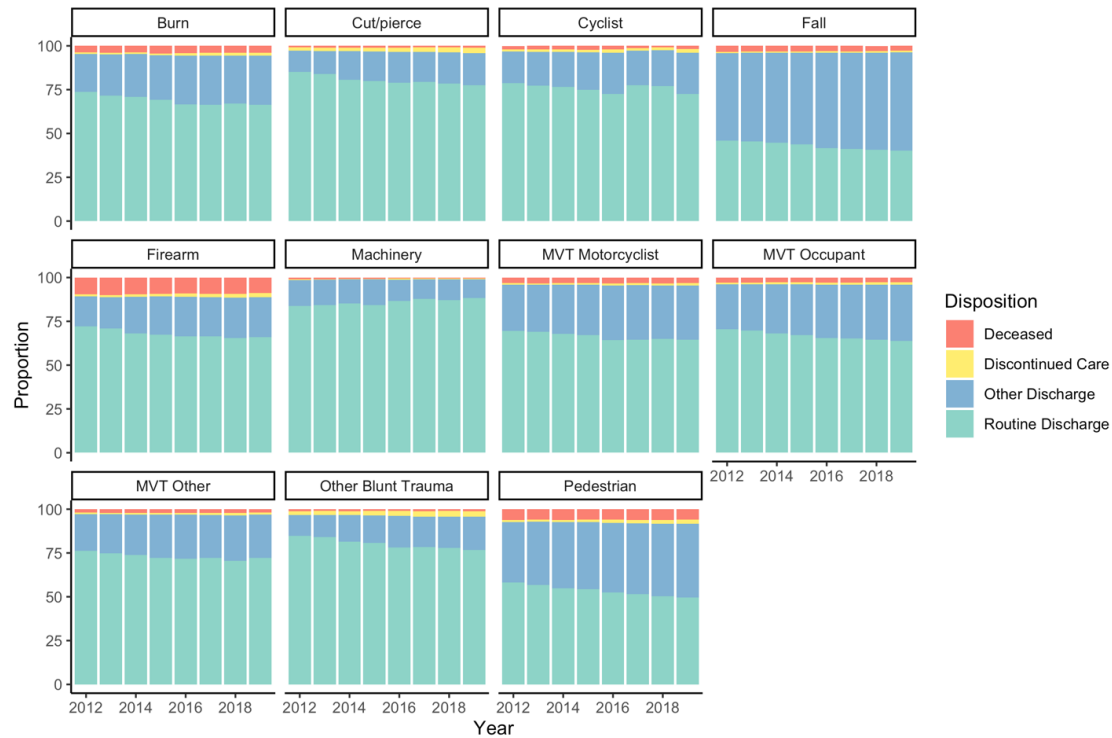
condensed into “cyclist”; MVT other, MVT unspecified, and transport other were condensed to “MVT other”. Finally, the category struck by/against was simply renamed “other blunt trauma” to distinguish it from other categories. Categories were condensed to ease interpretation of general trends.

The following MOIs were deemed non-traumatic, according to our definition above, and were excluded from analysis: adverse drug effects, adverse medical care effects, drowning/submersion, natural/environmental bites and/or stings, other specified, overexertion, poisoning, and suffocation.

Supplemental Figure 1. Injury severity scores over time by mechanism of injury.



*Supplemental Figure 2.* Proportion of injuries over time stratified by hospital disposition and mechanism of injury. Routine discharge indicates patients were discharged to home or self-care. Other discharge entails discharged from trauma center to continued care (e.g. outpatient facility, rehabilitation hospital, etc.).



### Supplemental References

1. American College of Surgeons (2021): National Trauma Data Bank: NTDB Research Data Set Admission Years 2012-2019. *Am Coll Surg*. Retrieved from <https://www.facs.org/quality-programs/trauma/quality/national-trauma-data-bank/>
2. Centers for Disease Control and Prevention (2021): *ICD Injury Codes and Matrices*. Retrieved from [https://www.cdc.gov/nchs/injury/injury\\_matrices.htm](https://www.cdc.gov/nchs/injury/injury_matrices.htm)