

## Methods Explained:

1. **Abbreviated Injury Score (AIS):** an anatomically based injury severity scoring system that classifies each injury by body region on a 6-point scale (minor to unsurvivable).
  - a. Body region breakdown:

AIS Numerical Descriptor	AIS Section Descriptor	Body Regions Included
1	Head	Cranium, brain
2	Face	Eye, ear, lips
3	Neck	Neck, throat
4	Thorax	Thoracic contents, including rib-cage
5	Abdomen/Pelvic Contents	Abdominal/pelvic organs
6	Spine	Spinal column/cord
7	Upper extremities	Upper limbs including shoulder
8	Lower extremities	Lower limbs including pelvis
9	External	Integumentary system, including burns

**Reference:** Abbreviated Injury Scale (AIS) - Overview [Internet]. Association for the Advancement of Automotive Medicine. 2019 [cited 12 October 2020]. Available from: <https://www.aaam.org/abbreviated-injury-scale-ais/>; Morris, Andrew & Barnes, Jo & Fildes, Brian & Bentivegna, Fulvio & Seyer, Keith. (2020). Effectiveness of ADR 69: a case-control study of crashed vehicles equipped with airbags.

2. **Injury Severity Score (ISS):** injury severity score that assesses the combined effects of multiple-injured patients and is based on anatomical injury severity location (AIS)
  - a. Equation:  $ISS = A^2 + B^2 + C^2$ , where A, B and C cannot come from the same AIS descriptor
    - i. Add together the squares of the highest AIS rating for each of the three most severely injured body areas
    - ii. Limitations: does not take into consideration multiple traumas in the same body region; gives each body region equal importance

**Reference:** Baker SP, O'Neill B, Haddon W Jr, Long WB. The injury severity score: a method for describing patients with multiple injuries and evaluating emergency care. J Trauma. 1974 Mar;14(3):187-96. PMID: 4814394.

3. **New Injury Severity Score (NISS):** injury severity score that assesses the combined effects of multiple-injured patients, overcoming some of the shortcomings of the ISS, by adding together the three most severe injuries *regardless of the body region in which they occur*
  - a. Equation:  $NISS = A^2 + B^2 + C^2$

**Reference:** Osler T, Baker SP, Long W. A modification of the injury severity score that both improves accuracy and simplifies scoring. J Trauma. 1997 Dec;43(6):922-5; discussion 925-6. doi: 10.1097/00005373-199712000-00009. PMID: 9420106.

Poster Citations:

- (1) Brown, R., Deyo, B., Riley, C., Quanbeck, A., Glass, J. E., Turpin, R., .Agarwal, S. (2017). Screening in Trauma for Opioid Misuse Prevention (STOMP): Study protocol for the development of an opioid risk screening tool for victims of injury. *Addiction Science & Clinical Practice, 12*(1). doi:10.1186/s13722-017-0097-6
- (2) Alghnam, S., & Castillo, R. (2016). Traumatic injuries and persistent opioid use in the USA: Findings from a nationally representative survey. *Injury Prevention, 23*(2), 87-92. doi:10.1136/injuryprev-2016-042059
- (3) Rosenbloom, B. N., McCartney, C. J., Canzian, S., Kreder, H. J., & Katz, J. (2017). Predictors of Prescription Opioid Use 4 Months After Traumatic Musculoskeletal Injury and Corrective Surgery: A Prospective Study. *The Journal of Pain, 18*(8), 956-963. doi:10.1016/j.jpain.2017.03.006
- (4) Prescription Opioid Data. (2020, March 12). Retrieved October 18, 2020, from <https://www.cdc.gov/drugoverdose/data/prescribing.html>
- (5) Oelreich, E. V., Eriksson, M., Brattström, O., Sjölund, K., Discacciati, A., Larsson, E., & Oldner, A. (2020). Risk factors and outcomes of chronic opioid use following trauma. *British Journal of Surgery, 107*(4), 413-421. doi:10.1002/bjs.11507