

Hand and Upper Extremity Trauma in the Undocumented Immigrant Population in the United States



Dani C. Inglesby, MD^{1,4}, Jeffrey Okewunmi, BS², Christine S. Williams, MD^{3,4}, Jared M. Gopman, MD^{1,4}, Eitan Melamed, MD^{1,4}

1. Division of Plastic and Reconstructive Surgery, Icahn School of Medicine at Mount Sinai, New York NY 10029
2. Icahn School of Medicine at Mount Sinai, New York, NY
3. Department of Orthopedic Surgery, Icahn School of Medicine at Mount Sinai, New York NY 10029
4. Division of Hand Surgery, Heath & Hospitals/Elmhurst Hospital Center, Queens, NY 11373

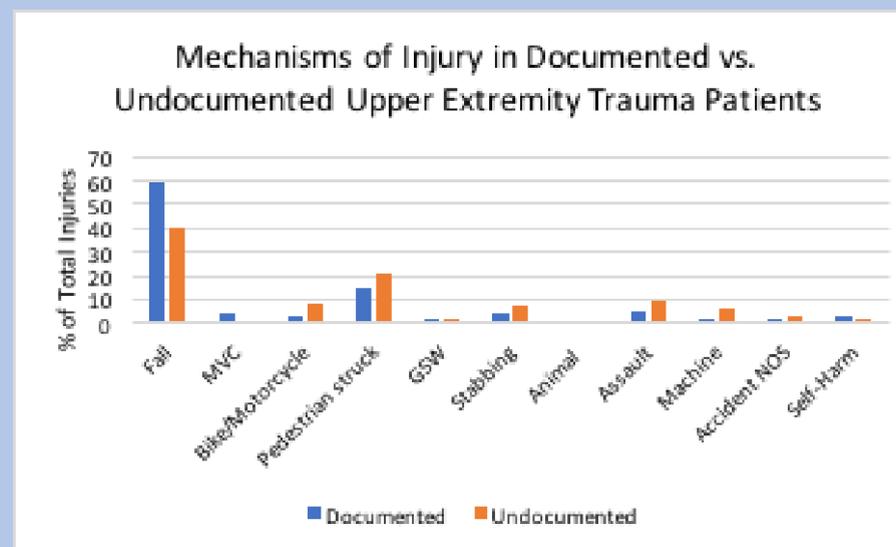
Objectives

- Compare clinical features of upper extremity trauma injuries in documented vs. undocumented patients at Elmhurst Hospital Center (EHC) during a 45-month period.

- Identify disparities in health-related variables and provide the medical community with a more thorough understanding and ability to optimally provide care for this population.

Results

| Variable | Documented | Undocumented | p-value |
|----------------|-------------|--------------|--------------------|
| N | 865 (83.1%) | 176 (16.9%) | |
| Age | 62.4 | 40.5 | p<0.0001 |
| Male | 494 (57.1%) | 147 (83.5%) | p<0.0001 |
| Female | 371 (42.9%) | 29 (16.5%) | p<0.0001 |
| Length of Stay | 9.1 | 6.26 | p=0.0040 |
| ISS | 8.28 | 6.91 | p=0.0205 |
| Comorbidities | 559 (64.6%) | 75 (42.6%) | p<0.0001 |
| Other systems | 536 (61.9%) | 105 (59.7%) | p=0.5847 |



Conclusions

- Significant differences exist in the mechanism of injury in the UI population presenting with upper extremity trauma in Queens, NYC
- Awareness of these social determinants of health and the challenges faced by undocumented immigrants across the country is essential in order for the hand surgeon to have a more holistic understanding of both the pre-injury and post-discharge outcomes factors that can affect the patients long-term return to function after injury

Methods

- Examined EHC trauma database for all patients admitted with upper extremity trauma from April 2016 through December 2019

- Examined for the following: demographic information, documentation status, type and mechanisms of injury, hospital length of stay

- 1,041 patients included: 865 (83.1%) were documented and 176 (16.9%) were undocumented
- Undocumented immigrants were younger (40.5 vs. 62.4 years) and predominantly male (83.5% vs. 57.1%) with fewer comorbidities (42.6% vs. 64.6%)
- Occupational injury was 3x as likely in UIs (13.6% vs. 4.6%)
- UIs were nearly twice as likely to be harmed as a result of violence (19.9% vs. 10.2%)
- Increased rates of injury during bicycle/motorcycle accidents (8.0% vs. 3.0%) or as pedestrian struck (21.6% vs. 14.3%) were found in the UI cohort

| Mechanism | Documented | Undocumented | p-value |
|-------------------|-------------|--------------|--------------------|
| Fall | 513 (59.3%) | 70 (39.8%) | p<0.0001 |
| GSW | 14 (1.6%) | 3 (1.7%) | p=0.9237 |
| MVC | 30 (3.5%) | 1 (0.6%) | p= 0.0402 |
| Bike/moto | 26 (3.0%) | 14 (8.0%) | p= 0.0017 |
| Pedestrian struck | 124 (14.3%) | 38 (21.6%) | p= 0.0149 |
| Stab | 37 (4.3%) | 13 (7.4%) | p=0.0803 |
| Animal | 10(1.2%) | 1 (0.6%) | p=0.4866 |
| Assault | 40 (4.6%) | 16 (9.1%) | p=0.0157 |
| Machine | 21 (2.4%) | 10 (5.7%) | p=0.0186 |
| Accident | 20 (2.3%) | 6 (3.4%) | p=0.3931 |
| Self-harm | 25 (2.9%) | 4 (2.3%) | p=0.6601 |

