

The Cost of Hand Injuries to Non-U.S. Citizen Manual Laborers

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Introduction

Non-US citizen Spanish speaking workers, particularly those in high-risk manual labor occupations, face disproportionately high rates of workplace injuries. These workers are more likely to be employed in hazardous environments with inadequate safety measures, which increase the risk of injury, including frequent hand injuries that significantly affect their ability to earn a living. Even minor hand injuries can lead to prolonged recovery periods, economic hardship, and a diminished quality of life. Research shows that immigrants, both documented and undocumented, are more likely to work in these high-risk jobs compared to their US-born counterparts (Orrenius & Zavodny, 2009). In 2021, approximately 27 million immigrants were employed in the US labor force, comprising 17% of nonelderly adult workers, with noncitizens representing 9% of the total workforce (Pillai & Artiga, 2023). Non-US citizen workers are more likely to be uninsured, low-income, and face significant barriers to healthcare access, which can worsen recovery outcomes after workplace injuries. Financial constraints and lack of insurance often result in delayed or forgone medical treatment, exacerbating health issues and lengthening recovery periods.

This study aims to examine how healthcare access influences the recovery outcomes of non-US citizens with work-related hand injuries. By exploring the financial and healthcare barriers these workers face, this research seeks to provide evidence for policy changes that can improve both health and economic outcomes for this vulnerable population. Focusing on non-US citizens, this study will contribute to a broader understanding of health disparities in the labor force and advocate for more inclusive policies and improved workplace safety measures.

Methods

- **Retrospective study** analyzed 3,878 patient charts from a level one trauma center in Southeastern United States from 2016 to 2024, identifying **68 non-US citizen Spanish speaking manual laborers with work-related hand injuries**.
- Inclusion criteria included non-US citizen status (verified via passport and financial clearance), work-related injury designation, insurance classification (self-pay, free care, or workers' compensation), and Spanish as primary language.
- Key variables included injury type, hand dominance, treatment modality, return-to-work status, total medical costs, and hospital length of stay.

Demographics Table

Demographic Variables	
Average Age	38.13 years
Male	65 (95.59%)
Females	3 (4.41%)
Language	Spanish

Cost of Healthcare

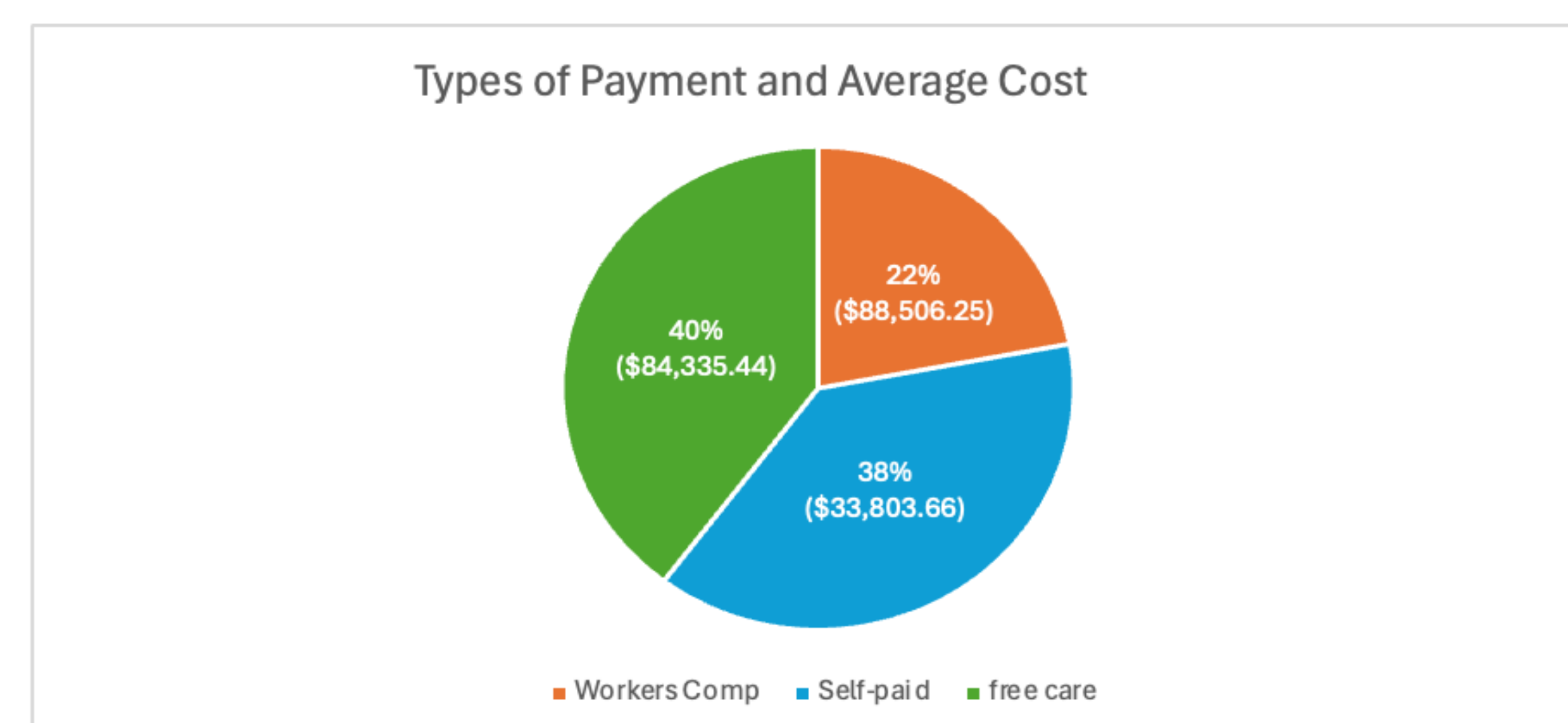


Figure 1: Type of insurance used to pay for injuries and the average cost for each type.

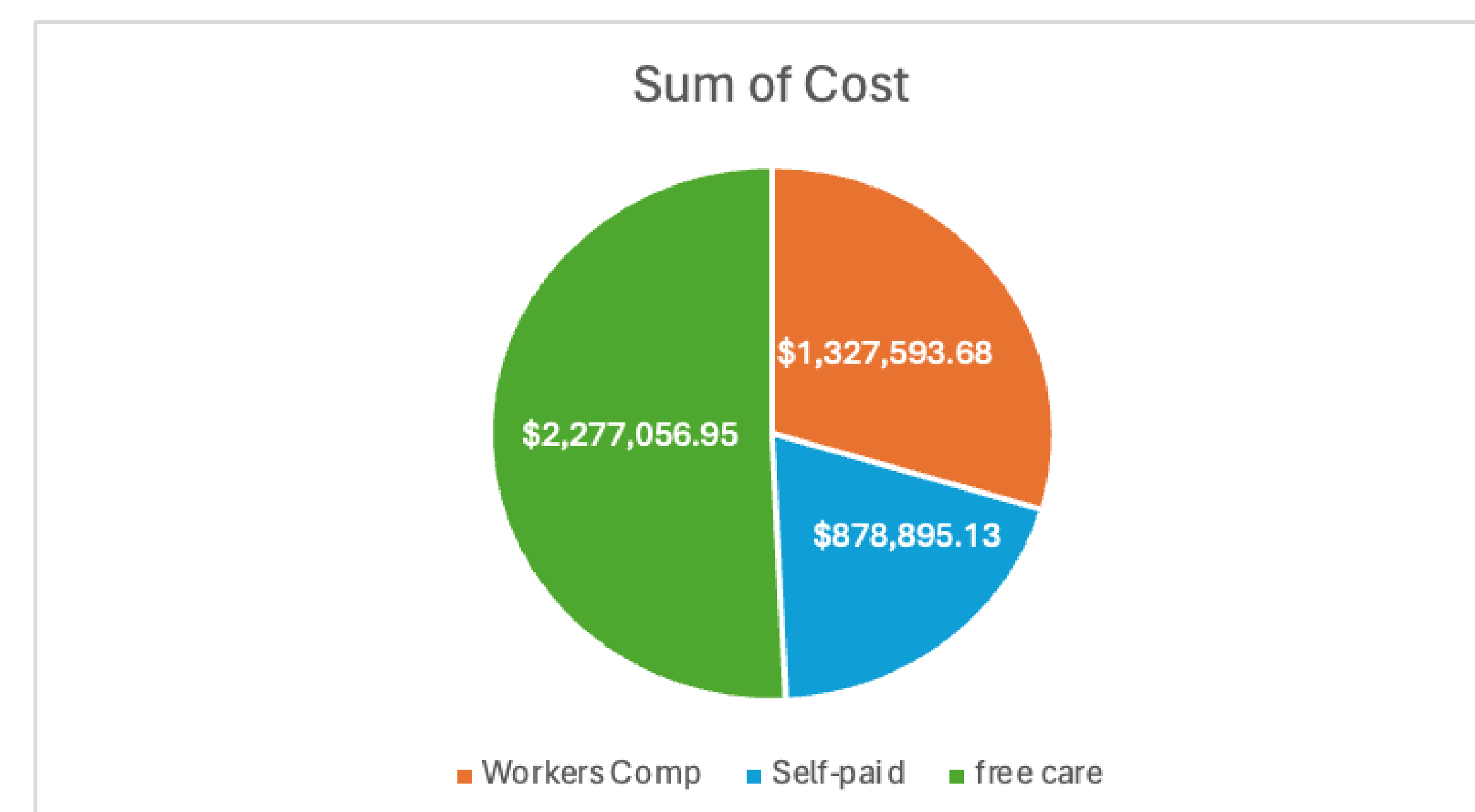


Figure 2: The total cost of healthcare, classified by types of insurance used in the cohort.

Results

- Of the 68 patients:
 - 45.59% patients were able to return to work vs 16.17% vs 38.23% unknown status
 - Dominant hand injury (18 patients), non-dominant (34) vs both UE (3) vs unknown dominance (13)
 - Injury type: blunt (57.35%) vs penetrating (42.65%)
 - Average length of stay: 78.18 hours
 - Type of treatment: surgery (75%) vs non-operative management (5.88%) vs ER management (19.12%)

Conclusions

- Non-US Citizen Spanish Speaking manual laborers face substantial financial and occupational consequences following work-related hand injuries.
- The **highest medical costs were incurred by workers' compensation and free care patients**, highlighting disparities in healthcare access and workplace safety. The **total cost of healthcare for this cohort was \$4.48 million**.
- A significant portion (26.19%) of injured workers did not return to work and with the average initial hospital stay being 3.25 days. This does not include any follow up healthcare appointments or therapies necessary for a full recovery, thus posing a potential long-term socioeconomic consequence.
- Findings emphasize the need for awareness of social determinants, policy interventions to improve workplace safety, healthcare accessibility, and financial protections for undocumented laborers.

References

1. Orrenius, Pia M., and Madeleine Zavodny. 2009. "Do Immigrants Work In Riskier Jobs?" *Demography* 46 (3): 535–51.
2. Pillai, Drishti, and Samantha Artiga Published. 2023. "Employment Among Immigrants and Implications for Health and Health Care." KFF (blog). June 12, 2023. <https://www.kff.org/racial-equity-and-health-policy/issue-brief/employment-among-immigrants-and-implications-for-health-and-health-care/>