NCEA
National Center on Elder Abuse

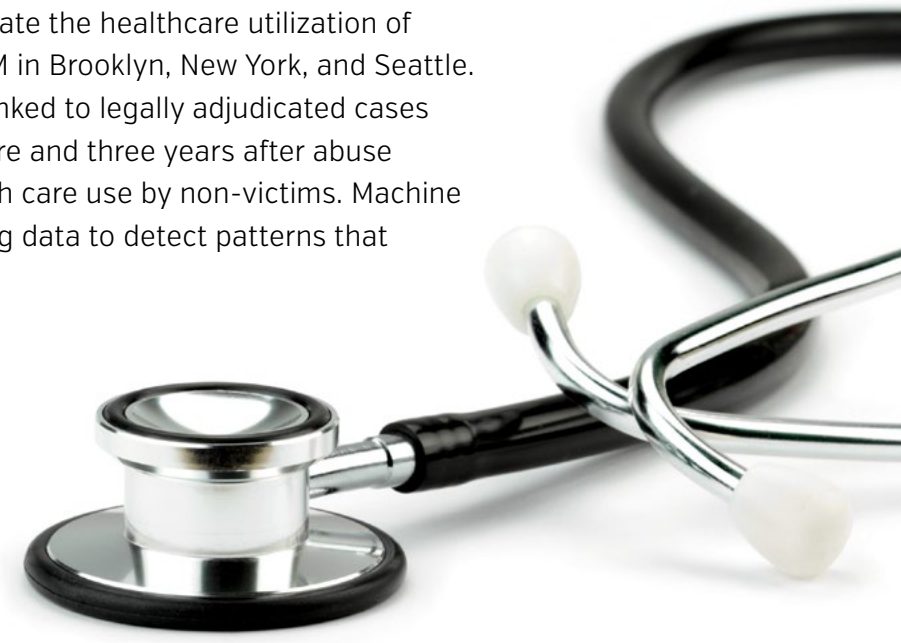
RESEARCH TRANSLATION

Identifying patterns of health care utilization among physical elder abuse victims using Medicare data

Elder mistreatment (EM) occurs frequently, but is seldom disclosed, discovered, and reported in the US, leading to serious health dangers in our older adult population. EM comes in many forms, including physical abuse, sexual abuse, psychological abuse, neglect, and financial abuse. Most EM cases may last years before being discovered. Because healthcare workers sometimes are the only contact to older adults, these encounters become opportunities to increase discovering and reporting EM. Research has shown healthcare utilization and costs are higher for victims of child abuse and intimate partner violence as compared with non-victims, findings which underscore potential opportunities for abuse identification, early intervention, and policy change. There is no similar research in EM. In this study, researchers posit that older people who have experienced physical abuse may have different patterns of healthcare utilization than non-victims. Specifically, the research team hypothesizes that victims of physical EM have fewer primary care visits and therefore less preventative care, resulting in increased utilization of the emergency department (ED) and hospital services for ambulatory care and non-urgent issues.[1]

Method

In a retrospective study, researchers will evaluate the healthcare utilization of 204 older people who experienced physical EM in Brooklyn, New York, and Seattle. The individuals' Medicare claims data will be linked to legally adjudicated cases of physical EM and evaluated three years before and three years after abuse detection. Results will be compared with health care use by non-victims. Machine learning approaches will be used to analyze big data to detect patterns that suggest potential physical EM.



Results

This research was started in 2018.
Results are projected to be available by 2023.

1. Rosen, T., Bao, Y., Zhang, Y., Clark, S., Wen, K., Elman, A., ... & Lachs, M. (2021). Identifying patterns of health care utilisation among physical elder abuse victims using Medicare data and legally adjudicated cases: protocol for case–control study using data linkage and machine learning. *BMJ open*, 11(2), e044768.

Key Takeaways

- This research will address a gap in knowledge about how physical abuse victims use healthcare differently than non-victims, as well as finding the differences in healthcare costs.
- Medicare claims data may be used to examine health care utilization patterns and medical consequences in older people who have experienced EM.
- Ideally, results will highlight "red flags" that would identify people in danger of EM and create opportunities to prevent harm.
- Machine learning techniques can be used to integrate multidimensional data to identify patterns of patient service utilization across types of EM.
- By focusing on the subcategory physical abuse, a particularly dangerous form of abuse, more concrete results might be discovered.

Limitations

- Using legally adjugated cases ensures that the subjects are actually victims of EM, but these cases represent only a small portion of victims. (i.e. subtle cases of EM may be difficult to identify or may lack sufficient evidence to prosecute.)
- Selected control cases may be unidentified cases of EM, diminishing the accuracy of study findings; but potential limitations may be overcome by selecting multiple control cohorts.
- Subtle patterns of EM that are detected through machine learning techniques may potentially not be deemed clinically meaningful.

Implications for Practice

The hopeful outcome is to improve healthcare providers' abilities to identify EM victims, to prevent abuse and mitigate harm, and provide evidence for policy change to reduce the associated high burden and cost to the healthcare system. Study findings may also inform the development of a primary care-based tool to detect potential victims. Future studies may use Medicare claims data to explore health utilization and consequences among diverse elder populations who have experienced non-physical EM.

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