

Gun Crimes and Trauma Center Location in Chicago

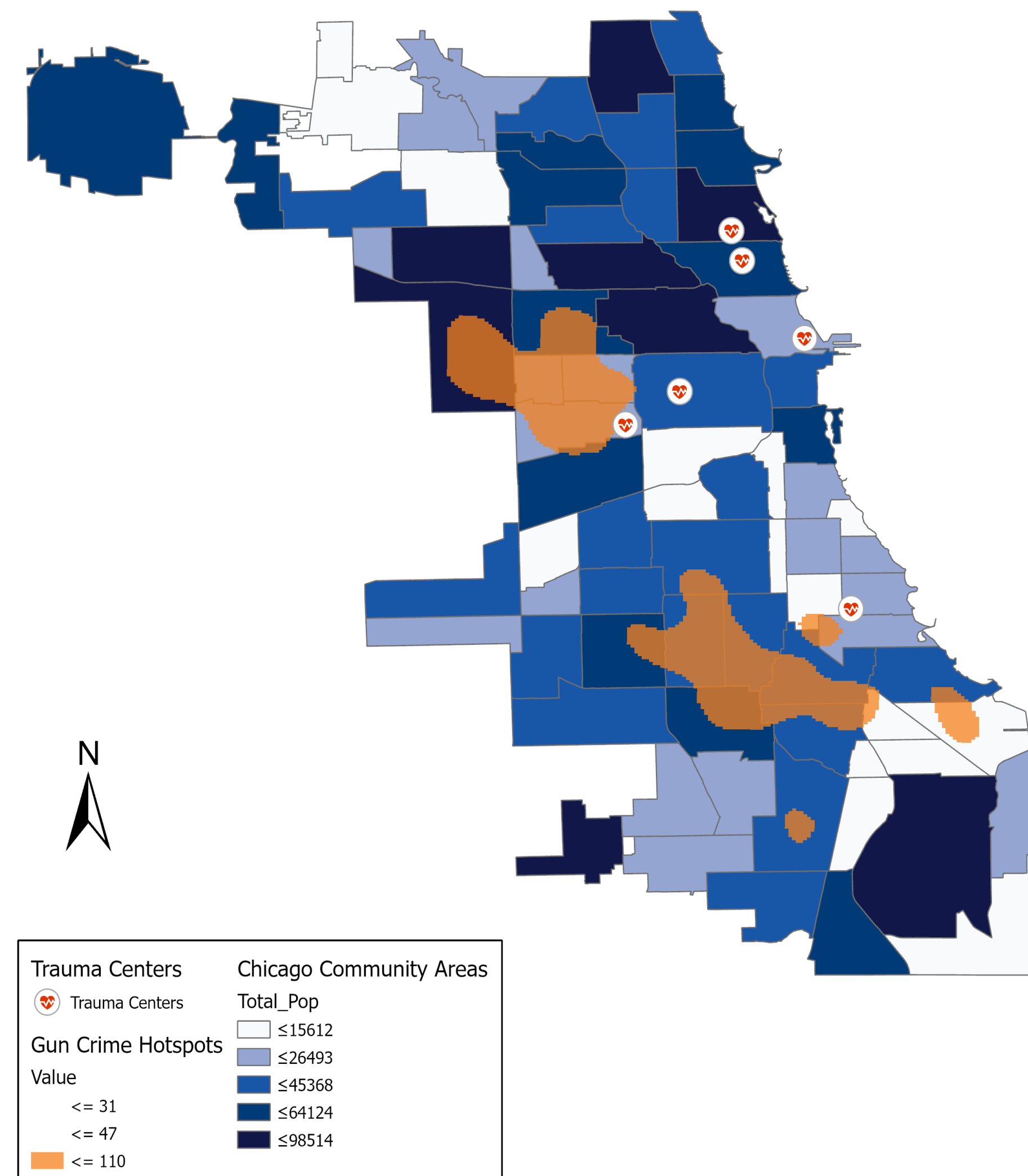
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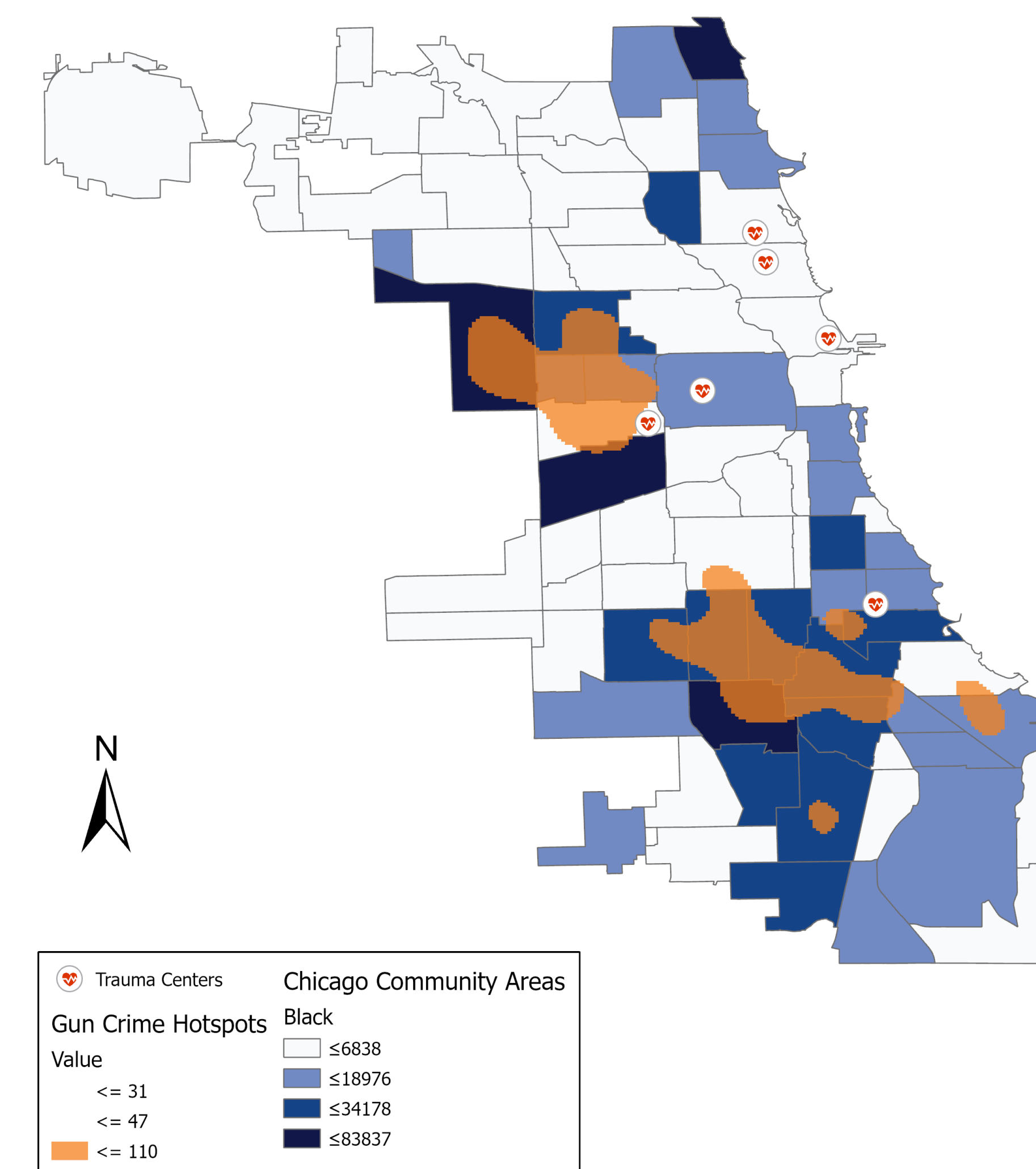
Motivation

- The average person will bleed out in 5 to 8 minutes from a gunshot wound.
- Even with proper first aid the victim is still at high risk of death until they can be operated on.
- A Level I trauma center is the best place to take a person when they have been shot.
- Only 6 of Chicago's 41 hospitals qualify as Trauma Centers

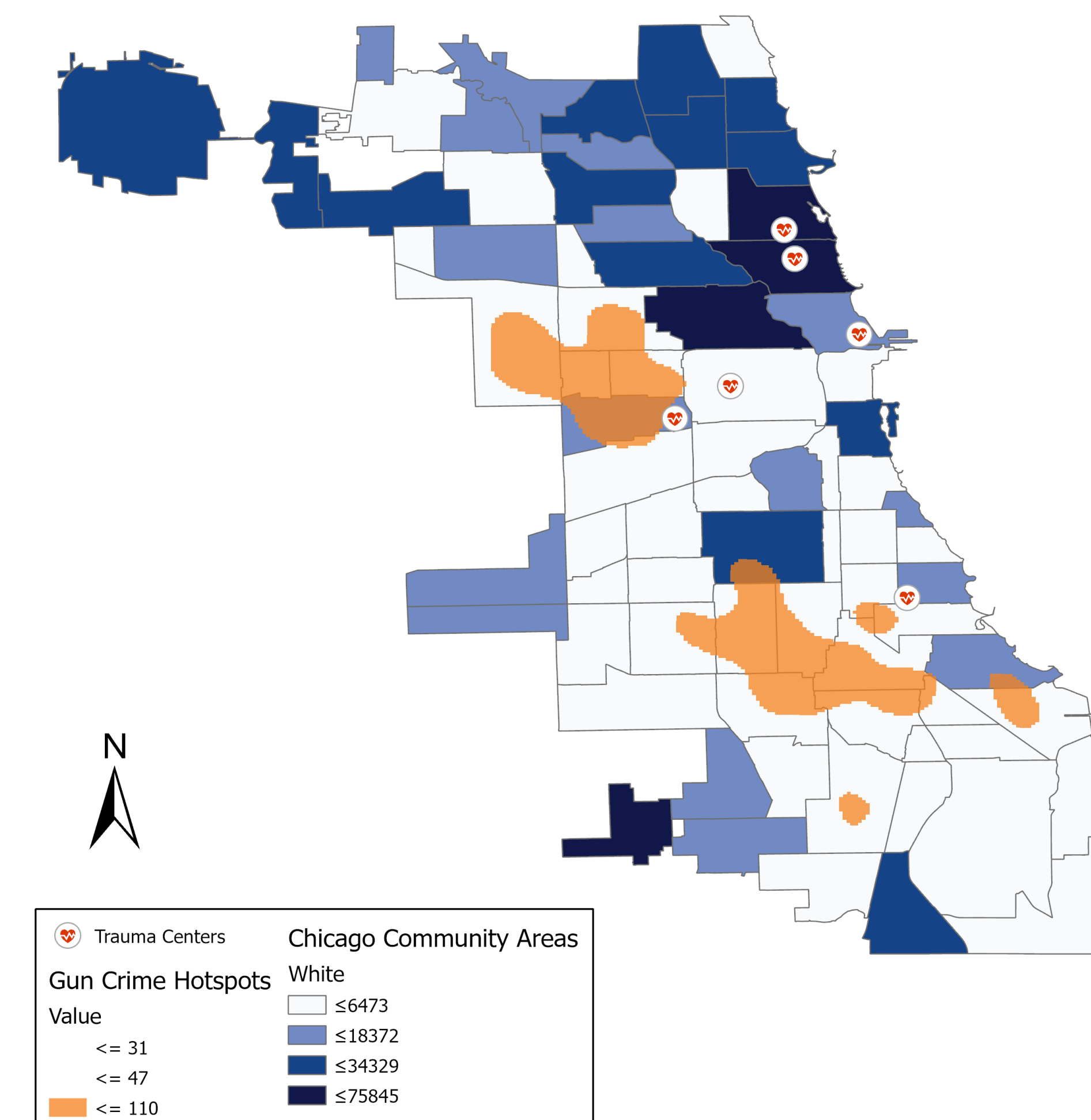
Comparison with Total Population



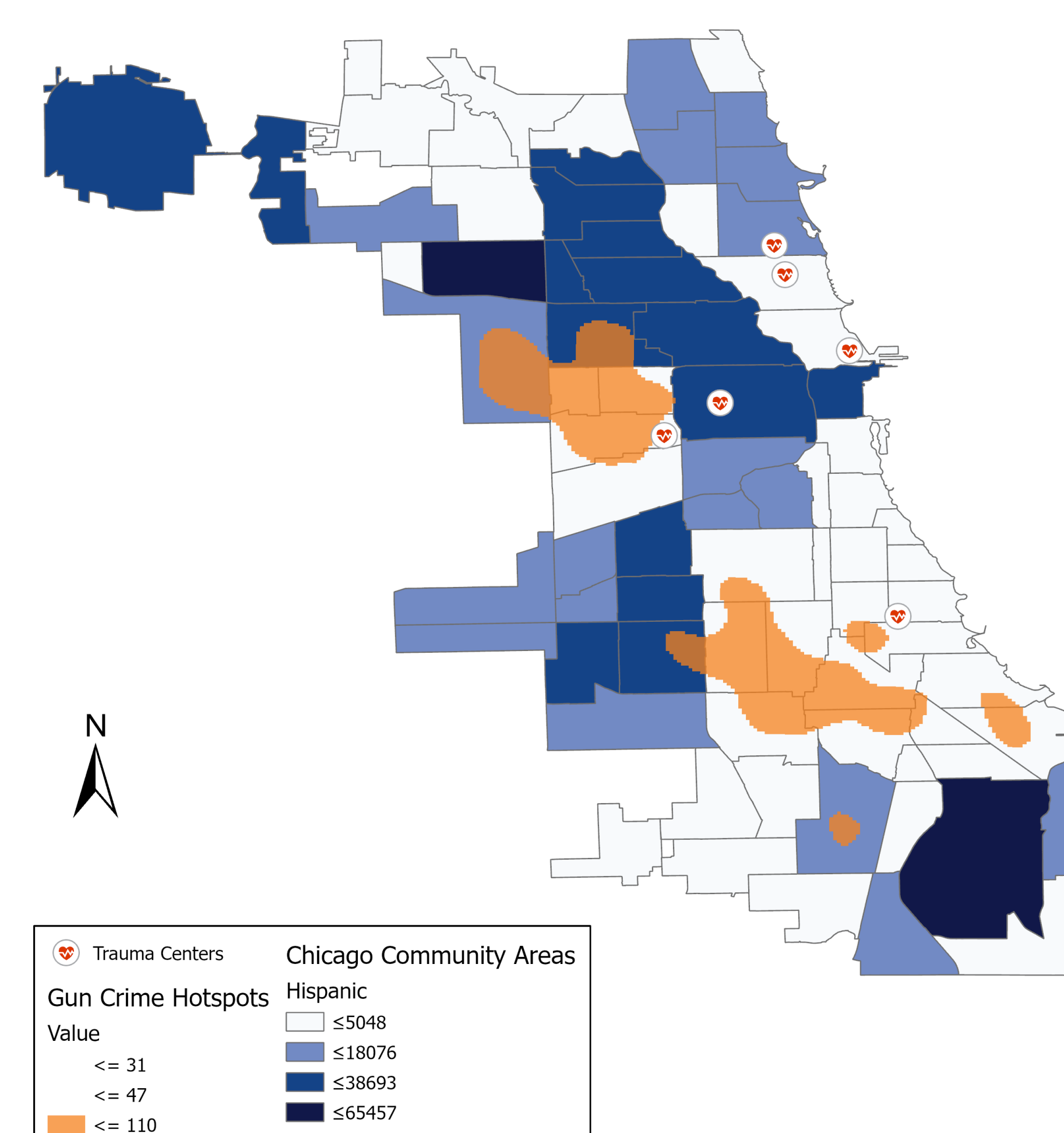
Comparison with Black Population



Comparison with White Population



Comparison with Hispanic Population



Questions

- Are there any observable spatial patterns of gun crimes in Chicago?
- Where are trauma centers in relation to location of gun crimes hotspots?
- Is there a correlation between race and trauma center location?

Data Sources

- City of Chicago Data Portal
- US Census Bureau

Scope

- Maps show neighborhoods of the City of Chicago
- Gun Violence data is taken from January 2019 – April 2020

Results

- Most of the City's Trauma Centers are in the Loop area downtown
 - Note that not all hospitals in the city are represented in the maps
- Most Trauma Centers are in neighborhoods with high numbers of White residents
- Hotspots of crime involving firearms are in neighborhoods within the West and South sides of the city
 - These areas also have the highest numbers of Black and Hispanic residents
- While it may seem that there are trauma centers that are near hotspots, areas with the highest incident levels are on average more than 3 miles away from the nearest Level 1 Trauma Center

Discussion and Limitations

- Time frame of crime data is short, a larger time frame may yield different results
- This research can be moved forward in several ways:
 - Are there any confounding factors that may answer why hotspots occur in certain areas?
 - What can be done about these confounders?
 - Can areas for future hospitals be identified using this data?

References

INSTITUTE FOR POLICY RESEARCH. (2018, May 28). Retrieved from AI, Kapuskin et al. (2017). Gun Violence in Chicago, 2016. University of Chicago Crime Lab.