

Introduction

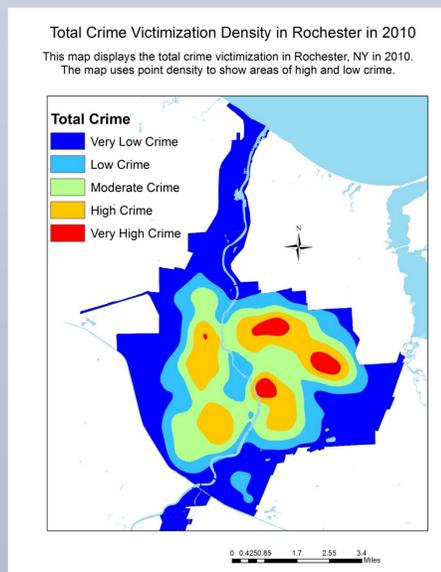
Geographical patterns of crime are well-known. Certain areas, usually those struggling with poverty, unemployment, and other structural social conditions, tend to experience more crime and police presence. It is important for police to understand these patterns to try to prevent crime victimization, and how to effectively assist victims of crimes.

This project examines a data set of all crime victims in the City of Rochester over 3 years (2010-2012) to understand patterns in victimization.

Objectives

- To determine risk of victimization based on demographics, crime type, and census tract
- To determine which people experience multiple crime victimizations.
 - Do they experience the same crime multiple times, or do they tend to experience many different types of crime?
 - When is a victim most at-risk of becoming a victim again?
- To determine which buildings/group of buildings experience crime
 - What is it about the building/group of buildings that makes it a repeat crime target?
- To contribute to police efforts to decrease predictable and repeat crime victimization

This "hotspot" map shows where the highest *number* of crimes occurred in 2010. This is a well-known pattern.



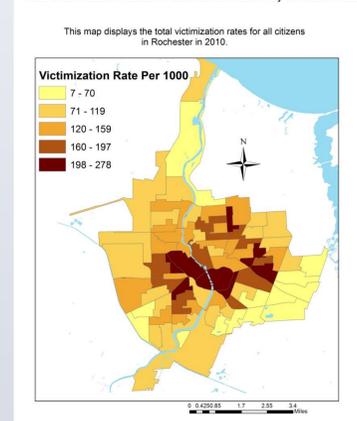
Methodology & Results

These maps show victimization *rates* (the chance that someone will experience a crime based on their demographics and neighborhood):

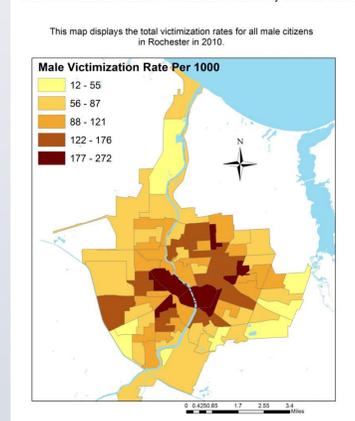
$$\frac{\text{Number of people who experience a crime}}{\text{Number of people who live in that neighborhood}} \times 1,000$$

Risk of victimization varies by where you live, your race, gender, and age. Also, you risk of victimization is different for different types of crime.

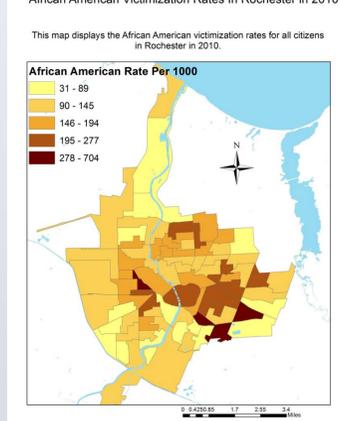
Total Victimization Rates In Rochester in 2010 by Census Tract



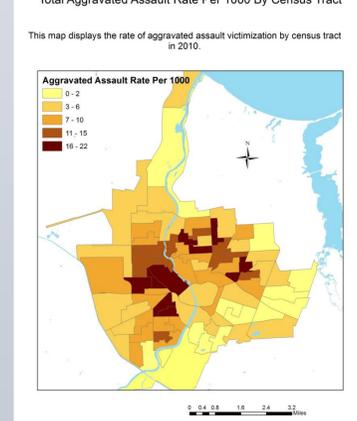
Male Victimization Rates In Rochester in 2010 by Census Tract



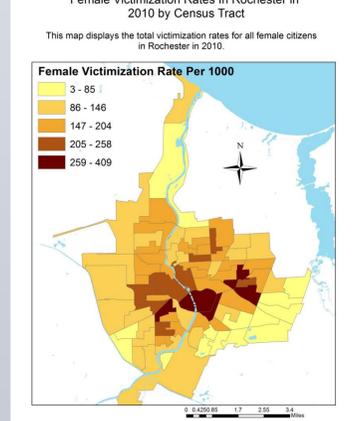
African American Victimization Rates In Rochester in 2010



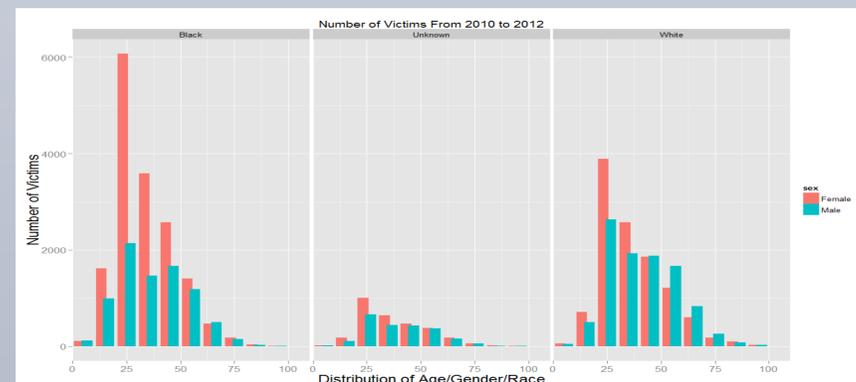
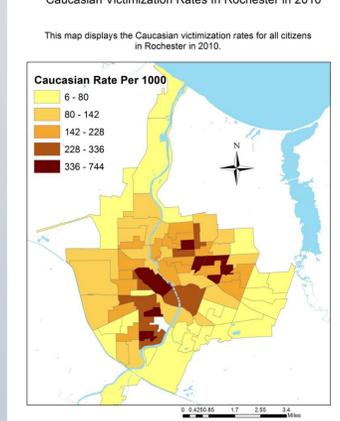
Total Aggravated Assault Rate Per 1000 By Census Tract



Female Victimization Rates In Rochester in 2010 by Census Tract

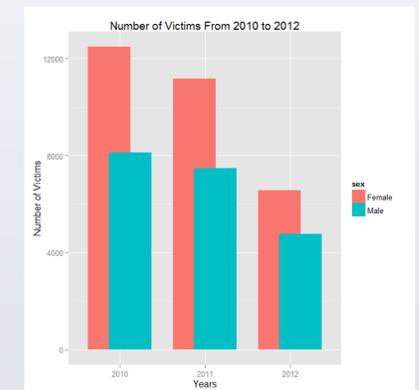


Caucasian Victimization Rates In Rochester in 2010



Next Steps

Across the City of Rochester, crime has been going down in recent years...



But for some areas, groups of people, and individual people, crime is not going down, and they tend to experience crime victimization much more regularly than most people.

Our next analyses will:

- Identify repeat individuals and repeat buildings in the data set and analyze their patterns of victimization
- Identify "near-repeat" victimizations (i.e. when a house is burglarized and then another house *near* it is also burglarized)
- Focus on gun violence and other violent crimes to examine the patterns behind how arguments/disputes escalate into more serious violence

Data Sources

Monroe Crime Analysis Center (MCAC)
Rochester Police Department
US Census and American Community Survey

Contact

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