

THE TRAUMA DESERT

Mapping Gun Violence Burden Against Trauma System Capacity in Philadelphia

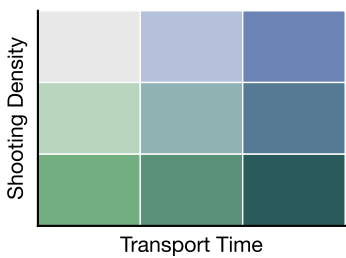
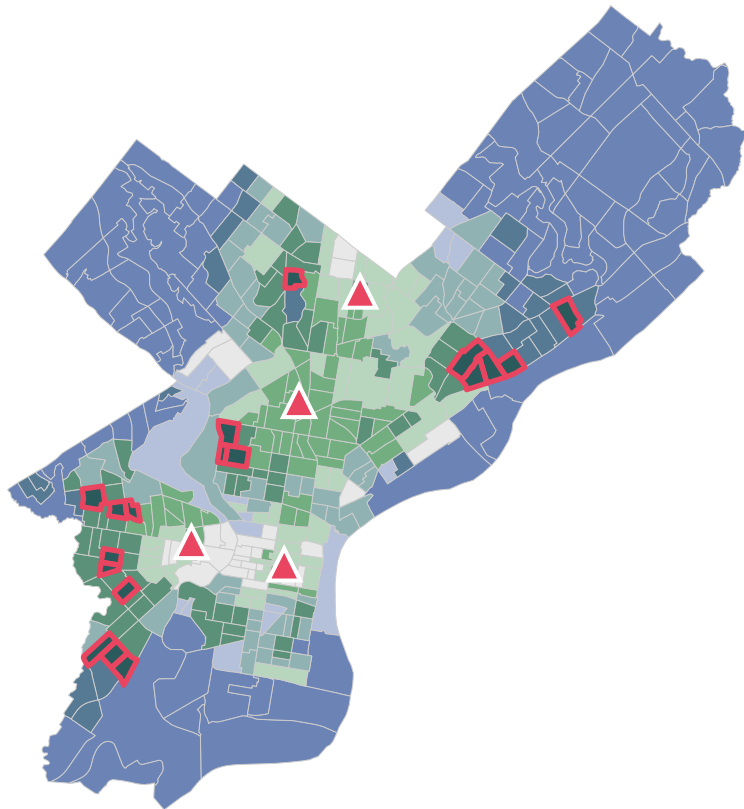
17,383

Shootings
(2015-2025)

18

Trauma Desert
Tracts

A. Bivariate Classification
Shooting Density vs Transport Time



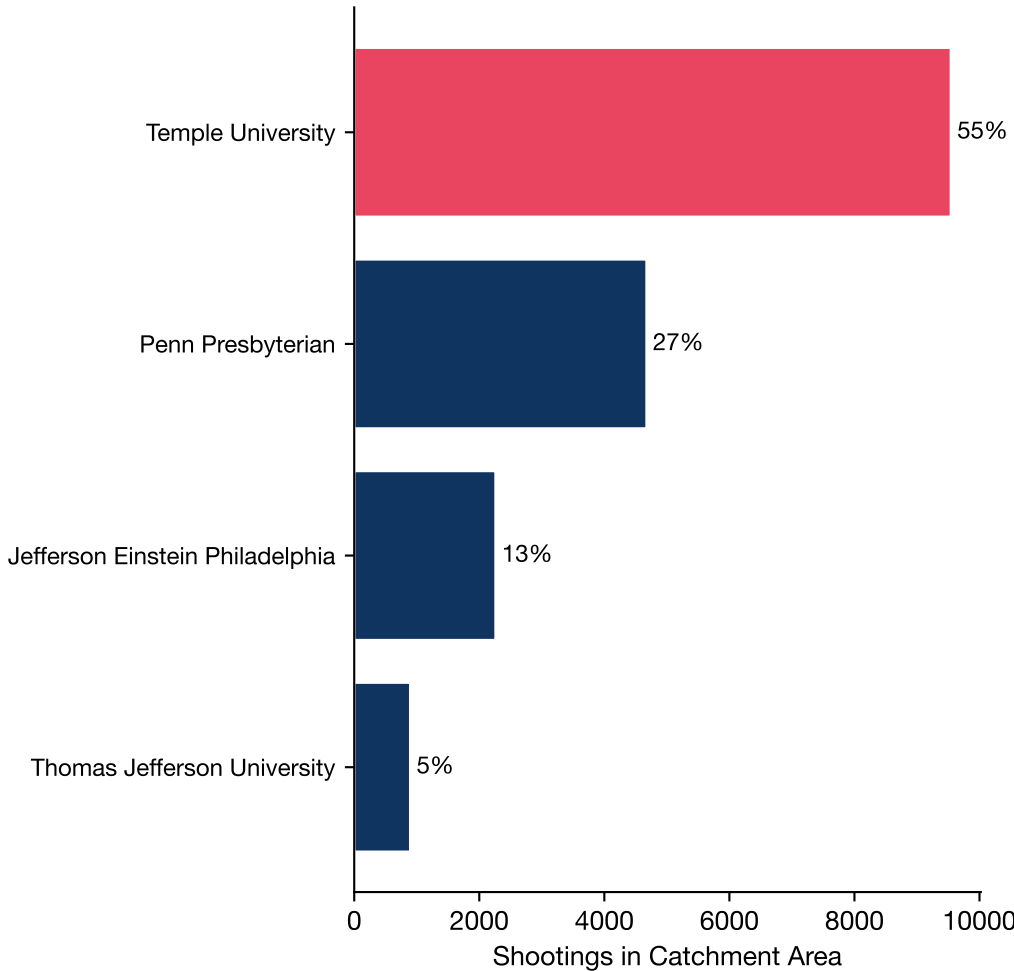
99.6%

Within 20 min
of Level I

54.9%

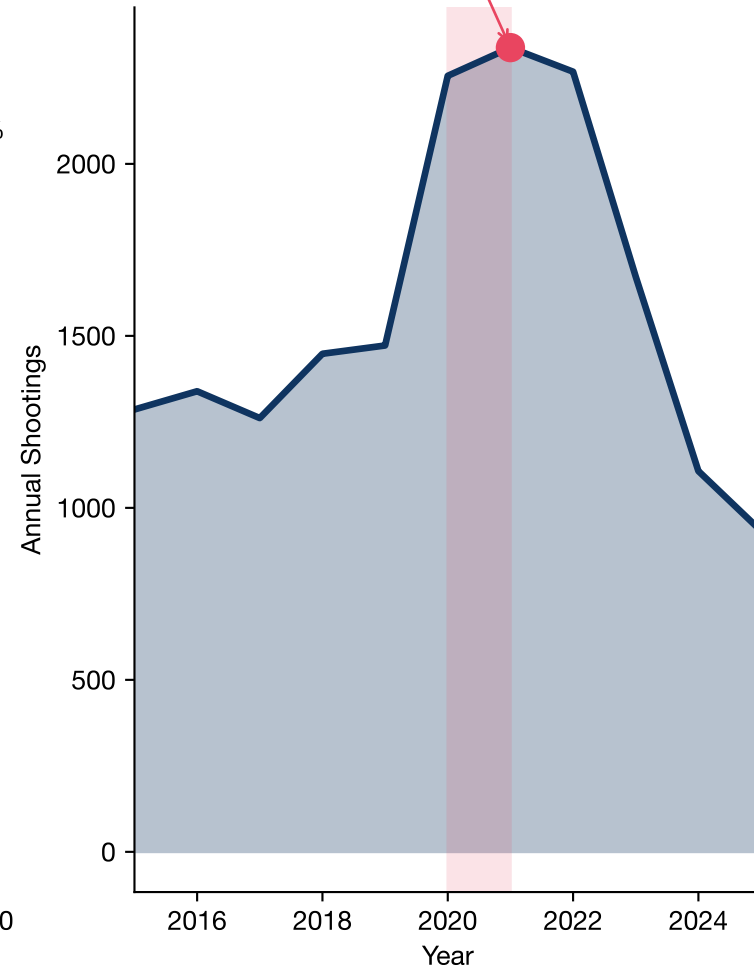
Handled by
Trauma Hospital

B. Hospital Burden Distribution
(Temple handles 55% of all shootings)

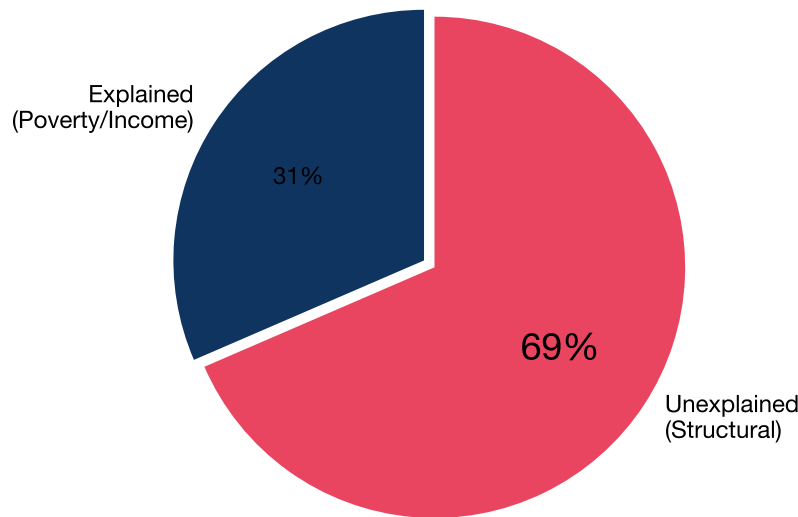


68.5%

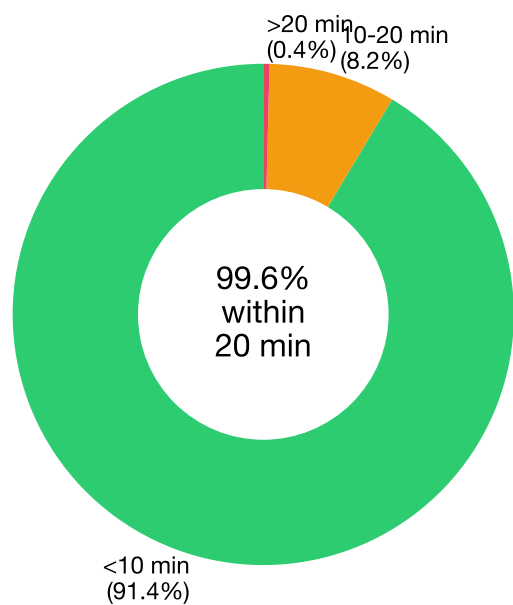
Disparity
Ratio
(COVID spike 2020-2021)



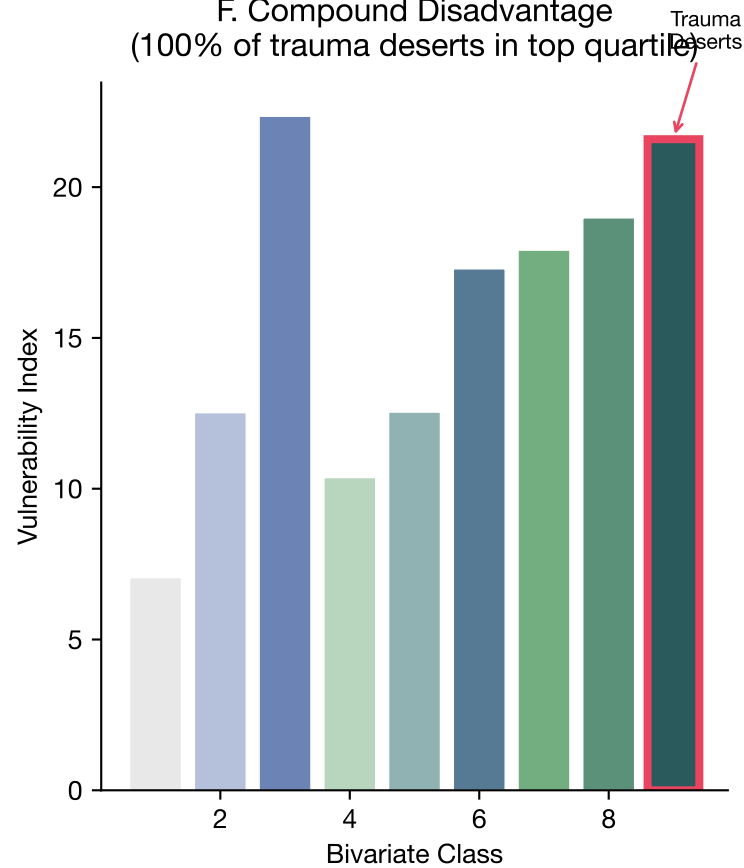
D. Racial Disparity Decomposition
(Black tracts have 4.4x higher shooting density)



E. Golden Hour Coverage
(Excellent geographic access)



F. Compound Disadvantage
(100% of trauma deserts in top quartile)



G. Summary

KEY FINDINGS

- THE DISPARITY IS VIOLENCE, NOT ACCESS**
Black neighborhoods are actually 3.2 min CLOSER to trauma centers, but experience 4.4x higher shooting rates.
- TEMPLE IS THE FRONTLINE**
Temple University Hospital handles more than half of all shooting victims in Philadelphia (54.9%).
- STRUCTURAL FACTORS DOMINATE**
68.5% of the racial disparity in violence cannot be explained by poverty or income. Historical/systemic factors are at play.
- COVID DOUBLED VIOLENCE**
Shootings peaked at 2,338 in 2021, nearly double pre-pandemic levels. Now declining.
- COMPOUND DISADVANTAGE**
All 18 trauma deserts are also in the top quartile of overall neighborhood vulnerability.