How Safe Streets Baltimore Uses Open Data

BNIA Data Day

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Overview

• Safe Streets Baltimore

• What data are available?

• Site selection

• Staffing

• Operations

• Program evaluation
**Safe Streets Baltimore**

- Community-based violence prevention program
- Outreach and conflict mediation to prevent shootings
  - Cure Violence Model
- Utilizes credible messengers

Crime and Risk Related Data on Open Baltimore

- Part I victim-based crimes - incident locations
  - Violent and Property Crimes
- Adult arrests - i.e. drugs, weapons-related
- Calls for Service/911
- Weekly COMSTAT report
- Gun offenders
- Liquor stores, vacant, animal abuse (311 Calls)
- (Police Use of Force, Police cameras,...)

Open Baltimore: https://data.baltimorecity.gov/
## Site Selection

<table>
<thead>
<tr>
<th>Dataset</th>
<th>Key variables</th>
<th>Link</th>
<th>Limitations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Part I victim-based crime</td>
<td>Incident locations of shootings and homicides</td>
<td><a href="https://goo.gl/eJJuHw">https://goo.gl/eJJuHw</a></td>
<td>‘Past year’ homicides.</td>
</tr>
<tr>
<td></td>
<td>Note: each row represents a victim.</td>
<td></td>
<td>No demographics or motive.</td>
</tr>
</tbody>
</table>

We select police posts in the top 25% for gun violence.

- Police boundaries recently changed (we use older post boundaries)
- 3-5 years of homicides and shootings.
- Incidents, victims, post trajectory (stable, up, down).
- New sites cannot border/touch an existing site.
- Protective effects spillover.
Violent Crimes and Time of Day, 2015: Focus on Sandtown

Data source: Open Baltimore. We also look at day of week.
Operations

Cherry Hill Violent Crimes, May 1- July 16, 2016

Overlapping symbols may indicate multiple victims and/or incidents. Calendar is victims per day.

Legend is citywide, crimes appear on map if they occurred in that area during the time period.

Dr. Leana Wen
Health Commissioner

Stephanie Rawlings-Blake
Mayor

Data Source: Open Baltimore
Operations

Sandtown-Winchester (Police Post 731)
Adult Drug-related Arrests and Shootings (All Ages)

Legend
Drug Arrests
113 - 294
11 - 21
HOMICIDE
SHOOTING

Estimated Number of Drug Arrests in Post

In post, number of shooting incidents 2010 to 2015 for locations with multiple shootings

56% of drug arrests are non-marijuana (heroin, cocaine, etc.)

Notes: Number of drug-related arrests are labeled in bold. Areas with fewer than 10 drug arrests are not shown.
The number of drug arrests is likely an underestimate due to problems with classifying drug arrests and missing coordinates and addresses. Source: Open Baltimore, BPD Arrests.

Prepared by: Baltimore City Health Department

Data Source: Open Baltimore
More shooting incidents at this intersection than anywhere else in Baltimore City
- 12 separate shooting incidents (2008-2015)
- Heavy drug activity in this area

Two shootings in 2016 year-to-date

Data Source: Open Baltimore
Program Evaluation

- Graphs and tables (descriptive)
- Comparison group
- Pre-/post-intervention
- Modeling (analytical)
- Past surveying change in attitudes
Moving Averages, 2015

We make comparisons against 1) border posts and 2) a citywide composite/average of the highest shooting areas.
Mean monthly shooting incidents

- **Example: Cherry Hill (Old Police Post 924)**
  - Pre-implementation (12 months)
    - Jan 1, 2008 to Dec 31, 2008
    - 1 shooting incident per month
  - Post-implementation (84 months)
    - Jan 2009 to Dec 2015:
    - Less than 1 shooting every two months (55% reduction)

The above estimates don’t take into account citywide changes in the level of violence and police interventions.

* Boundaries recently changed
**Open data only back to 2008
Modeling

**Outcome(s)**
- Shooting incidents
- Fatal shootings
- Non-fatal shootings

**Explanatory variables**
- Presence/Absence Safe Streets Site
- Program data (conflict mediations)
- Drug and Gun Arrests, Police programs

Other variables: month and year

Count models
Comparison groups (border and composite police posts)
Estimated program effects (% reduction in incidents)

Summary

• Open data are valuable!

• Use of open data is applicable to other crime and violence prevention programs

• Public health surveillance

• Other: MD Case Search, Social Media

• Map gallery – Homicide epidemic
  • baltimorecity.gov/healthmaps
Thanks!

Questions?

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Cure Violence Logic Model