

## Public Health Surveillance of Homicides in Baltimore City, January 1 - June, 30, 2017

Homicides are preventable. The purpose of this public health surveillance report is to provide a common operating picture for agencies, community-based organizations, and residents involved in violence prevention. All data used in this report are from openly available sources, including the Baltimore Sun homicide website<sup>1</sup> and Baltimore Police data via Open Baltimore<sup>2</sup>. The data may contain errors or omissions.

### Update

As of 7/6/2017, Baltimore City has 182 homicide victims this year —39 homicide victims ahead of last year's pace (27% increase over same time period in 2016).<sup>3</sup> Approximately, 30% of victims were under 25 years old. Firearms were used in the deaths of 88% of victims. Homicide victimization typically occurs after 12 noon, begins to increase in late afternoon—continuing through most of the evening. Twenty-seven percent of victims were killed on a Saturday or Sunday, 87% of victims died outdoors, and 73% of victims died in the street. Twelve percent of victims died inside a dwelling/home.

### Background

An interactive online "story map" of the 2015 homicide epidemic in Baltimore City was created (<http://arcg.is/1KbnJSE>). It uses spatial analysis to examine patterns of violence.

Potential causes of continued violence in Baltimore City include gang violence, retaliatory violence, changes in the drug trade, police staffing shortages, mistrust of government, and a combination of social and economic conditions. Moreover, numerous cities that have experienced dramatic increases in homicides, like Baltimore, are hyper-segregated and lack opportunities for social mobility for many people.

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<sup>1</sup> Baltimore Sun. Homicide Map: <http://data.baltimoresun.com/news/police/homicides/>. Last accessed on 7/7/2017.

<sup>2</sup> Baltimore City Police Department. Part I Victim Based Crime Data. (<https://goo.gl/qV4qb6>). Last accessed on 7/7/2017.

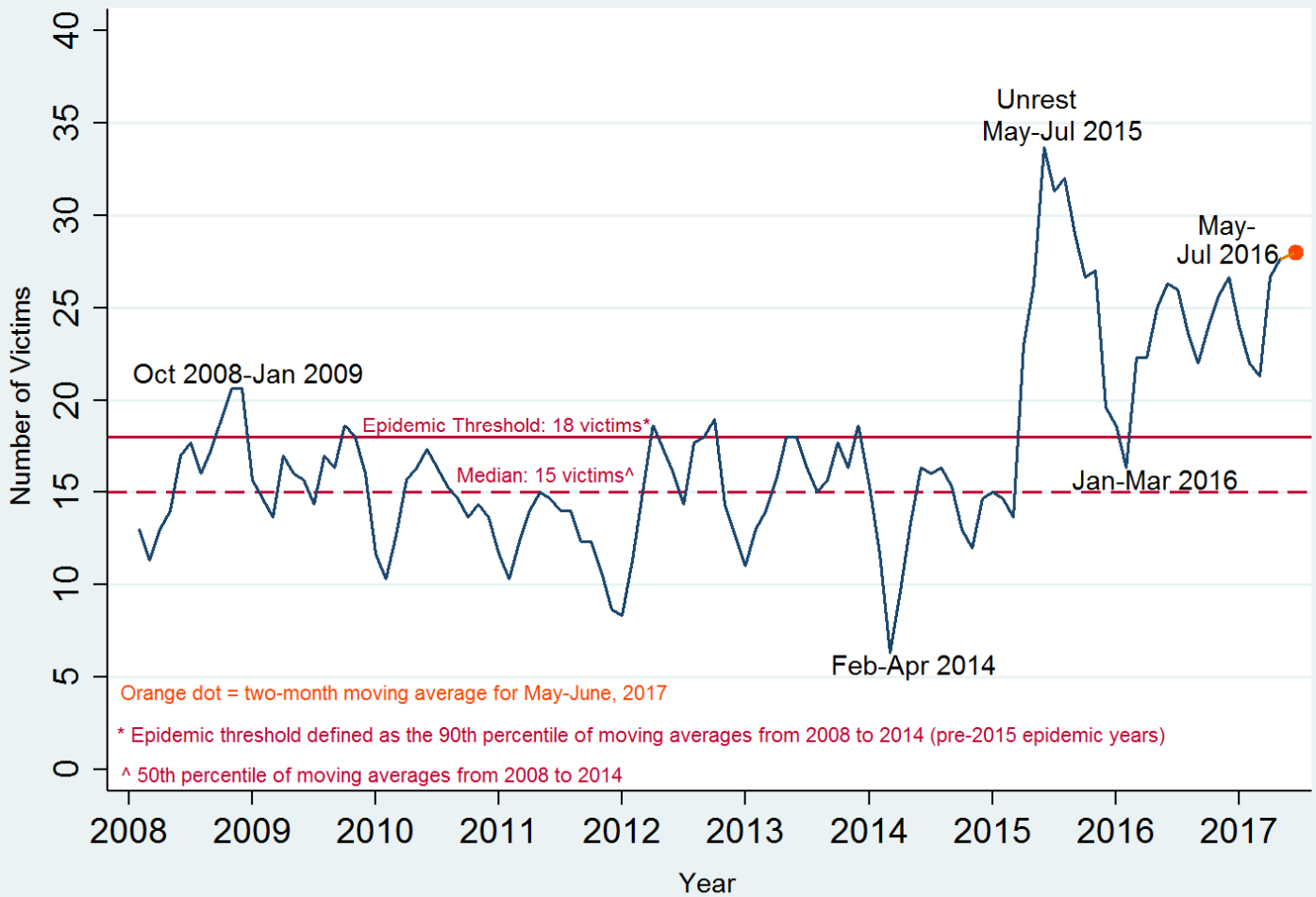
<sup>3</sup> This homicide figure includes a small number of homicide victims shot in a previous year but died in the current year, as is commonly reported. When possible, these homicides were excluded.



### Temporal Trends

Presently, citywide moving-averages for the number of firearm homicide victims remain elevated well above pre-2015 epidemic levels of violence (graph). Violence often peaks in the summer, but peaks can occur throughout other times of the year. A moving-average is calculated to help smooth phenomena that otherwise may appear jumpy to help to identify patterns. Three months of victims are summed and averaged, then advanced by one month and a new average is calculated. These means are then plotted on the graph.

Baltimore City: Three-Month Moving Averages for Firearm Homicide Victims, January 1, 2008 to June 30, 2017



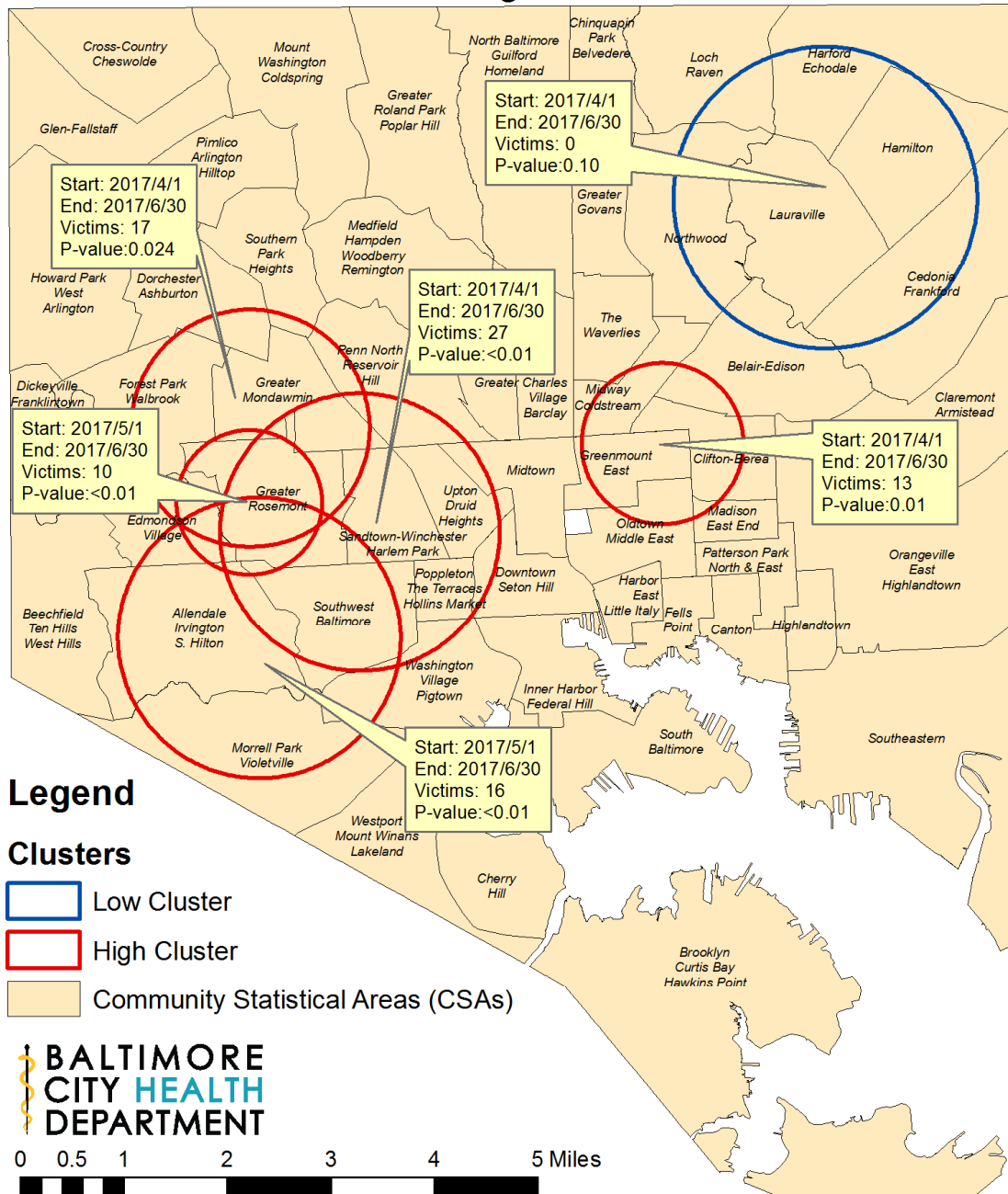
### Space-Time Clusters

The map below shows high (“hot”) and low (“cool”) space-time clusters of firearm homicide victims that remain active through the end of June—where we might expect clusters to appear in July (a prospective analysis). The blue cluster area experienced zero firearm homicides between April 1<sup>st</sup> and June 30<sup>th</sup>, 2017. The red clusters, however, are areas with high numbers of firearm homicide victims during the

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specified time periods. Additional information, such as motive, relationships between individuals, or homicide type (e.g. domestic) are frequently not available in open data. Purely spatial patterns (irrespective of time) are discussed in the 2015 homicide epidemic map (<http://arcg.is/1KbnJSE>).

### Baltimore City: Space-Time Clusters of Firearm Homicides, Active through June 2017



Notes: To be counted as part of a given cluster, the majority of a census tract in which the homicide occurred (its center or centroid) must fall within the cluster. Community Statistical Areas (CSAs) are displayed on the map for ease of interpretation. SaTScan and scan statistics were used in a prospective Poisson model (<https://www.satscan.org/>) through the end of the period. Clusters met or nearly met statistical significance (approximately p-value < 0.10). P-values for scan statistics indicate the probability of rejecting the null hypothesis (no space-time cluster), when the null is true.

## *Non-fatal Shootings*

This report focuses on homicides (rather than non-fatal shootings) for ease of interpretation. In addition, fatal shootings may be distinct from non-fatal shootings by involving different people and being more planned and deliberate. Still, offenders and many victims have similarities, including age and contact with law enforcement. For a discussion of offender and victim characteristics, see "[Statistical snapshots from Baltimore's deadliest year.](#)" Research in other parts of the country indicates victims are often related in small social networks of individuals that co-offend/are arrested together (see "[Network Exposure and Homicide Victimization in an African American Community](#)").

- As of 6/30/2017, there have been 312 victims of non-fatal shootings in Baltimore City this year (6 less compared to the same period last year).
- Non-fatal shootings can severely injure and disable, provide significant burdens to families, and possibly lead the victim, family, or friends to commit retaliatory violence.
- Hospital-based violence intervention programs (VIPs) directed towards shooting victims can help to reduce future victimization, trauma, and offending (see "[Risk Factors for Recurrent Violent Injury among Black Men](#)").

## *Related Information*

Baltimore City Health Department Web Map Gallery:  
[www.baltimorecity.gov/healthmaps](http://www.baltimorecity.gov/healthmaps).

Multiple Shootings at Single Locations in Baltimore City:  
<http://health.baltimorecity.gov/sites/default/files/Multiple%20Locations%20Brief%20March%202017.pdf>.

For more reports on youth violence topics,  
visit: <http://health.baltimorecity.gov/violence-prevention/reports-and-presentations>.

## *Selected News Items*

Castellanos L (2017). The Impact of Violence on Community Health.  
<http://www.hhnmag.com/articles/8216-the-impact-of-violence-on-our-communitys-health>.

Economist (2017). Crime and Despair in Baltimore.  
<https://www.economist.com/news/united-states/21724399-america-gets-safer-marylands-biggest-city-does-not-crime-and-despair-baltimore>.

Huffington Post (2017). What Bullets do to Bodies:  
<http://highline.huffingtonpost.com/articles/en/gun-violence/>.

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Robinson L (2017). Hospital responders work to break cycle of violence in Baltimore. <http://www.wbaltv.com/article/hospital-responders-work-to-break-cycle-of-violence-in-baltimore/10240027>.

### *Sources/References*

Baltimore City Police Department. Part I Victim-based Crime Data: <https://data.baltimorecity.gov/Public-Safety/BPD-Part-1-Victim-Based-Crime-Data/wsfq-mvij/data>.

Baltimore Sun. Baltimore Homicides Map. <http://data.baltimoresun.com/news/police/homicides/>.

*For more information, e-mail: [healthmaps@baltimorecity.gov](mailto:healthmaps@baltimorecity.gov).*