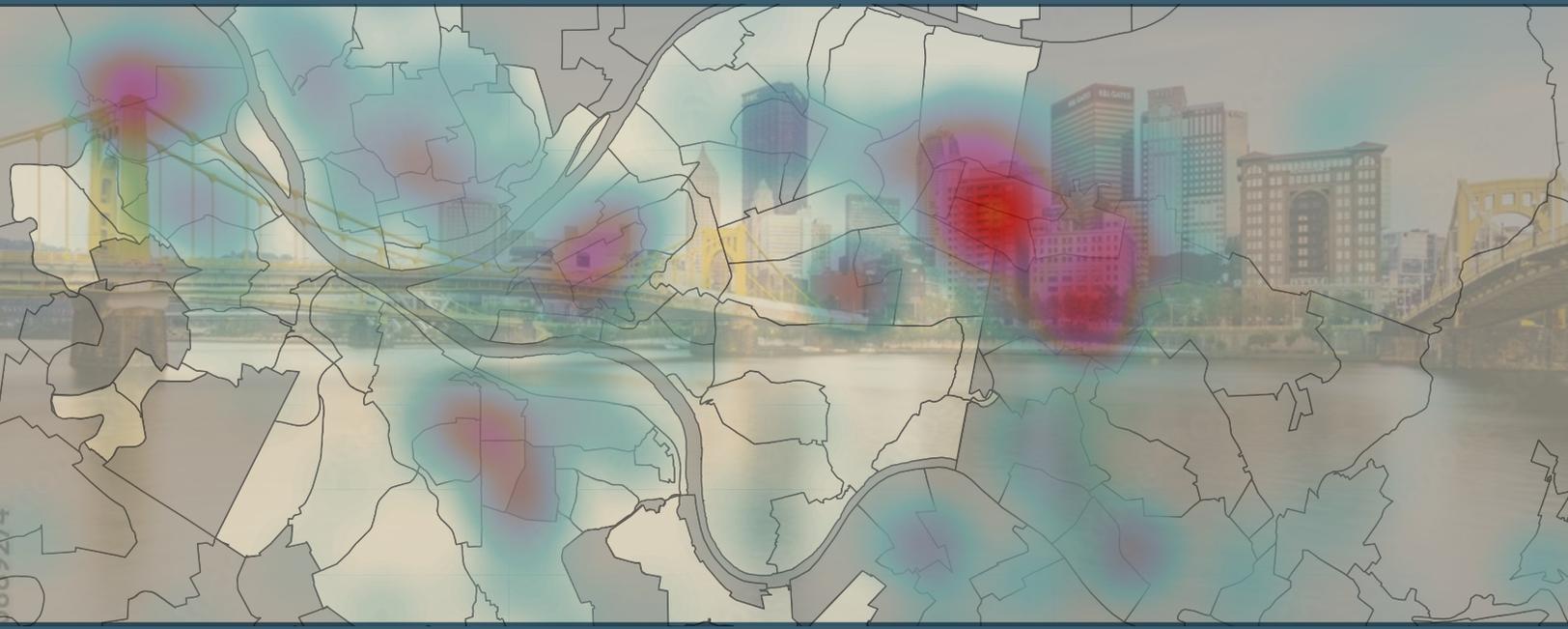


Homicides in Allegheny County and the City of Pittsburgh, 2016 through 2021



July 2022



The Allegheny County
Department of Human Services
One Smithfield Street
Pittsburgh, Pennsylvania 15222

<https://analytics.alleghenycounty.us/>

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ACRONYMS

ACOME	Allegheny County Office of the Medical Examiner
ACS	American Community Survey
CDE	[FBI] Crime Data Explorer
CNI	[Allegheny County] Community Need Index
DHS	[Allegheny County] Department of Human Services
GIS	Geographic Information System
PBP	Pittsburgh Bureau of Police

EXECUTIVE SUMMARY

All people, regardless of race or socioeconomic status, deserve to live in neighborhoods that are safe and free of violence. Overall violence, and homicide victimization in particular, is not randomly distributed, however. Rather, violence is heavily concentrated in just a small number of higher-need communities and overwhelmingly cuts short the lives of young Black men.

Using data from the Allegheny County Office of the Medical Examiner (ACOME), Allegheny County Department of Human Services (DHS) analyzed homicide trends from 2016 through 2021. Homicides make up about a quarter of gun violence each year, with non-fatal shootings accounting for most gun violence. As such, we also used data from the Pittsburgh Bureau of Police (PBP) to analyze trends in non-fatal shootings.

This report intends to inform the public, policy makers and violence prevention efforts about the people and places most disproportionately impacted by involvement with or victimization from gun violence in Allegheny County, in addition to presenting information on what factors are driving these disproportionalities. Efforts to reduce gun violence must be informed by data.

KEY FINDINGS

- There were 643 homicides in Allegheny County from 2016 through 2021. While homicides were stable or on the decline from 2016 through 2019 in both Allegheny County and the City of Pittsburgh, homicides increased by 27% in the County and by 43% in the City from 2019 to 2021, largely reversing the declines of previous years.
- Despite Black men making up only 6% of the County's population, they are victims in 66% of annual homicides on average. Most of these victims are between 18 and 34 years old. Black people in Allegheny County have an average homicide victimization rate that is 21 times the rate for White residents, with young Black men most at risk of victimization.
- Eighty-six percent of homicides from 2016 through 2021 were committed with a firearm.
- Eighty-six percent of victims with an identified residence were murdered within 10 miles of their home. Females were more than twice as likely to be murdered at their residence than males.
- Most homicide victims were involved in mental health services or enrolled in public benefits programs at some point before their death. Seventy-one percent of victims had prior justice system involvement before their death, for victims for whom data was available.
- Homicides in Allegheny County are deeply concentrated in Pittsburgh's eastern neighborhoods (e.g., East Hills, Homewood, Larimer and Lincoln-Lemington) and Wilkinsburg. Other homicide hot spots are in a few neighborhoods on Pittsburgh's upper Northside, Hill District, South Hilltop and West End; in Stowe-Rox; in the western-most sections of Penn Hills; and in several municipalities throughout the Monongahela River Valley.

- On average, homicides occur in just 0.3% of census blocks in Allegheny County, with 79% of these blocks located in census tracts with moderate to extreme levels of community need. Community need was identified using a modified version of DHS’s Community Need Index (CNI).¹ Census tracts in higher-need neighborhoods like Homewood and Allentown in the City of Pittsburgh and in County municipalities such as Wilkinsburg, North Braddock, McKees Rocks, Stowe Township and Clairton saw the largest increases in average homicide rates.

BACKGROUND

Homicide victimization is overwhelmingly carried out with a firearm. Some neighborhoods are more susceptible to gun violence as a result of decades of discriminatory housing, lending and land-use policy;² outmigration and the impacts of deindustrialization and economic restructuring;³ the crack-cocaine epidemic and the ensuing War on Drugs;⁴ and persistent disinvestment and abandonment.⁵ Additionally, the absence of stricter firearm control in the United States has led to interpersonal crime that is far more likely to turn deadly than in other countries with similar levels of crime but much lower rates of gun ownership.⁶

The results of these policies and labor market changes have been the concentration of poverty, joblessness, instability and blight; the social isolation of residents from resources, social networks, key institutions and opportunities; and the entrenchment of legal cynicism resulting from racism and classism in our criminal justice system. All these factors destabilize the social fabric of vulnerable neighborhoods—negatively affecting social cohesion and collective efficacy⁷—and subsequently allow gun violence to proliferate. It is important to note that such consequences are not distributed equally across neighborhoods. Nearly all majority-Black census tracts in Allegheny County have higher levels of need while most majority-White census tracts (with key exceptions) are lower in need, with need defined as relative rates of poverty, unemployment, lack of educational attainment, single parenthood and gun shots fired/reported.⁸

¹ <http://www.alleghenycountyanalytics.us/wp-content/uploads/2021/05/21-ACDHS-06-CommunityNeedIndex-05-12-2021-final.pdf>

² Rothstein, R. (2018). *The Color of Law*. NYC: Liveright Publishing Corp; *Exposing Housing Discrimination*. n.d. Urban Institute; Trounstine, J. (2018). *Segregation by Design: Local Politics and Inequality in American Cities*. Cambridge: Cambridge University Press.

³ Wilson, W. (2012). *The Truly Disadvantaged: The inner city, the underclass, and public policy*. Chicago: University of Chicago Press

⁴ Alexander, M. (2010). *The New Jim Crow Mass Incarceration in the Age of Colorblindness*. N.p.: The New Press.

⁵ Sharkey, P. (2018). *Uneasy Peace: The Great Crime Decline, the Renewal of City Life, and the Next War on Violence*. New York City: W. W. Norton & Company.

⁶ Zimring, F., & Hawkins, G. (1997). *Crime Is Not the Problem: Lethal Violence in America*. New York City, NY: Oxford University Press.

⁷ Social cohesion refers to the strength of relationships and the sense of solidarity among members of a community. Collective efficacy is the process of activating or

converting social ties among neighborhood residents to achieve collective goals, such as public order or the control of crime. Collective efficacy is an informal mode of control.

⁸ Cotter, N., & Mejia, N. (2021, May). The Allegheny County Community Need Index: Update for 2021 with a Focus on the Connection between Race and Community Need. Allegheny County Analytics. Note: For the current report, we removed the gun shots measure from the Community Need Index for analysis that cross referenced gun violence victimization and community need, as to not bias results. Disparity in community need by race still holds, despite the removal of the gun shots fired/reported measure.

The cycle of violence is brutal, self-reinforcing and yet another perpetrator of poverty in our higher-need communities. The costs of violence extend far beyond offenders, victims and their loved ones. Violence impacts the entire community. When violence is commonplace, residents retreat from neighborhood activity and are more likely to move;⁹ the effects of persistent trauma accumulate and have a severe impact on the mental and physical health of residents;¹⁰ business growth and prosperity are limited; the education, justice and medical systems are strained;¹¹ the ability to learn in school is inhibited;¹² and community progress slows.

A very small percentage of at-risk young men in our higher-need communities are the most vulnerable to involvement with or victimization from gun violence, with social network analyses showing that most of these young men are acquainted with each other.¹³ One study found that less than 4% of a neighborhood’s population was involved with a large percentage of homicides within a co-offending social network (e.g., a co-offending peer network, group or gang).¹⁴ Regarding additional relational risk factors, these young men tend to come from homes with poor family functioning and have parents with substance abuse issues and/or criminal involvement.

These young men have often experienced significant trauma and violence, have prior criminal justice system involvement and a history of victimization, exhibit behavioral challenges, do not trust authorities to settle disputes, experience peer pressure to be involved with violence (or suffer social rejection among peers), and have easy access to a firearm. An estimated 32 to 50% of homicides are preceded by alcohol consumption by the offender.¹⁵ Most violence erupts as the result of “beefs” between at-risk young men (arguments that are increasingly likely to start online) or is retaliatory in response to other instances of violence in the community, with at-risk young men of the belief that they are defending their life, the life of a loved one or their own reputation. Aggression can result when men experience stress caused by the self-perceived failure to live up to masculine expectations or when men maintain harmful masculine expectations.¹⁶ Other fatal violence is between intimate partners wherein the primary victims are female with a male offender, while a small fraction of fatal violence is motivated by hate based on sex, race, gender or sexual identity, religion or ethnicity.

⁹ Gabriel, R., Hess, C., & Crowder, K. (2021, May). When push comes to shove: Local violence and residential mobility among residents. *Journal of Marriage and Family*.

¹⁰ Smith, M. E. et al (2020, February). The impact of exposure to gun violence fatality on mental health outcomes in four urban U.S. settings. *Social Science and Medicine*.

¹¹ The Economic Cost of Gun Violence How to Save \$280 Billion During a COVID Recession (2021, February 2). In Everytown Research & Policy.

¹² Sharkey, P. 2010, June 29. “The Acute Effect of Local Homicides on Children’s Cognitive Performance.” Proceedings of the National Academy of Sciences of the United States of America.

¹³ Papachristos AV, Wildeman C, Roberto E. Tragic, but not random: the social contagion of nonfatal gunshot injuries. *Soc Sci Med*. 2015;125:139-150.

¹⁴ Andrew V, Papachristos and Christopher Wildeman, “Network Exposure and Homicide Victimization in an African American Community.” *American Journal of Public Health* 104, no.1 (2014).

¹⁵ Alcohol and Violent Crime: What is the Connection? What can be Done? (2006, April). *U.S Department of Justice Office of Justice Programs Bureau of Justice Assistance*.

¹⁶ Harmful Masculinity and Violence: Understanding the Connection and Approaches to Prevention. (2018, September). *American Psychological Association*.

METHODOLOGY

This report focuses primarily on homicides that occurred from 2016 through 2021 in Allegheny County, with a special focus on the City of Pittsburgh. Homicide data come from the Allegheny County Office of the Medical Examiner¹⁷ (ACOME). Non-fatal shootings in the City of Pittsburgh from 2016 through 2021 were also examined using data from the Pittsburgh Bureau of Police (PBP). Additionally, we compared changes in average homicide rates for census tracts in Allegheny County for 2010–2015 versus 2016–2021. Homicide victimization by census tract was cross referenced with a modified¹⁸ version of Allegheny County Department of Human Services' Community Need Index (CNI), which identifies relative need across census tracts in Allegheny County.

Homicides were geocoded, spatially analyzed and mapped using Arc GIS Pro. Demographic information on victims and offenders were assessed using data from ACOME and the Allegheny County Data Warehouse, with the latter also allowing us to analyze human service and criminal justice system involvement for victims. Where applicable, homicides were computed as rates per 100,000 people using population estimates from the United States Census Bureau. This report is an update of our previously published reports on homicides from [1997 through 2012](#) and from [2010 through 2015](#). **Appendix A** provides a description of the data sources used in this analysis and includes a note on the differences in homicides as reported by ACOME, PBP and local media sources.

DATA ANALYSIS

National and Local Homicides: Long-Term Trends

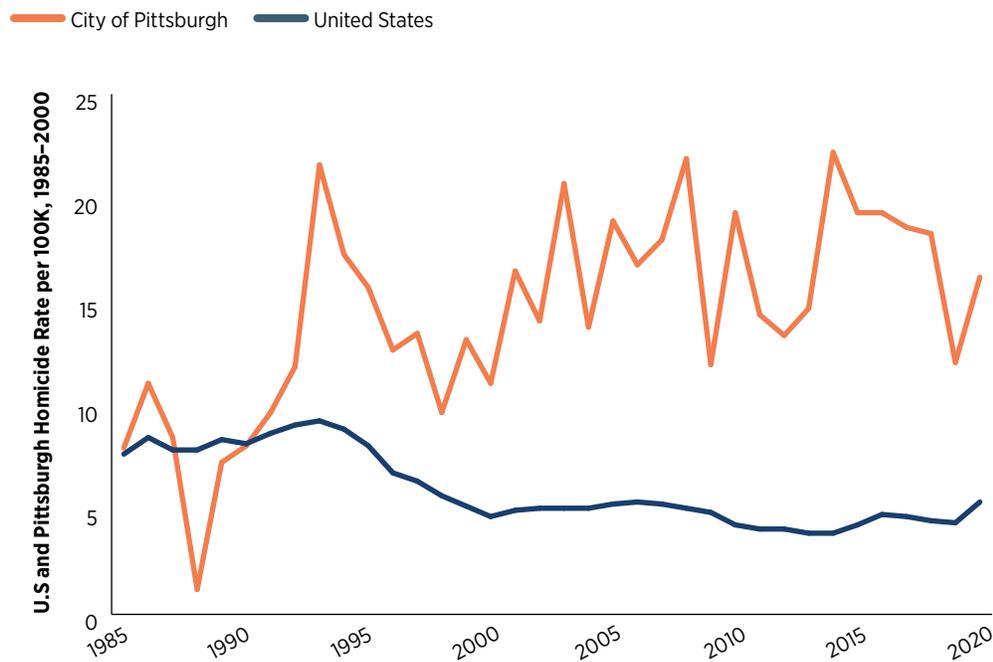
Nationally, the homicide rate plummeted from its modern¹⁹ peak in 1993 (9.3 per 100,000 residents) to its lowest rate in more than half a century in 2014 (3.9 per 100,000 residents) according to data reported by the Federal Bureau of Investigation's (FBI) Crime Data Explorer (CDE) (**Figure 1**). Unlike the nation, the City of Pittsburgh saw its homicide rate peak four times since 1985: 1993 (21.6 per 100,000 people), 2003 (20.7 per 100,000 people), 2008 (21.9 per 100,000 people), and 2014 (22.2 per 100,000 people).

¹⁷ In this report, we use ACOME homicide data rather than data from the Pittsburgh Bureau of Police (PBP) or Allegheny County Police (ACP) to maintain a consistent data source and definition of homicides for every geography in Allegheny County. See note about homicide data in **Appendix B** to understand some of the differences between homicides as reported by PBP, ACP and ACOME.

¹⁸ Our Community Need Index (CNI) uses data on gun shots fired/reported via Allegheny County Emergency Services. Given that this report examines homicides and non-fatal shootings, we removed gun shots fired/reported as a measure from the CNI, as to remove any bias towards neighborhoods with high homicide rates. We cross referenced homicide victimization by census tract with this modified CNI to assess whether community need related to the concentration of homicide victimization.

¹⁹ We define modern in this context as 1960s onward. While **Figure 1** focuses on homicide rates from 1985 to 2000 (i.e., the data available on the FBI's Crime Data Explorer), the homicide rate in the U.S increased sharply from the late 1960s to its absolute modern peak in 1993. The sharp, continued decline of the U.S. homicide rate from 1994 to 2014 is commonly known as "The Great Crime Decline."

FIGURE 1: United States and City of Pittsburgh Homicide Rates, 1985 through 2020



Source: FBI's Crime Data Explorer and U.S Census Bureau population estimates²⁰

National and Local Homicides: 2016 through 2021

Homicide Rates in the United States, Allegheny County and Pittsburgh

The national homicide rate, after remaining relatively stable from 2016 through 2019 at approximately 5 per 100,000 people (Figure 2), increased by 21% from 2019 to 2020, which may be the largest year-to-year percent increase since 1905.²¹ It is important to note that the 2020 U.S. homicide rate is still about 40% lower than the peak U.S. homicide rate of roughly 9 per 100,000 people in 1993, according to data from the FBI's CDE (Figure 1).

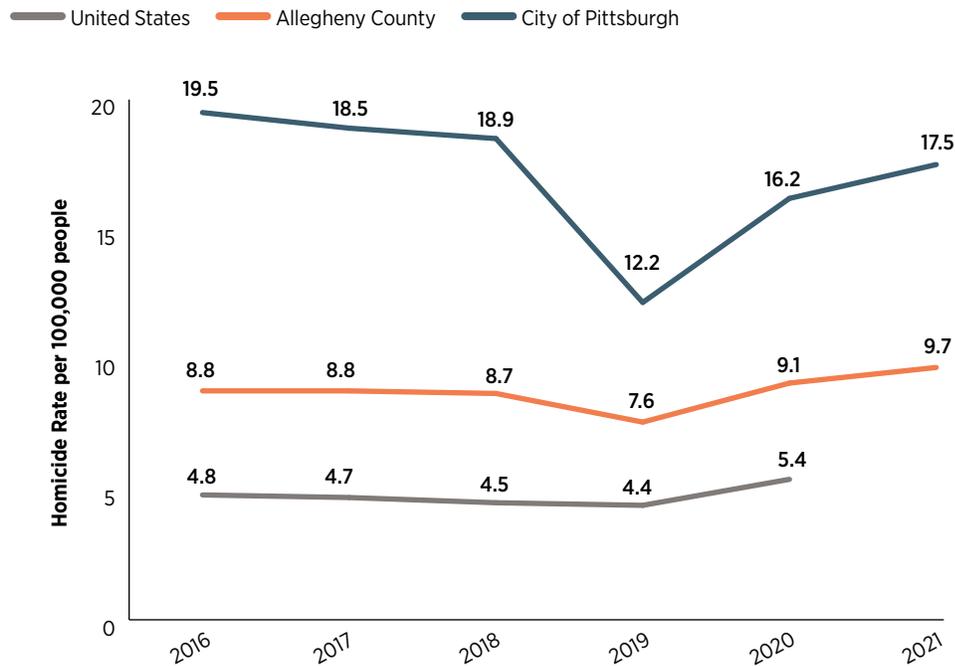
Homicide rates in Allegheny County and the City of Pittsburgh followed similar trends as those in the U.S. in recent years. The homicide rate in Allegheny County and the City of Pittsburgh was stable or declining from 2016 through 2019, but Allegheny County saw its homicide rate increase by 19% from 2019 to 2020, and the City of Pittsburgh saw an increase of 32% over the same period. Both Allegheny County and the City of Pittsburgh saw their homicide rate increase again from 2020 to 2021, by 6% and 8% respectively.

²⁰ Homicides for United States pulled from the FBI CDE. Homicides for City of Pittsburgh from 1985 to 2006 were pulled from FBI CDE and Homicides from 2007 through 2020 were pulled from ACOME. We computed homicide rates for the City of Pittsburgh (by year) using population counts via the 1980, 1990, 2000, 2010 and 2020 Decennial

census. Homicide rates for the United States were computed (by year) using population counts via the 1980, 1990, 2000, 2010 and 2020 census, with homicide rates from 2011 through 2019 being computed with respective ACS One-year estimates.

²¹ Gramlich, J. (2021, October). What we know about the increase in U.S. murders in 2020. *Pew Research Center*.

FIGURE 2: Homicide Rates in the United States, Allegheny County and the City of Pittsburgh, 2016 through 2021



Data Source: ACOME, FBI CDE and population estimates from U.S Census Bureau²²

Homicide Rate Comparison to Benchmark Cities

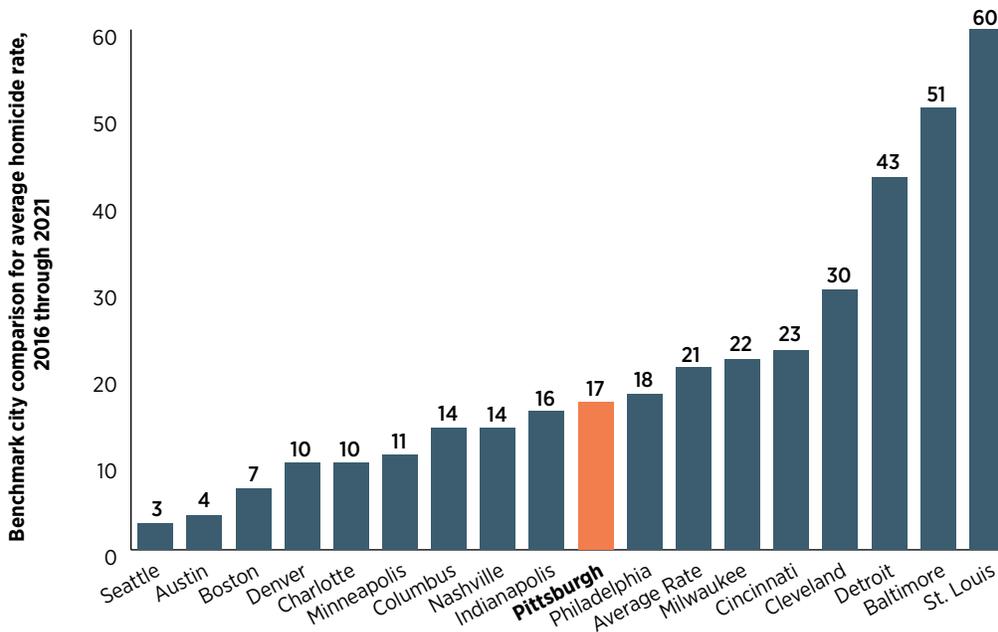
Compared with homicide rates in 16 benchmark cities—which together had an annual average of 21 homicides per 100,000 people²³—Pittsburgh’s average rate is slightly lower at 17 per 100,000 people (Figure 3). Pittsburgh’s rate is less than half that of Detroit, Baltimore and St. Louis; comparable to Indianapolis and Philadelphia; and several times that of Seattle, Austin and Boston.

²² Homicides for the City of Pittsburgh and Allegheny County pulled from ACOME. Homicides for United States pulled from FBI CDE. We computed homicide rates for the City of Pittsburgh and Allegheny County using population estimates via 2019 ACS Five-year estimates. Homicide rates for the United States were computed using 2016

through 2019 ACS One-year estimates and 2020 Decennial population counts.

²³ Benchmark cities are based on cities of comparable size and defined in Key Indicators for Understanding Our Region, published by Pittsburgh Quarterly under Pittsburgh Today.

FIGURE 3: Average Annual Homicide Rate by City, 2016 through 2021



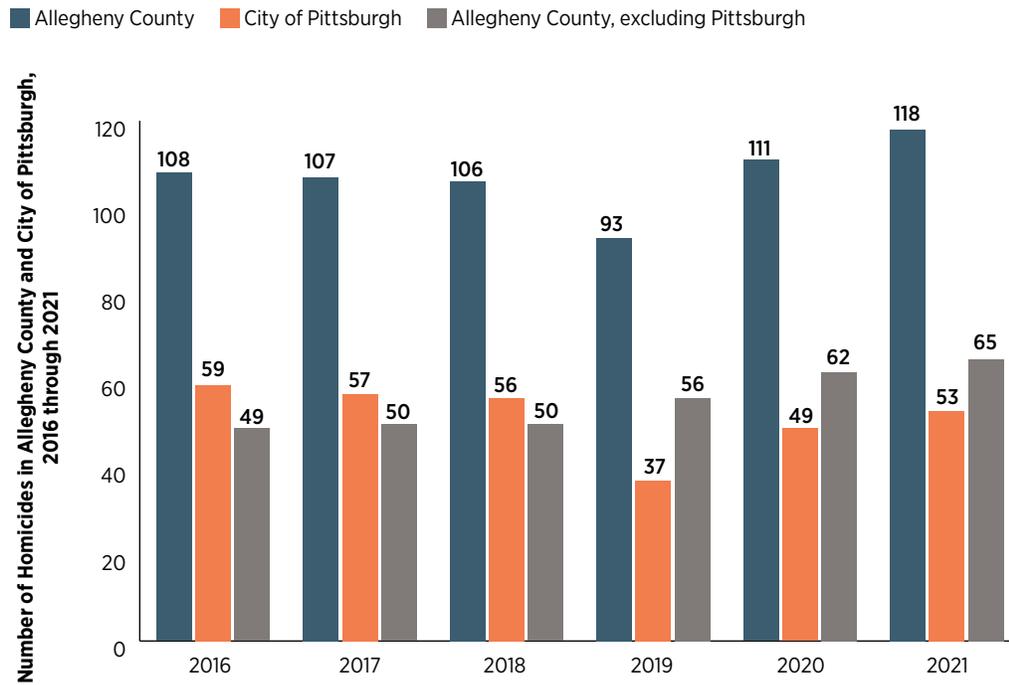
Source: FBI CDE and 2019 ACS Five-year population estimates

Homicide Counts in Allegheny County and Pittsburgh

There were 643 homicides in Allegheny County from 2016 through 2021 and 311 in the City of Pittsburgh, according to ACOME data. **Figure 4** shows that total homicides in Allegheny County as a whole and in the City of Pittsburgh were stable or on the decline from 2016 through 2019, with a 14% decline in the County and a 37% decline in Pittsburgh during that time.

However, from 2019 to 2021, Allegheny County homicides increased by 27%, with a 43% increase in the City of Pittsburgh and a 16% increase outside of the City.

FIGURE 4: Count of Homicides in Allegheny County and City of Pittsburgh, 2016 through 2021



Data Source: ACOME

In each year from 2019 through 2021, the majority of homicides in Allegheny County occurred outside the City of Pittsburgh. This is a change from earlier years when the majority of homicides in the County happened within City of Pittsburgh limits (Table 1).

TABLE 1: Share of Homicides in Allegheny County Occurring Outside the City of Pittsburgh, 2016 through 2021

YEAR	2016	2017	2018	2019	2020	2021
Share of Homicides Outside Pittsburgh	45%	47%	47%	60%	56%	55%

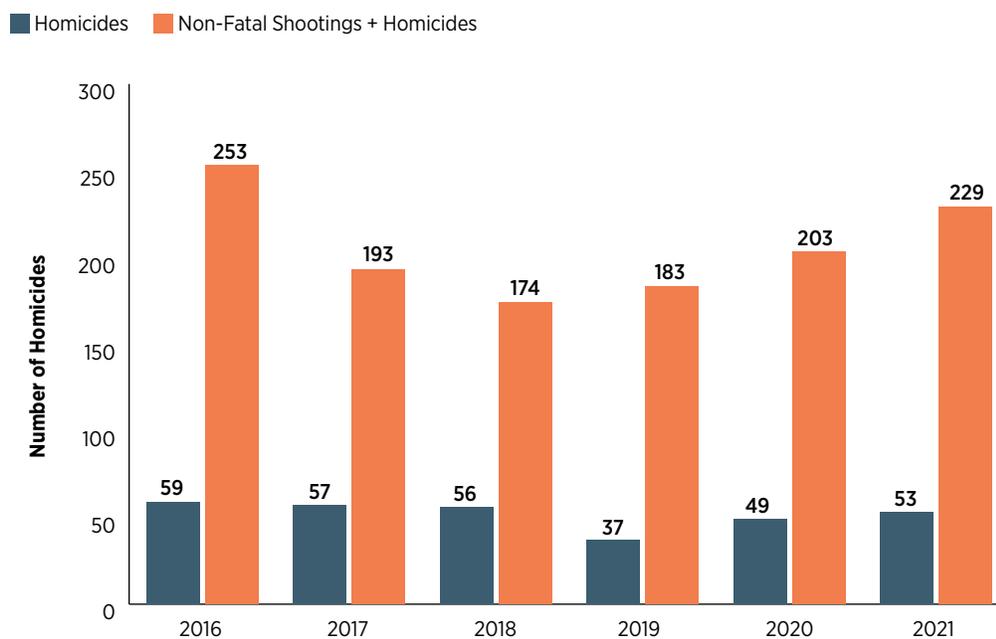
Data Source: ACOME

Homicides Are Just a Fraction of Gun Violence

Figure 5 shows the combined count of homicides and non-fatal shootings in the City of Pittsburgh.²⁴ On average, homicides account for 25% of total gun violence²⁵ in the City of Pittsburgh. This means that to view a full picture of gun violence, we cannot rely on homicide counts alone.

When looking at homicides and non-fatal shootings together, Pittsburgh saw declines in gun violence from 2016 to 2017 (a decline of 24%) and from 2017 to 2018 (a decline of 10%) (**Figure 5**). However, the city saw steady increases in gun violence from 2018 to 2019 (an increase of 5%), 2019 to 2020 (an increase of 11%) and 2020 to 2021 (an increase of 13%). Measuring homicides alone suggests that 2019 was a record low for gun violence in Pittsburgh, but including non-fatal shootings reveals that 2019 was an increase from 2018.

FIGURE 5: Number of Homicides versus Homicides Plus Non-Fatal (NF) Shootings in the City of Pittsburgh, 2016 through 2021



Data Source: ACOME and PBP

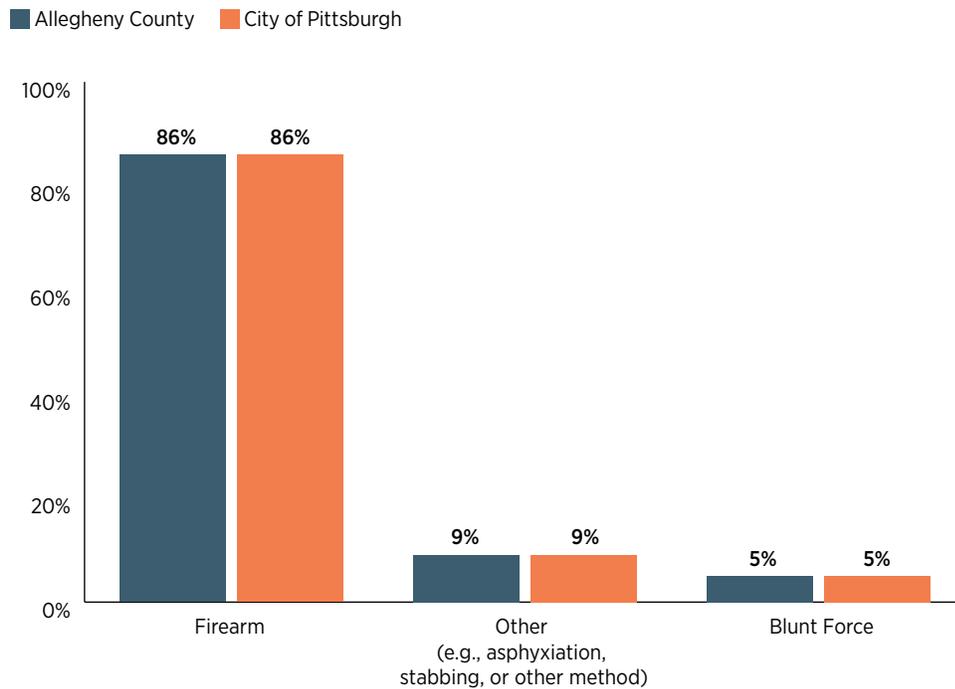
²⁴ This part of the analysis describes non-fatal shootings within the City of Pittsburgh but not the rest of Allegheny County because DHS receives non-fatal shooting data from the PBP only.

²⁵ We define “gun violence” as the combined count of homicides and non-fatal shootings, given that 86% of homicides in Allegheny County from 2016 through 2021 were committed with a firearm.

Causes of Homicide

In both Allegheny County and the City of Pittsburgh, 86% of homicides are committed with a firearm, with the remainder a result of blunt force trauma or some other mode of violence (e.g., asphyxiation, stabbing, or some other method) (Figure 6).

FIGURE 6: Causes of Homicide, Allegheny County and City of Pittsburgh, 2016 through 2021



Data Source: ACOME

Types of Homicidal Violence

The primary types of fatal violence are community violence and violence that occurs within the home. Community violence is typically defined as exposure to intentional acts of interpersonal violence committed in public areas by individuals who are not intimately related to the victim. We define home violence as violent or aggressive behavior within the residence of the victim, which may involve violent abuse by a spouse or partner.

Using data from the PBP, we categorized violence by legal sex of homicide victims, for cases in which the sex of the victim and offender were known and for cases where the incident location and victim’s residence were known. We had access to offender data for the City of Pittsburgh only, not the rest of Allegheny County. There were 116 homicide victims for whom the aforementioned information was known. In this analysis, community violence was broadly defined as fatal acts of violence outside of the victim’s residence,²⁵ while home violence was defined as fatal acts of violence within the victim’s residence.

The majority (58%) of homicides were caused by male on male community violence, with male on male home violence being the second leading cause at 13%. In all, 77% of homicides met our broad definition of community violence, while 23% met our definition of home violence (Table 2).

TABLE 2: Homicide Victimization in the City of Pittsburgh by Type, 2016 through 2021

VIOLENCE TYPE	COUNT	PERCENTAGE
Community Violence: Male on Male	67	58%
Home Violence: Male on Male	15	13%
Community Violence: Male on Female	13	11%
Community Violence: Female on Male	8	7%
Home Violence: Male on Female	5	4%
Home Violence: Female on Male	4	3%
Home Violence: Female on Female	3	3%
Community Violence: Female on Female	1	1%
Total	116	100%

Data Source: PBP

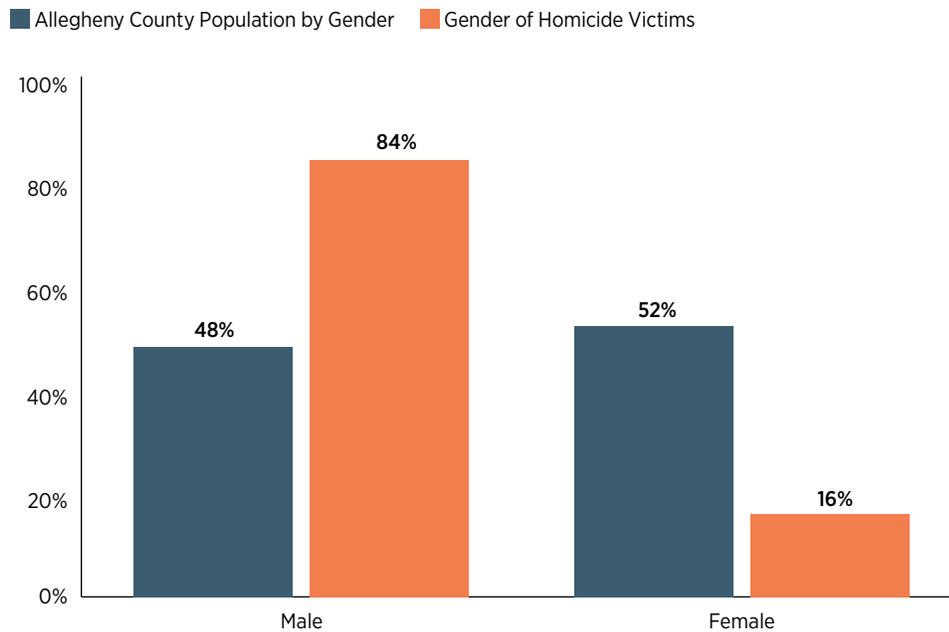
²⁶ We did not have information on whether or not victims and offenders were intimately related.

Victims of Homicide

Legal Sex of Victims

Although Allegheny County’s population is roughly evenly distributed by sex, 84% of homicide victims from 2016 through 2021 were male (Figure 7); for the City of Pittsburgh, this value was also 84%. Males were more than five times as likely to be victims of homicide than females in the County and City.

FIGURE 7: Sex of Homicide Victims in Allegheny County, 2016 through 2021, Compared to the County Population



Data Source: ACOME and 2019 ACS Five-Year population estimates

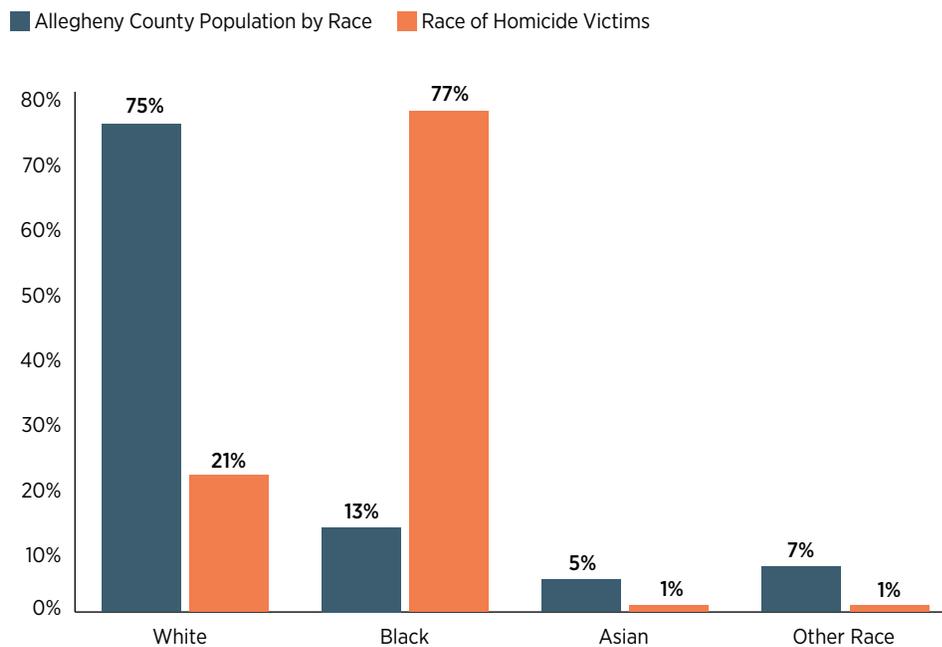
Race of Victims

Since Allegheny County’s two major racial groups are White and Black, this report focuses on victimization disparities between those populations primarily. Out of 643 homicides from 2016 through 2021, only 1% of homicide victims were Asian (compared to a County population that is 5% Asian) and only 3 victims were Hispanic or Latino, when cross referenced with data on ethnicity in the Allegheny County Data Warehouse.

Black residents were much more likely to be victims of homicide than White residents. While Black residents comprise only 13% of the County population, they accounted for 77% of homicide victims in the County from 2016 through 2021 (Figure 8). During those years, Black Allegheny County residents experienced an average homicide victimization rate that was 21 times greater than the rate for White residents.

Similarly, in the City of Pittsburgh, 23% of the population is Black and 80% of all homicide victims were Black. The homicide victimization rate of Black Pittsburgh residents was 12 times greater than that of White residents.

FIGURE 8: Race of Homicide Victims in Allegheny County, 2016 through 2021, Compared to the County Population



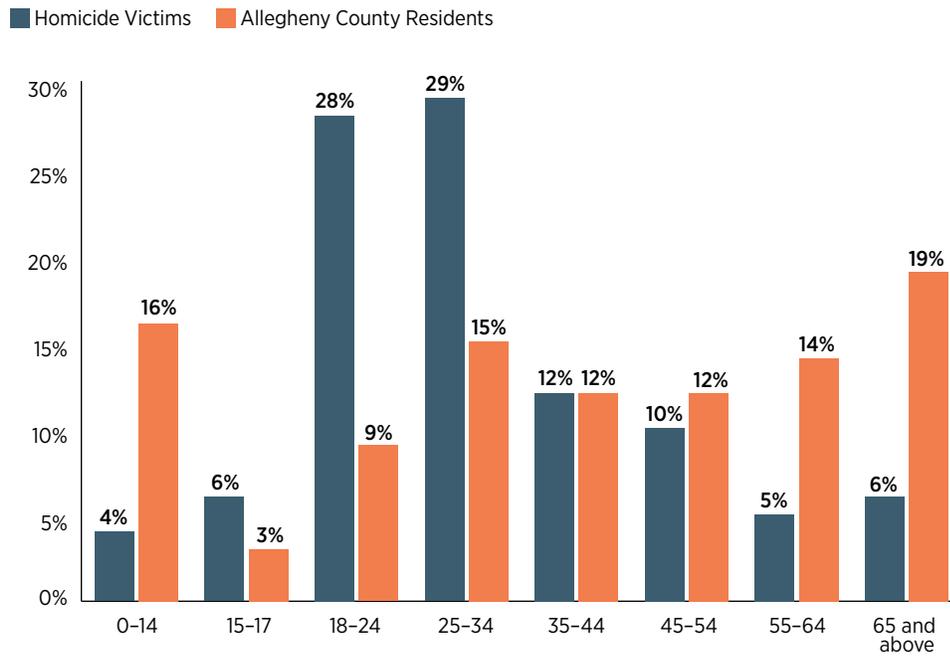
Source: ACOME and 2020 Decennial Census population estimates

Age of Victims

More than half (56%) of homicide victims in Allegheny County during the period of study were between the ages of 18 and 34 (Figure 9). Eighteen- to twenty-four-year-old individuals were killed at a percentage that is more than three times their representation in the population of Allegheny County, and 25-to-34-year-old individuals were killed at a percentage nearly twice their representation in the population. Ten percent of victims were younger than 18.

In the City of Pittsburgh, 58% of homicide victims were between the ages of 18 and 34, and 9% of victims were younger than 18.

FIGURE 9: Age of Homicide Victims in Allegheny County, 2016 through 2021

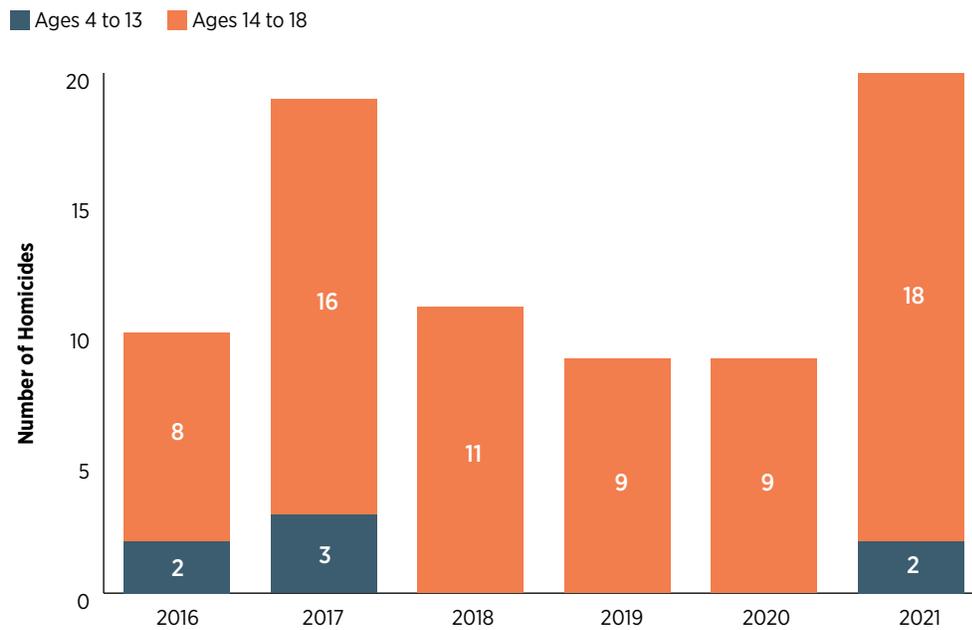


Data Source: 2019 ACS Five-Year population estimates

School-Aged Youth

School-aged youth (ages four through 18) accounted for 12% of Allegheny County homicides from 2016 through 2021; 91% of those school-aged youth victims were ages 14 through 18. **Figure 10** shows yearly counts of school-aged youth homicides, with 2021 being the deadliest year (20 victims age 18 and younger).

FIGURE 10: Homicide Count by Year, School-Aged Youth, Allegheny County, 2016 through 2021



Source: ACOME

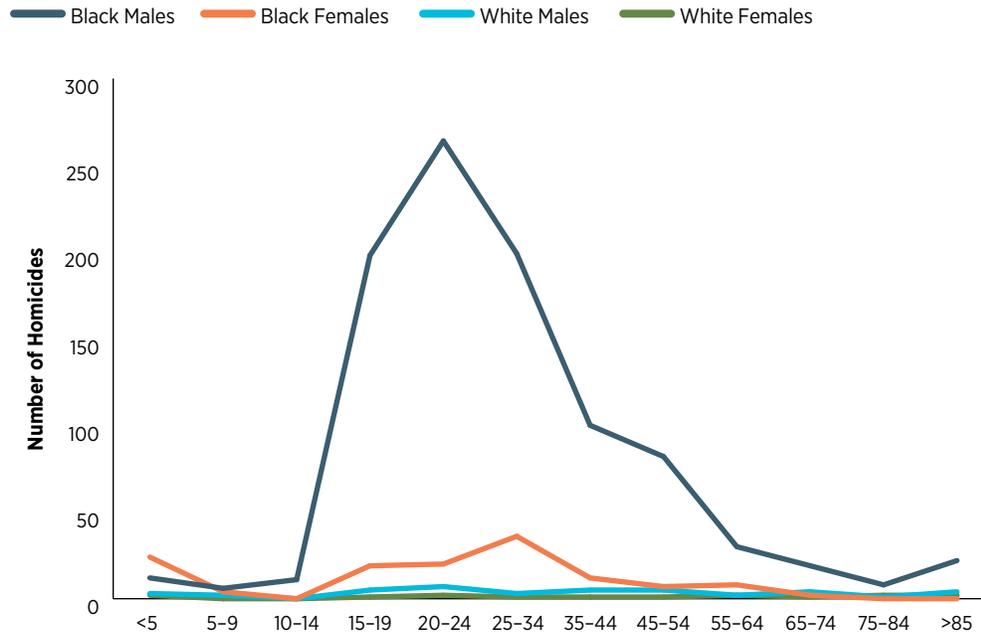
Population at Highest Risk of Victimization

When considering age, race and sex together, a stark picture emerges: violence is a significant problem for young Black men, far out of proportion to their representation in the County population. Although the rates are higher for Black men in almost every age range, Black men ages 15 through 44 are victims of homicide at much higher rates, with Black men ages 20 to 24 being killed by homicide at the highest rate (**Figure 11**). Black men comprise only 6% of the population in Allegheny County but made up 66% of homicide victims from 2016 through 2021.

Black women in Allegheny County are slightly overrepresented in that they account for 7% of the County’s population but comprised 10% of all homicide victims from 2016 through 2021, with Black women ages 20 to 34 being the most at risk.

Both White men and White women are victimized far less than their representation in the population. White men comprise 39% of the County population yet were only 16% of homicide victims from 2016 through 2021 and White women account for 41% of the County population yet were only 6% of homicide victims over the same period.

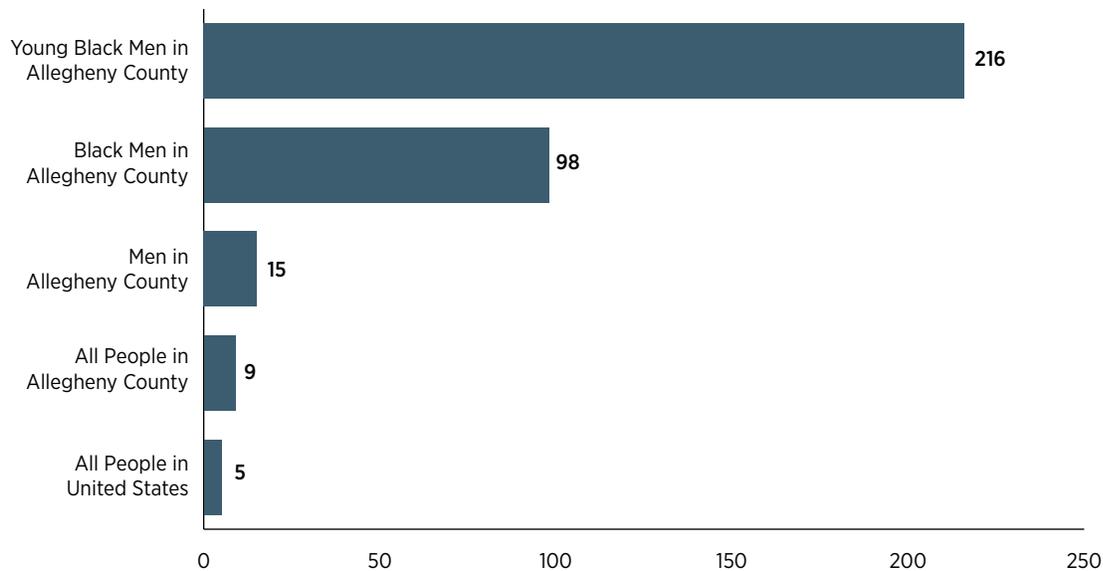
FIGURE 11: Average Homicide Rates by Age, Sex and Race of Homicide Victims (per 100,000), 2016 through 2021



Data Source: ACOME and 2019 ACS Five-year population estimates

Figure 12 visualizes the steep disproportionality in homicide victimization for young Black men in Allegheny County. The average yearly homicide rate in Allegheny County was nine per 100,000 (80% higher than the U.S homicide rate); for Black males, the rate was 98 per 100,000. The rate for young Black men (ages 15 through 34) was 216 per 100,000. This is more than 36 times the average homicide rate for the United States.

FIGURE 12: Homicide Victimization Rates per 100,000, 2016 through 2021



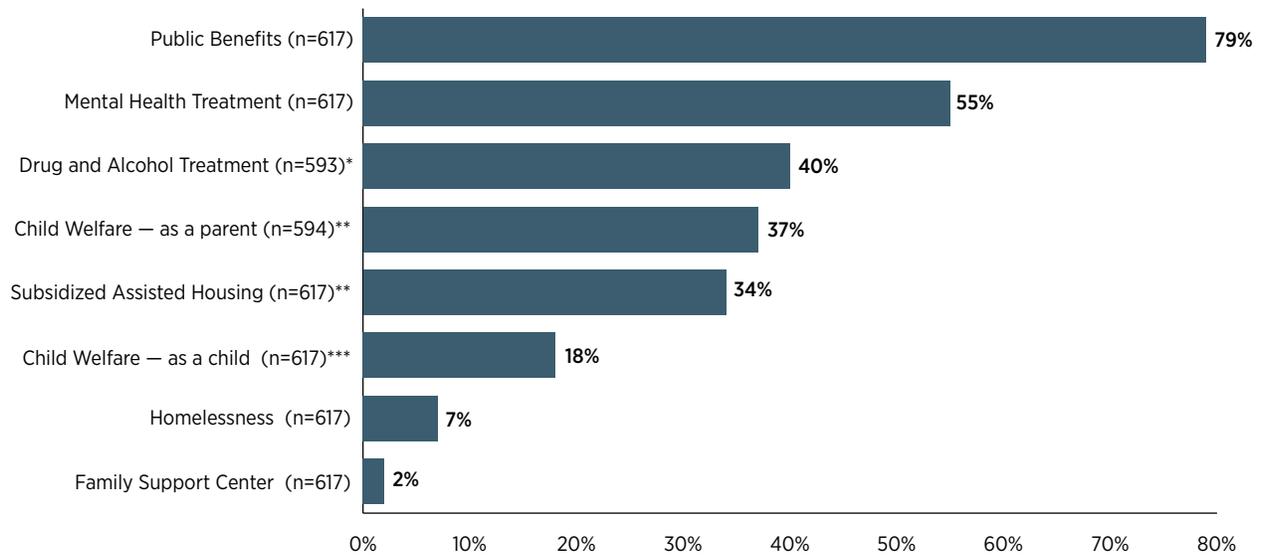
Data Source: ACOME and 2019 ACS Five-Year population estimates

Victims’ Involvement with Human Services

Data from the Allegheny County Data Warehouse were used to examine homicide victims’ past encounters with public systems. Data were examined to understand potential touch points for intervention and prevention. We were able to identify human services data for 96% (617, n=643) of homicide victims in Allegheny County over the six-year period from 2016 through 2021. Eighty-four percent of those victims (519, n=617) were involved in any of the services listed in **Figure 13** before their death.

Seventy-nine percent of the victims with available human services information (485, n=617) received public benefits at some point in their lifetime before their death. Forty-one percent of victims (253, n=617) were involved in the child welfare system (as a child or as a parent). Sixty-two percent of the victims (380, n=617) received a publicly funded mental health or drug/alcohol service, and 32% of the victims (196, n=617) received both mental health and drug/alcohol services.

FIGURE 13: Percent of Homicide Victims (2016 through 2021, n=617) Ever Involved in Human Services Before Their Death, by Service Type



* Includes only victims who were 18 years or older at or before their death. Although drug and alcohol services may be provided to clients who are younger than 18, this is a rare occurrence, so we excluded them from this part of the analysis.

** Includes only victims who were 18 years or older at or before their death.

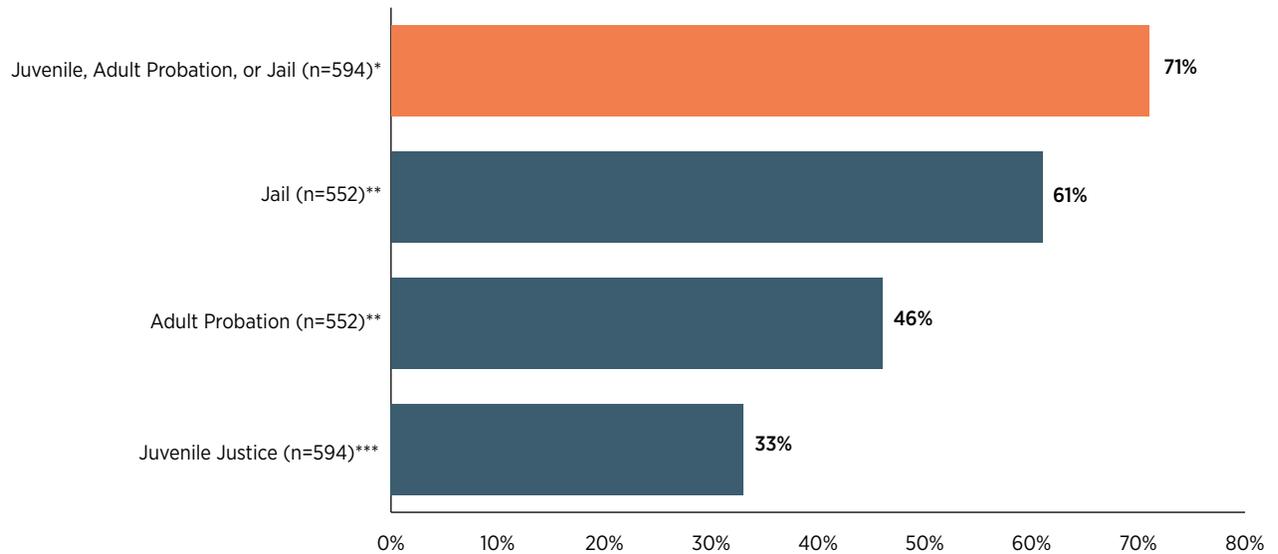
*** Data about children’s involvement in child welfare services were only available as of 2002 and were available for victims who were under age 18 at any point between 2002 and 2021.

Data Source: Allegheny County Data Warehouse

Victims’ Involvement with the Criminal Justice System

Seventy-one percent of victims had prior justice system involvement before their death, for victims for whom data was available. Sixty-one percent (334, n=552) had a prior jail booking. Forty-six percent (255, n=552) had a case in adult probation. Thirty-three percent of victims (194, n=594) had a prior history with the juvenile justice system (Figure 14).

FIGURE 14: Percent of Homicide Victims (2016 through 2021) Ever Involved in Justice System Before Their Death



* This group includes victims who were 10 or older at or before their death

**Only includes victims who were 18 years or older at or before their death

*** The Allegheny County Data Warehouse has historic information from the Juvenile Probation Office since 2000. Involvement in this system was available for victims who were 10 through 17 at some point from 2000 through 2021.

Data Source: Allegheny County Data Warehouse

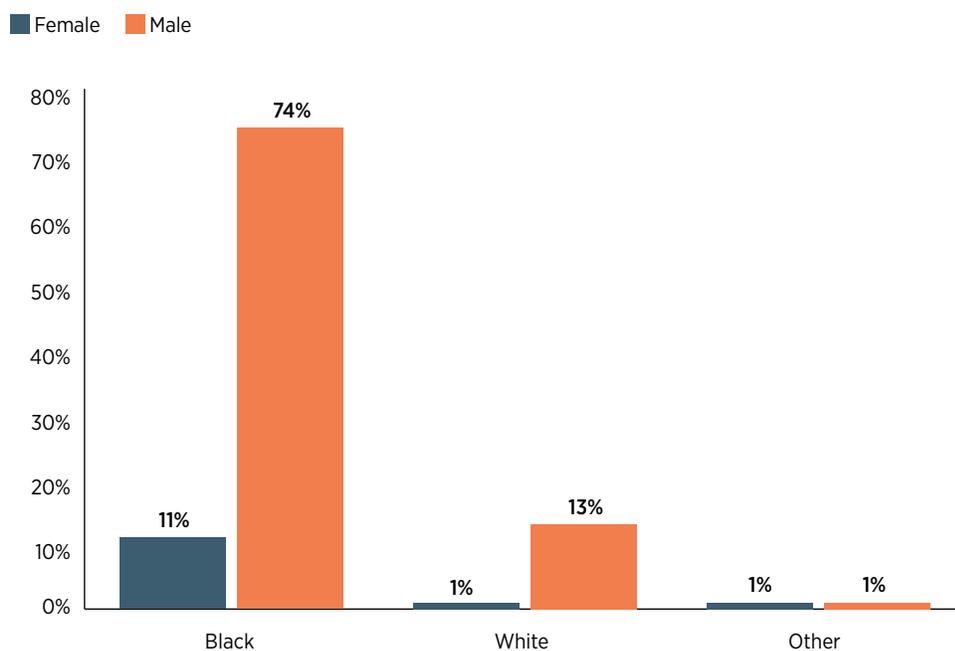
Ninety percent of the victims involved in either juvenile justice or adult probation or in jail before their death were male (380, n=421). When considering only jail bookings, 92% were men (307, n=334). Most of the homicide victims with a jail booking were booked more than once.

Offender Demographics

DHS receives data on people who committed homicides from only the PBP. Therefore, we have offender data only for homicides that occurred in the City of Pittsburgh. There were 139 unique and known offenders who committed homicide on individual(s) in the City from 2016 through 2021.²⁷

Homicide offenders tended to be demographically similar to victims. Seventy-four percent of offenders were Black men and nearly 70% of offenders were between ages 18 and 34. Only 8% of known offenders were ages 17 and under, with all offenders below age 18 being between the ages of 15 and 17. See **Figures 15 and 16** for demographic information on offenders in cases where data was available and the offender was known.

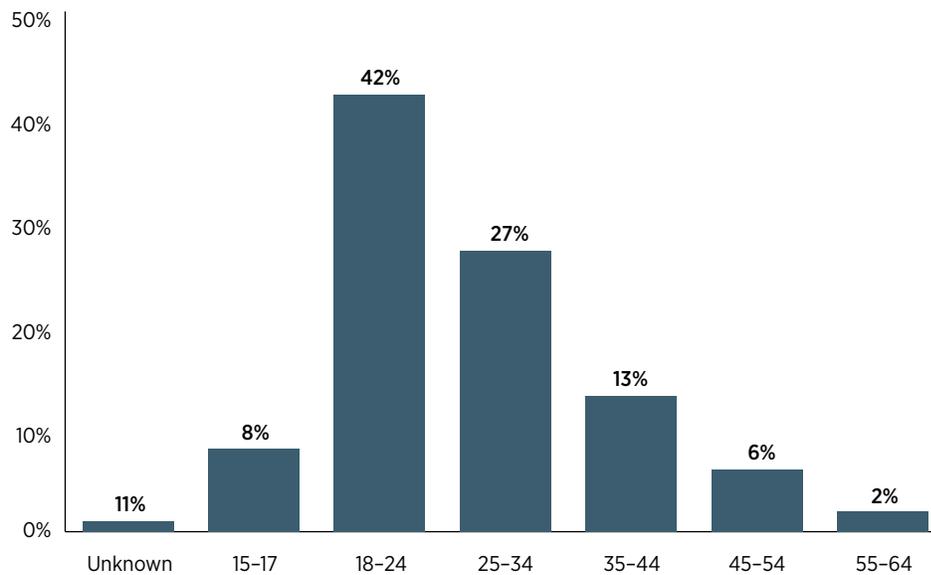
FIGURE 15: Known Homicide Offenders by Race and Legal Sex in the City of Pittsburgh (n=139), 2016 through 2021



Data Source: PBP

²⁷ There were 311 homicides in the City of Pittsburgh from 2016 through 2021, according to the ACOME. There were occasions where an offender killed more than one victim and occasions where multiple offenders killed the same victim.

FIGURE 16: Known Homicide Offenders by Age in the City of Pittsburgh (n=139), 2016 through 2021



Data Source: PBP

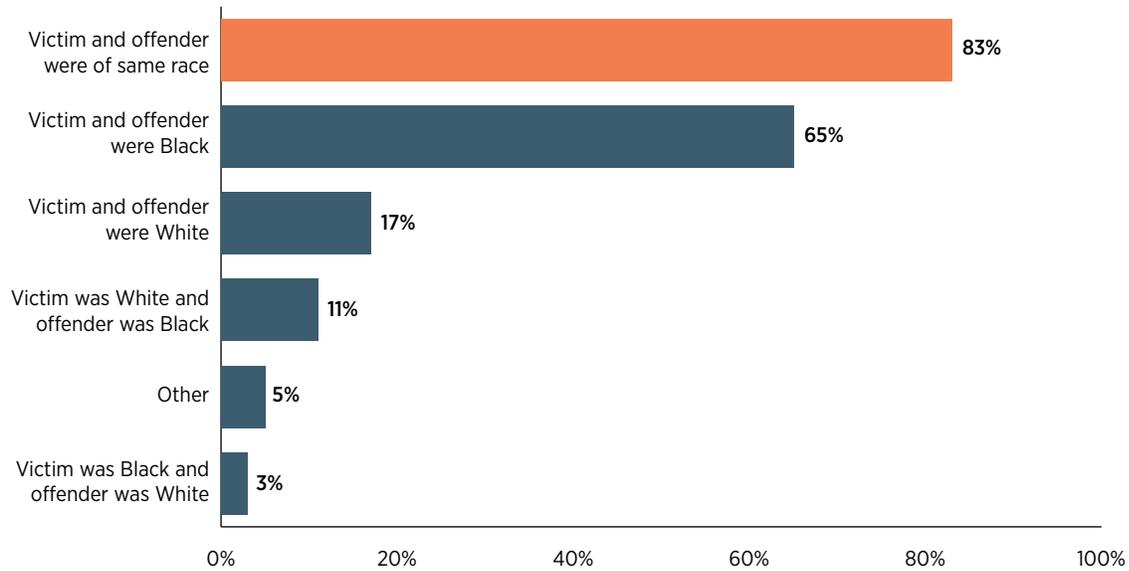
Comparison of Offender and Victim Demographics

There were 154 unique and known “offender-to-victim” relationships in the City of Pittsburgh where demographic information on the victim and offender were available. While there were 311 homicides in the City from 2016 through 2021, the offender(s) was known in about 44% of all cases.²⁸

A clear pattern emerges wherein homicides rarely cross racial lines. Eighty-three percent of victims and offenders were of the same race (Figure 17), and 71% of homicides were carried out by male offenders taking the lives of male victims (Figure 18).

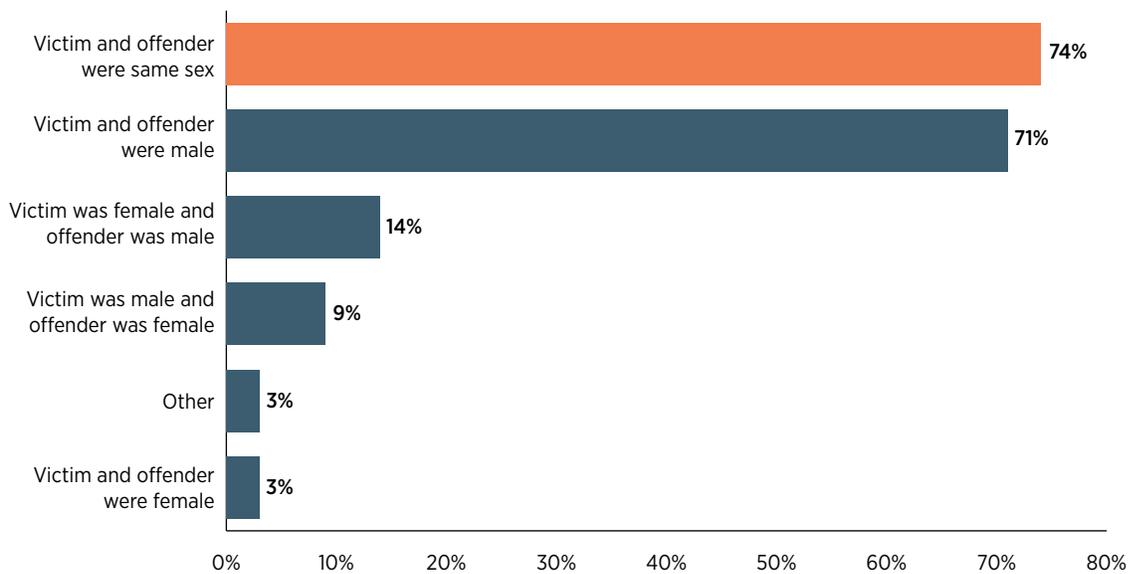
28 There were several occasions where the offender was known and killed more than one victim and several cases in which several offenders were charged with killing the same victim.

FIGURE 17: Unique Homicide Offender and Victim Relationships in City of Pittsburgh by Race (n=154), 2016 through 2021



Data Source: ACOME, PBP

FIGURE 18: Unique Homicide Offender and Victim Relationships in City of Pittsburgh by Sex (n=154), 2016 through 2021



Data Source: ACOME, PBP

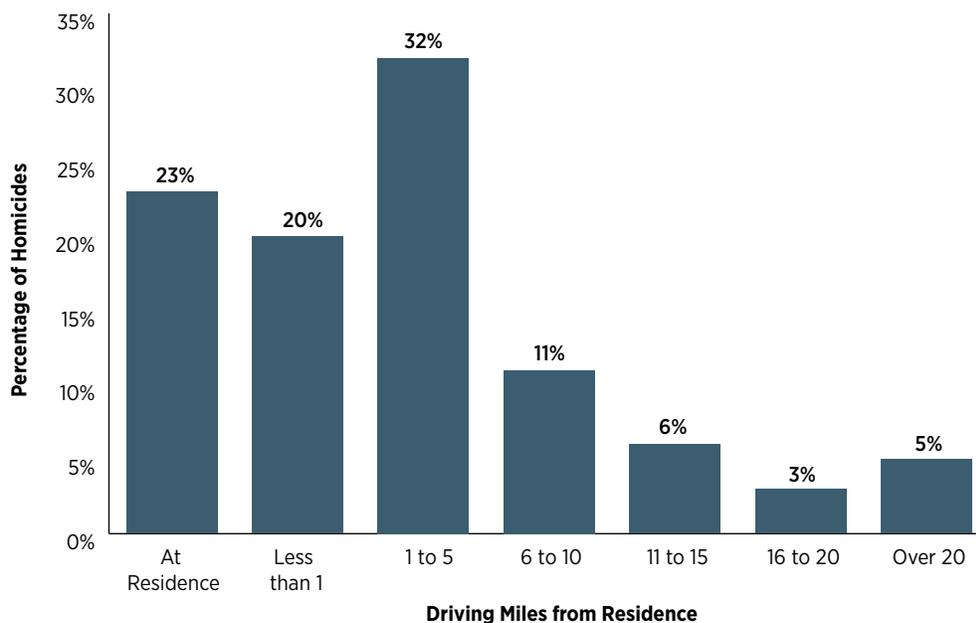
Where Did Violence Occur?

Distance Between Homicide Incident and Victim’s Residence

Using Arc GIS Online, we conducted a geospatial analysis on distance between the location of the homicide incident and the homicide victim’s home, in cases where we had location data for both the incident and the victim’s residence at the time of homicide victimization. We had sufficient data for 96% (619, n=643) of homicide victims in Allegheny County from 2016 through 2021.²⁹

Ninety-four percent of victims who were murdered in Allegheny County lived in Allegheny County and 69% of victims who were murdered in the City of Pittsburgh lived in the City of Pittsburgh. Seventy-five percent (467, n=619) of homicide victims in Allegheny County were murdered within just five miles of their home and 86% (534, n=619) were murdered within 10 miles of their home. See **Figure 19**.

FIGURE 19: Driving Distance from Homicide Victim’s Residence to Homicide Location, 2016 through 2021 (n=619)

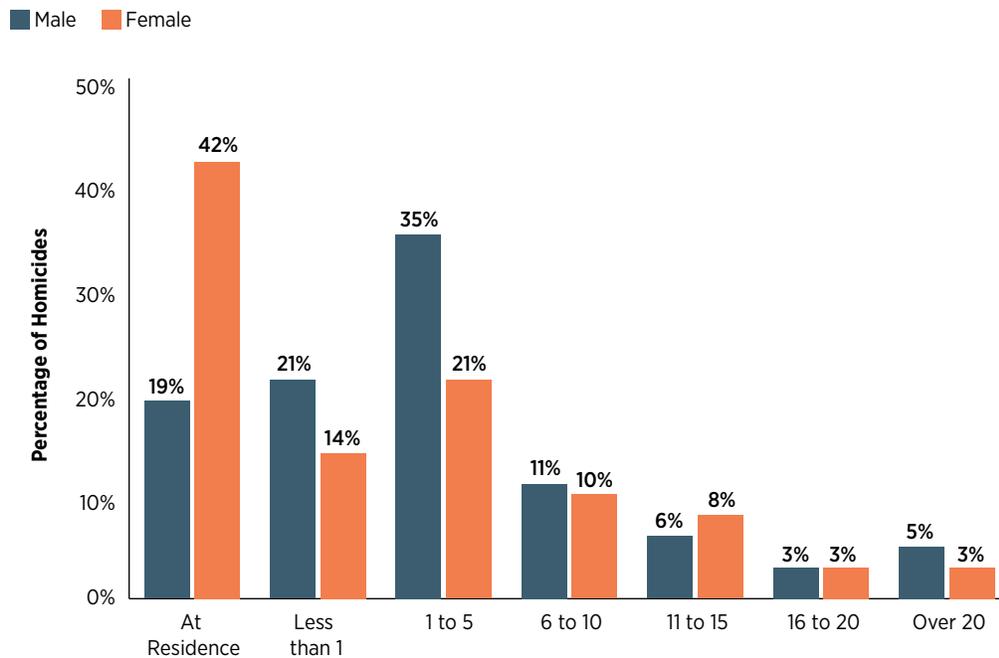


Data Source: ACOME and Arc GIS Online

29 We used the connect origins to destinations analysis tool in Arc GIS Online and computed the driving distance (in miles) between incident locations and the homes of victims, with victim residential addresses provided by ACOME.

While 19% (99, n=516) of male victims with a resident address were murdered at their residence, 42% (43, n=103) of female victims with a resident address occurred in the victim’s residence³⁰ (Figure 20). One possible conclusion is that these women died at home because of intimate partner violence, but the available information about motives is not sufficient to support this conclusion. Most male and female victims with a resident address were murdered within just five miles of their residence.

FIGURE 20: Driving Distance (in Miles) from Homicide Victim’s Residence to Homicide Location, by Sex of Victim, 2016 through 2021 (n=619)



Data Source: ACOME and Arc GIS Online

Homicide Density in Allegheny County

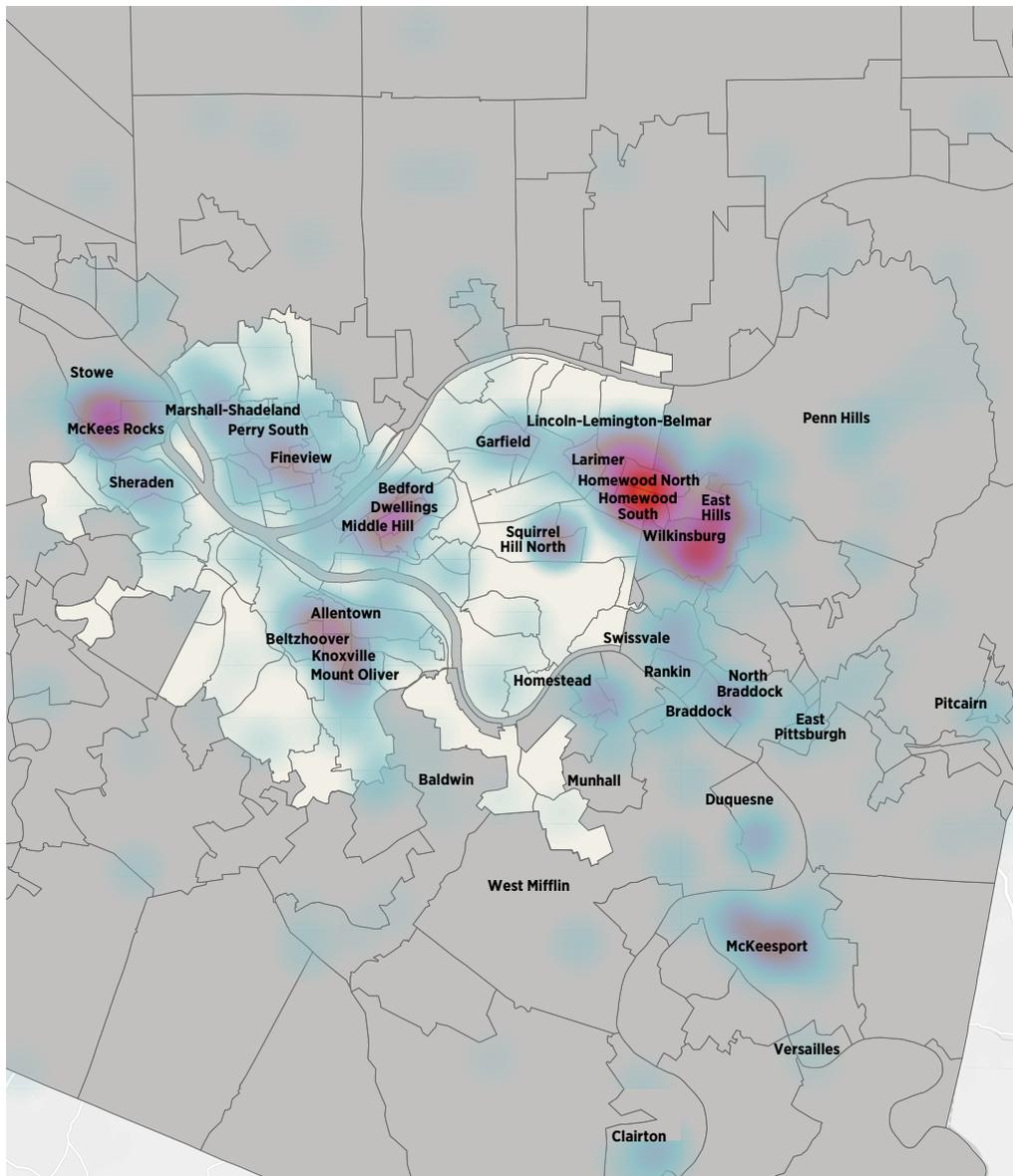
Homicides are incredibly concentrated in Allegheny County. On average, homicides occurred in just 0.3% of census blocks³¹ from 2016 through 2021. Figure 21 displays homicide concentration via a heat map, with areas in the brightest red having the highest concentration of cumulative homicides from 2016 through 2021. Homicides tend to concentrate in a small number of City of Pittsburgh neighborhoods; in several municipalities directly to the west and east of Pittsburgh; and throughout the Monongahela River Valley.

30 A victim was considered to be murdered at home if the geographic coordinates for their listed address and the incident of the homicide were identical.

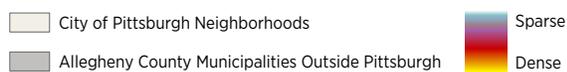
31 According to the U.S Census Bureau, “census blocks are generally small in area. In a city, a census block looks like a city block bounded on all sides by streets. Census blocks in suburban and rural areas may be large, irregular, and bounded by a variety of features, such as roads, streams, and transmission lines.”

The highest geographic concentration of cumulative homicides in Allegheny County (bright red hot-spot in **Figure 21**) occurred within Homewood North and South in the City of Pittsburgh. Forty-eight homicides occurred in Homewood North and South from 2016 through 2021, which accounts for 7% of total homicides in Allegheny County over the period. This is despite Homewood North and South containing only 0.4% of the total County population (in other words, a share of total homicides that is about 18 times their percentage of the population).

FIGURE 21: Homicide Hot Spots in Allegheny County, 2016 through 2021



data.pa.gov, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, USDA



Source: ACOME

Homicides by Allegheny County Municipality

When accounting for population, Wilkinsburg had the highest average homicide rate—62 per 100,000 residents—among municipalities in Allegheny County with more than 1,000 residents (Table 3). McKees Rocks (56 per 100,000) and Rankin (53 per 100,000) were the second and third municipalities with the highest average homicide rates, respectively. Allegheny County municipalities with the highest homicide rates tend to lie directly west of Pittsburgh, directly east of Pittsburgh and in the Monongahela River Valley.

TABLE 3: Allegheny County Municipalities in Top 15% of Distribution for Average Homicide Rate per 100,000 People, 2016 through 2021³²

MUNICIPALITY	AVERAGE HOMICIDE RATE	AVERAGE HOMICIDES	CUMULATIVE HOMICIDES
Wilkinsburg Borough	62	9	53
McKees Rocks Borough	56	3	20
Rankin Borough	53	1	6
Homestead Borough	46	1	8
North Braddock Borough	42	2	11
Stowe Township	41	3	16
McKeesport	36	6	38
East Pittsburgh Borough	35	1	4
Mount Oliver Borough	34	1	7
Clairton	30	2	11
Braddock Borough	29	1	3
Churchill Borough	26	1	5
Duquesne	25	1	8
Versailles Borough	23	0	2
Pitcairn Borough	21	1	4
Swissvale Borough	19	2	10
Pittsburgh	17	52	311

Data Source: ACOME and 2020 Decennial Census population estimates

32 Municipalities with fewer than 1,000 people were excluded. Homicide rates are particularly sensitive in geographic areas with small populations.

Homicides by City of Pittsburgh Neighborhood

When accounting for population, the Homewood South and Homewood North neighborhoods of Pittsburgh had the highest average homicide rates per 100,000 people from 2016 through 2021, with Larimer ranking third (Table 4). The right side of Table 4 displays neighborhoods with the highest rates of all types of gun violence, i.e., the combined total of fatal and non-fatal shootings.

TABLE 4: City of Pittsburgh Neighborhoods in Top 15% of Distribution for Average Homicide Rate and Average Gun Violence Rate per 100,000 People, 2016 through 2021³³

CITY OF PITTSBURGH NEIGHBORHOOD	AVERAGE HOMICIDE RATE	AVERAGE HOMICIDES	CUMULATIVE HOMICIDES	CITY OF PITTSBURGH NEIGHBORHOOD	AVERAGE GUN VIOLENCE RATE	AVERAGE GUN VIOLENCE	CUMULATIVE GUN VIOLENCE
Homewood South	206	5	28	Homewood South	642	15	87
Homewood North	127	3	20	Homewood North	478	13	75
Larimer	97	2	9	Bedford Dwellings	421	6	35
Fineview	88	1	6	Larimer	367	6	34
Bedford Dwellings	84	1	7	Fineview	365	4	25
Middle Hill	76	1	8	East Hills	323	9	56
East Hills	75	2	13	Homewood West	286	2	11
Beltzhoover	73	1	7	Middle Hill	285	5	30
Lincoln-Lemington-Belmar	60	2	13	Lincoln-Lemington-Belmar	243	9	53
Allentown	58	1	8	Beltzhoover	239	4	23
Perry South	53	2	12	Knoxville	224	8	47

Data Source: ACOME, PBP, 2020 Decennial Census population estimates

Homicides by Census Tract

Census tracts in Allegheny County align with official municipal and City of Pittsburgh boundaries and are a robust unit of geographic analysis because they fall into a preset population range (as defined by the U.S Census Bureau) and are small enough in geographic size to reveal patterns unable to be observed when conducting geospatial analysis at a larger geographic level (such as at the municipal level). Using census tracts also allows us to cross reference level of community need (per a modified³⁴ version of DHS’s Community Need Index) to where homicide victimization is occurring.

33 Neighborhoods with less than 500 people were excluded. Homicide rates are particularly sensitive in geographic areas with small populations.

34 To remove any bias towards community need based on gun violence, we removed the gun shots fired/reported indicator from the Community Need Index (CNI) used in this analysis, while keeping the indicators that measured poverty, unemployment, single parenthood and lack of educational attainment. Learn more about our most recent iteration of the CNI [here](#).

Minus a moderate-need tract in Wilkinsburg, the tracts with the highest homicide rates per 100,000 in Allegheny County occurred in tracts with high or extreme levels of need per DHS’s Community Need Index. Tracts in Homewood South (257 per 100,000), Wilkinsburg (159 per 100,000), and another tract in Homewood South (159 per 100,000) have the highest average homicide rates among all census tracts in Allegheny County from 2016 through 2021 (Table 5). It is important to note that most census tracts with the highest average homicide rates in Allegheny County are in neighborhoods in the City of Pittsburgh, apart from tracts in Wilkinsburg, North Braddock, McKees Rocks and McKeesport.

TABLE 5: Allegheny County Census Tracts in Top 5% of Distribution for Average Homicide Rate per 100,000 people, 2016 through 2021³⁵

CENSUS TRACT	MUNICIPALITY	CITY OF PITTSBURGH NEIGHBORHOOD	LEVEL OF NEED	AVERAGE HOMICIDE RATE	AVERAGE HOMICIDES	CUMULATIVE HOMICIDES
1303	City of Pittsburgh	Homewood South	Extreme Need	257	3	19
5606	Wilkinsburg	N/A	High Need	159	1	8
1304	City of Pittsburgh	Homewood South	Extreme Need	159	2	9
1301	City of Pittsburgh	Homewood North	Extreme Need	127	2	13
5615	Wilkinsburg	N/A	Moderate Need	124	3	20
1204	City of Pittsburgh	Larimer	Extreme Need	116	1	5
5611	Wilkinsburg	N/A	Extreme Need	101	1	6
5128	North Braddock	N/A	Extreme Need	100	1	8
2509	City of Pittsburgh	Fineview	High Need	97	1	6
509	City of Pittsburgh	Bedford Dwellings	Extreme Need	87	1	7
501	City of Pittsburgh	Middle Hill	Extreme Need	86	2	9
1302	City of Pittsburgh	Homewood North	Extreme Need	82	1	7
1208	City of Pittsburgh	Larimer	Extreme Need	80	1	4
1306	City of Pittsburgh	East Hills	Extreme Need	73	2	13
4644	McKeesrocks	N/A	Extreme Need	72	2	14
5523	McKeesport	N/A	Extreme Need	69	1	7
1803	City of Pittsburgh	Allentown	High Need	64	1	8
1016	City of Pittsburgh	Garfield	Extreme Need	64	1	4

Data Source: ACOME, modified Community Need Index, and 2019 ACS Five-Year population estimates

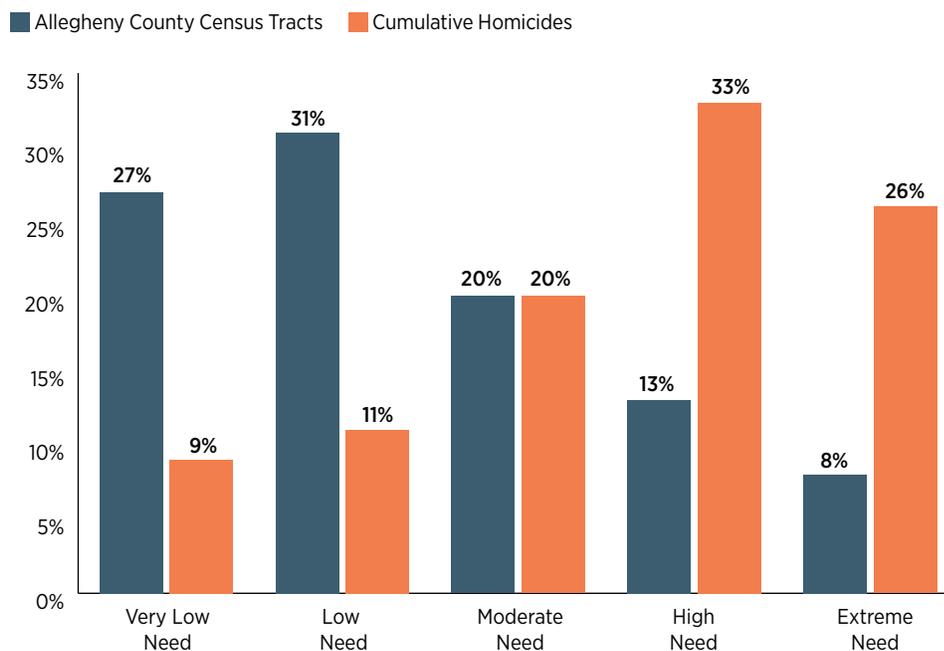
35 Census tracts with less than 500 people were excluded.

Which Types of Communities Are Most Impacted?

Higher-Need Communities Are Most at Risk of Homicide Victimization

Overwhelmingly, census tracts with high or extreme levels of need are the most at risk for homicide victimization, when comparing the share of census tracts in Allegheny County by level of need and the share of homicides that occurred in tracts by different levels of need from 2016 through 2021. Despite Allegheny County only having 21% of its tracts identified as having high or extreme levels of need per a modified version of DHS’s Community Need Index, 59% of homicides occurred in census tracts with high or extreme levels of need from 2016 through 2021 (**Figure 22**). Moderate-need census tracts saw a share of homicides that was identical to their share of census tracts in Allegheny County. Only 21% of homicides occurred in low-need or very-low-need census tracts from 2016 through 2021, despite 58% of Allegheny County census tracts being designated as having low or very low need.

FIGURE 22: Allegheny County Census Tracts by Level of Community Need and Cumulative Homicides by Level of Need, 2016 through 2021



Data Source: ACOME, modified Community Need Index, and 2019 ACS Five-Year population estimates

As seen in **Table 6**, the rate of homicide victimization in Allegheny County census tracts increases as level of need increases, with low- and very-low-need tracts having an average homicide rate per 100,000 residents that is lower than the average County rate (9 per 100,000 individuals) and high and extreme need tracts having average homicide rates that are well above the average county rate.

TABLE 6: Average Homicide Rate per 100,000 Individuals by Level of Community Need, by Census Tract, 2016 through 2021

LEVEL OF NEED	AVERAGE HOMICIDE RATE PER 100K
Very Low Need	3
Low Need	4
Moderate Need	10
High Need	31
Extreme Need	61

Data Source: ACOME, modified Community Need Index, and 2019 ACS Five-Year population estimates

Black Communities Are Most at Risk of Homicide Victimization Because They Tend to be Higher Need

On average, our Black communities tend to be the most impacted by homicide victimization, while our White communities (with exceptions) tend to be the least impacted (Table 7).

- Census tracts with populations less than 25% Black have an average homicide rate that is below the average homicide rate for Allegheny County (9 per 100,000 individuals).
- Census tracts with populations that are 26 to 50% Black (racially mixed) have an average homicide rate that is about twice that of the average county homicide rate.
- Census tracts with a population that is 51 to 75% Black (majority Black) have an average homicide rate that is about five times the average County rate.
- Census tracts with a population that is 76 to 100% Black (mostly Black) have an average homicide rate that is about nine times the average County homicide rate.

TABLE 7: Average Homicide Rate per 100,000 People, by Census Tract Categorizations for Percent Black and Percent White, 2016 through 2021.

PERCENT BLACK RANGES	NUMBER OF CENSUS TRACTS	AVERAGE HOMICIDE RATE PER 100K	PERCENT WHITE RANGES	NUMBER OF CENSUS TRACTS	AVERAGE HOMICIDE RATE PER 100K
0 to 25%	304	5	0 to 25%	26	70
26 to 50%	40	20	26 to 50%	40	37
51 to 75%	33	47	51 to 75%	73	13
76 to 100%	16	83	76 to 100%	263	3

Data Source: ACOME and 2019 ACS Five-Year population estimates

To understand why our Black communities are disproportionately impacted by homicide victimization, we need to observe the connection between race and community need in Allegheny County. There is a significant and strong relationship between percent Black by census tract in Allegheny County and higher community need and a significant and strong relationship between percent White by tract and lower community need.³⁶

It is important to note that our Black communities tend to have higher levels of need because of historical and contemporary racism in housing, lending and land use policy; the negative impacts of outmigration, white flight and urban renewal; disproportionate impacts resulting from deindustrialization and economic structuring; and the harmful ways in which government and other institutions have historically responded to public health challenges in Black communities (via punitive criminal justice policies and lack of investment), as discussed in our **Background** section.

There are some key exceptions to majority Black tracts having higher homicide victimization and majority White census tracts having lower victimization, however. A census tract in Stanton Heights is majority Black, lower need, and has a low average homicide rate, as is the case in sections of Wilkinsburg and Swissvale. Higher need majority White census tracts in the Pittsburgh neighborhoods of Allentown and Marshall-Shadeland, and in higher need tracts in McKees Rocks, Stowe Township and McKeesport, have some of the highest average homicide rates in Allegheny County.

Changes in Homicide Locations

Most tracts that saw significant increases in their average homicide rate were designated as having high or extreme need per our Community Need Index (**Table 8**). Higher-need tracts in Wilkinsburg (percent increase of 314%), North Braddock (percent increase of 303%), and Homewood South (percent increase of 66%) saw the most significant increases among census tracts in Allegheny County.³⁷ The one anomaly in **Table 8** was a census tract in Squirrel Hill North, which went from an average homicide rate of zero (in 2010–2015) to an average homicide rate of 53 per 100,000 (2016–2021). This anomaly is owed to the Tree of Life mass shooting in 2018, with Squirrel Hill North having zero homicides outside of Tree of Life from 2010 through 2021. Violence tends to concentrate in our higher-need communities, not very-low-need communities like Squirrel Hill North.

36 Cotter, N., & Mejia, N. (2021, May). Page 25. The Allegheny County Community Need Index: Update for 2021 with a Focus on the Connection between Race and Community Need. Allegheny County Analytics.

37 We analyzed which census tracts saw a change in their average homicide rate between 2010–2015 and 2016–2021 that was more than two standard deviations above the mean change among all census tracts in Allegheny County.

TABLE 8: Allegheny County Census Tracts with Most Significant Increases in Average Homicide Rate per 100,000 People, 2010 through 2015 compared to 2016 through 2021

CENSUS TRACT	MUNICIPALITY	CITY OF PITTSBURGH NEIGHBORHOOD	LEVEL OF NEED ³⁸	CHANGE IN AVERAGE HOMICIDE RATE	AVERAGE HOMICIDE RATE PER 100,000 (2010-2015)	AVERAGE HOMICIDE RATE PER 100,000 (2016-2021)
5615	Wilkinsburg	N/A	Moderate Need	93	30	124
5128	North Braddock	N/A	Extreme Need	74	25	100
1304	City of Pittsburgh	Homewood South	Extreme Need	63	96	159
1403	City of Pittsburgh	Squirrel Hill North	Very Low Need	53	0	53
5606	Wilkinsburg	N/A	High Need	47	112	159
4626	Stowe Twp	N/A	High Need	45	14	60
1803	City of Pittsburgh	Allentown	High Need	45	19	64
1303	City of Pittsburgh	Homewood South	Extreme Need	42	215	257
1301	City of Pittsburgh	Homewood North	Extreme Need	36	91	127
4644	McKees Rocks	N/A	Extreme Need	32	39	72
4928	Clairton	N/A	High Need	32	13	45

Data Source: ACOME, modified Community Need Index, 2014 ACS Five-Year population estimates, and 2019 ACS Five-Year population estimates

Most tracts that saw significant decreases in their average homicide rates were designated as having high or extreme need per our Community Need Index³⁹ (Table 9). Higher-need tracts in Duquesne (percent decrease of 90%), Bedford Dwellings (percent decrease of 45%), and East Liberty (percent decrease of 100%) saw the most significant decreases among census tracts in Allegheny County. While the tracts in Table 9 saw steep declines in their absolute homicide rates, many of the listed tracts have average homicide rates from 2016 through 2021 that are still among the highest in Allegheny County (refer back to Table 5), with the exception of East Liberty and the Strip District.

38 Level of Need designation is from a modified version of our most recent iteration of the CNI, which uses 2018 ACS Five-Year estimates.

39 We analyzed which census tracts saw a change in their average homicide rate that was more than two standard deviations below the mean change among all census tracts in Allegheny County, when comparing tracts' average 2010-2015 homicide rate to their average 2016-2021 homicide rate.

TABLE 9: Allegheny County Census Tracts with Most Significant Decreases in Average Homicide Rate per 100,000 People, 2010–2015 compared to 2016–2021

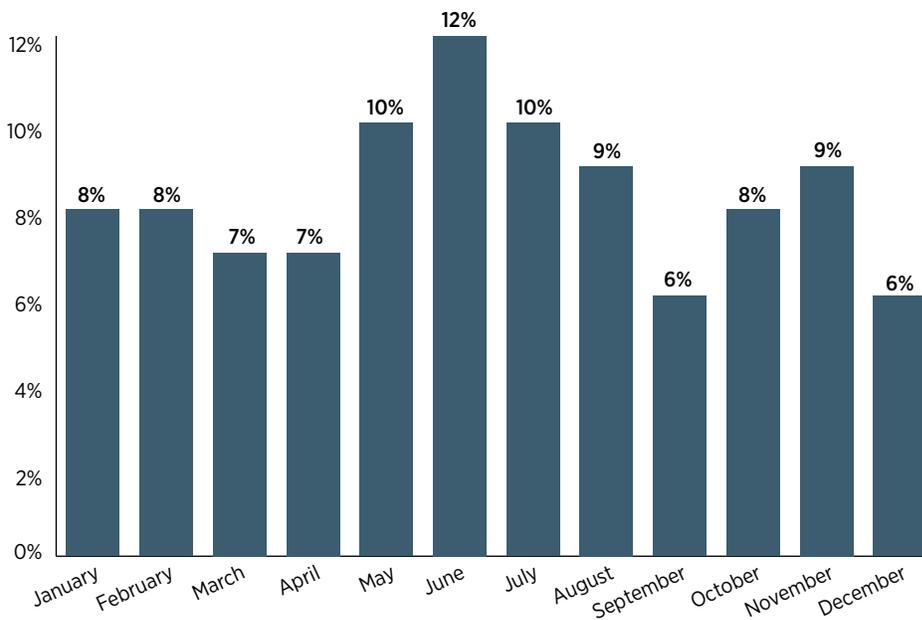
CENSUS TRACT	MUNICIPALITY	CITY OF PITTSBURGH NEIGHBORHOOD	LEVEL OF NEED ⁴⁰	CHANGE IN AVERAGE HOMICIDE RATE	AVERAGE HOMICIDE RATE PER 100K (2010–2015)	AVERAGE HOMICIDE RATE PER 100K (2016–2021)
4869	Duquesne	N/A	Extreme Need	-95	106	10
509	City of Pittsburgh	Bedford Dwellings	Extreme Need	-69	156	87
1113	City of Pittsburgh	East Liberty	Moderate Need	-62	62	0
5522	McKeesport	N/A	High Need	-59	97	38
5610	Wilkinsburg	N/A	Extreme Need	-57	57	0
501	City of Pittsburgh	Middle Hill	Extreme Need	-52	138	86
203	City of Pittsburgh	Strip District	Very Low Need	-45	73	28
2609	City of Pittsburgh	Northview Heights	Extreme Need	-45	85	39
5521	McKeesport	N/A	Extreme Need	-38	61	22
1204	City of Pittsburgh	Larimer	Extreme Need	-36	152	116
4867	Duquesne	N/A	Extreme Need	-34	42	7
5512	McKeesport	N/A	High Need	-32	57	25
5129	North Braddock	N/A	High Need	-31	48	16

When Did Violence Occur?

The frequency of homicides tended to increase from summer through early fall, then decline during the winter months (Figure 23). Thirty-six percent of Allegheny County homicides occurred from June through September, with the highest number occurring in July. Homicides in the City of Pittsburgh followed a similar pattern, with 38% of homicides occurring from June through September.

40 Level of Need designation is from a modified version of our most recent iteration of the CNI, which uses 2018 ACS Five-Year estimates.

FIGURE 23: Percentage of Homicides in Allegheny County by Month, 2016 through 2021



Data Source: ACOME

Day of the Week and Time of Day

Half of all homicides from 2016 through 2021 occurred between the hours of 8pm and 4am. While there was little variation in homicides by day of the week, 18% of homicides occurred on Saturdays. Fifteen percent of homicides occurred on Sundays and on Mondays. See Table 10.

TABLE 10: Homicides by Time of Day and Day of the Week, 2016 through 2021

	MON	TUE	WED	THU	FRI	SAT	SUN	TOTAL
8am-12pm	1%	2%	0%	2%	1%	3%	1%	10%
12pm-4pm	2%	2%	2%	1%	2%	3%	2%	13%
4pm-8pm	3%	2%	2%	2%	2%	2%	2%	16%
8pm-12am	5%	4%	4%	2%	3%	5%	3%	27%
12am-4am	3%	2%	4%	3%	4%	3%	4%	23%
4am-8am	1%	1%	1%	2%	2%	2%	3%	12%
Total	15%	12%	14%	13%	13%	18%	15%	100%

Source: ACOME

REDUCING HOMICIDES IN ALLEGHENY COUNTY

Evidence-based programs that have been shown to reduce violence tend to share one or more of the following principles:

- Focus only on those people most at-risk for victimization from, or involvement with, violence, who are overwhelmingly young men living in higher need communities who have been exposed to significant trauma, have previously exhibited violent behavior, and are often already involved with the criminal justice system.
- Connect at-risk young men with trauma-informed care and help them manage impulse control, often through cognitive behavioral therapy.
- Provide wrap-around services to help stabilize and improve the lives of at-risk young men and offer them an alternative life away from violence.
- Reduce the opportunity to commit violence.
- Provide peer support and interrupt transmission of violence through credible messengers.

Practitioners and experts of violence prevention often cite the following as necessary steps to conduct effective violence prevention:

- The causes of violence are multifaceted and so too must be the response.
- A multifaceted response requires strong coordination and collaboration under the guidance and oversight of a centralized organization (both within highly impacted communities and across them).
- Efforts to reduce violence must be sustainably funded.
- The approach to violence reduction must be based on programs that have been proven to prevent violence or show promise in preventing violence.
- Organizations doing violence prevention need capacity building and technical assistance support from model developers of violence reduction programs to ensure that violence reduction programs are implemented with fidelity.
- Process and outcome data must be continually collected and analyzed to assess fidelity and impact. It will likely take time to see community level impacts.
- Outreach workers, interrupters and social services staff working with those at highest risk for committing violence need to be adequately compensated for such a stressful and traumatic job, as to reduce turnover.

Based on the homicide trends presented in this report and the best practices listed above, DHS is sustainably funding public health approaches to community violence reduction that are rooted in evidence and well-coordinated. DHS's strategies to reduce community violence focus on reducing violence **within** highly impacted communities and **across** them.

Strategies aimed at reducing violence **within** highly impacted communities asks stakeholders in those communities to come together to A) create a community violence reduction plan and B) choose a lead agency to coordinate and oversee violence reduction efforts on behalf of the community. Given the growing need and lack of resources among highly impacted municipalities outside the City of Pittsburgh, DHS is primarily funding efforts in Allegheny County that are outside the City of Pittsburgh.

In addition to funding existing efforts that show results or promise in reducing community violence, DHS is funding the following evidence-based violence reduction programs:

- **Cure Violence:** treats the spread of violence like a disease and disrupts it through credible violence interrupters, prevents it by connecting those most at-risk to services via outreach workers, and changes community norms around violence. Read more [here](#).
- **Becoming A Man (BAM):** a school-based violence prevention program that deploys full time licensed councilors who work with at-risk young men five days a week through cognitive behavioral therapy, peer support, and future orientation. Read more [here](#).
- **Rapid Employment and Development Initiative (READI):** a paid transitional jobs program that is primarily focused on violence prevention by identifying those most at risk for involvement with violence. Outreach workers relentlessly engage those men at highest risk. At-risk young men build skills and take part in cognitive behavioral therapy through the format of a 9-to-5 workday, five days a week. Read more [here](#).

Our strategies to reduce community violence **across** highly impacted communities involve A) identifying a countywide convener to bring together all relevant actors in the violence reduction space in Allegheny County (to ensure that violence reduction efforts are coordinated across municipal and neighborhood borders) and B) funding evidence-based violence reduction efforts that make more sense to operate centrally. Our strategies **across** highly impacted communities include the City of Pittsburgh. The following are centralized violence reduction efforts that DHS is funding:

- **Hospital-based intervention:** sends credible trauma responders and outreach workers to the bedsides of gunshot victims in hospital trauma centers to connect these at-risk young men to necessary services and stop the spread of violence by interrupting retaliation.
- **Victim and family support:** trauma teams are deployed to connect gunshot victims and their loved ones to mental health services.
- **Shooting review boards:** stakeholders come together to systematically understand why a given shooting (fatal or non-fatal) occurred and use this data to inform prevention.
- **Building capacity to support Crime Prevention Through Environmental Design (CPTED):** uses blight reduction and vacant lot remediation as tools to reduce the opportunity to commit violent crime.

AUTHORS

Nicholas Cotter

CONTRIBUTORS

Kathryn Collins, Erin Dalton

EDITORS

Colleen Cain, Elizabeth Zembruski

REVIEWERS

Heath Johnson, PhD, MSW (Pittsburgh Bureau of Police), Anita Zuberi, PhD (Duquesne University)

APPENDIX A

APPENDIX A: DETAIL ON DATA SOURCES

- **Allegheny County Data Warehouse:** This central repository of social and public services data allows DHS to track and report client demographic and service data across its program offices and beyond. These data are matched with ACOME data to analyze victims' involvement in publicly funded human services as well as the juvenile and criminal justice systems.
- **Allegheny County Office of the Medical Examiner (ACOME).** ACOME autopsies all premature and unexplained deaths that may have resulted from a sudden, violent, unexplained, or traumatic event. Deaths attributed to homicide by ACOME are a medical designation, not a criminal one. In this report, we use ACOME homicide data rather than data from the Pittsburgh Bureau of Police (PBP) or Allegheny County Police (ACP) to maintain a consistent data source and definition of homicides for every geography in Allegheny County.
ACOME homicide data includes date and time of death; location where the body was found; cause of death; and race, gender, and age of the victim. Data used in this report cover two comparison periods: 2010 through 2015 and 2016 through 2021.
- **City of Pittsburgh Bureau of Police (PBP).** We used PBP data on non-fatal shootings. The census tract in which a non-fatal shooting occurs is recorded by the responding officer and then mapped to City of Pittsburgh neighborhood boundaries. As such, some user error may occur. DHS does not have demographic data for non-fatal shooting victims.
- **Community Need Index (CNI):** The CNI identifies relative need by standardizing and combining those community level measures that tend to be predictive of adverse outcomes for families, such as poverty rate, unemployment/ joblessness rate, rate of single parenthood, rate of lack of educational attainment, and gun shots fired/reported. Tracts are sorted into one of five levels of need ranging from very low need to extreme need. We cross referenced homicide victimization by census tract with our tract based CNI. To remove any bias towards community need based on gun violence, we removed the gun shots fired/reported indicator from the CNI used in this analysis. Learn more about our most recent iteration of the CNI [here](#).
- **Federal Bureau of Investigation Crime Data Explorer (CDE):** The FBI's Uniform Crime Reporting (UCR) Program defines murder and nonnegligent manslaughter as the willful (nonnegligent) killing of one human being by another. The classification of this offense is based solely on police investigation as opposed to the determination of a court, medical examiner, coroner, jury, or other judicial body. The UCR Program does not include the following situations in this offense classification: deaths caused by negligence, suicide, or accident; justifiable homicides; and attempts to murder or assaults to murder, which are classified as aggravated assaults. CDE data based on the UCR program may differ from published UCR tables due to differences in methodology.

APPENDIX A

- U.S. Census Bureau.** We primarily used 2020 Decennial Census population counts, 2015-2019 American Community Survey (ACS) Five-Year Estimates, and 2010-2014 ACS Five-Year Estimates to derive county, city, and census tract level population data as well as gender, race, and age of residents. 2020 census population estimates for census block groups were aggregated to the neighborhood level using official City of Pittsburgh neighborhood boundaries, as to compute homicide rates based on Pittsburgh neighborhood boundaries. In some instances, Pittsburgh neighborhoods were combined if they shared the same census block group boundary. See full list of population tables below.

TABLE	YEAR(S)
P2	2010 and 2020 Decennial U.S Census Bureau population counts
DPO5	2014 American Community Survey (ACS) Five-Year population estimates and 2019 ACS Five-year population estimates.

APPENDIX B

APPENDIX B: DIFFERENCES IN HOMICIDE COUNTS BY DATA SOURCE

There can be differences between [DHS's dashboard](#), official homicides reported by Allegheny County Office of the Medical Examiner (ACOME) and homicides reported by [Pittsburgh Post-Gazette](#).

The main difference in the numbers is due to geocoding. DHS geocodes the incident address obtained from ACOME. ACOME gives us the incident coordinates, the county and the municipality or Pittsburgh neighborhood in which the homicide occurred. DHS uses only those homicides that were successfully geocoded. DHS excludes cases in which the homicide location was not geocoded or is outside the county.

The [Pittsburgh Post-Gazette](#), besides reporting the ACOME homicides, reports victims that were injured in Allegheny County, but whose death and autopsy occurred in another county. Given that several trauma centers exist in Allegheny County, it is rare that a shooting victim is taken to a trauma center outside of Allegheny County, although it does happen.

The difference in homicides as reported by Pittsburgh Bureau of Police (PBP) and Allegheny County Police (ACP) versus ACOME are typically marginal when examined annually, but slight differences do exist. Differences between ACOME data and homicides reported by PBP and ACP are as follows:

- Date of death: ACOME reports the date of death, while the PBP and ACP report the date when the incident occurred. Time of death is not the same as time of incident, as in most cases the victim died at a certain time (minutes, hours, or days) after being injured.
- Victims listed in police data (PBP/ACP) but not in ACOME data: This generally occurs in cases where the cause of death is still under investigation or in cases where the victim was injured in Allegheny County, but the victim's death and autopsy occurred in another county.
- ACOME is a medical designation, not a criminal one.

Another limitation of the ACOME data is that the death details are not necessarily finalized at any given time. The files contain the most recent details on the death, but this information is subject to change as the investigation progresses.