

WORKING PAPER

Gathering Clouds:

Explaining the 2015-2016 Homicide Surge in Chicago

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EXECUTIVE SUMMARY

After two decades of homicide declines in Chicago that reduced levels to the mid 400s during the past decade, 2016 saw the homicide total climb to around 760.

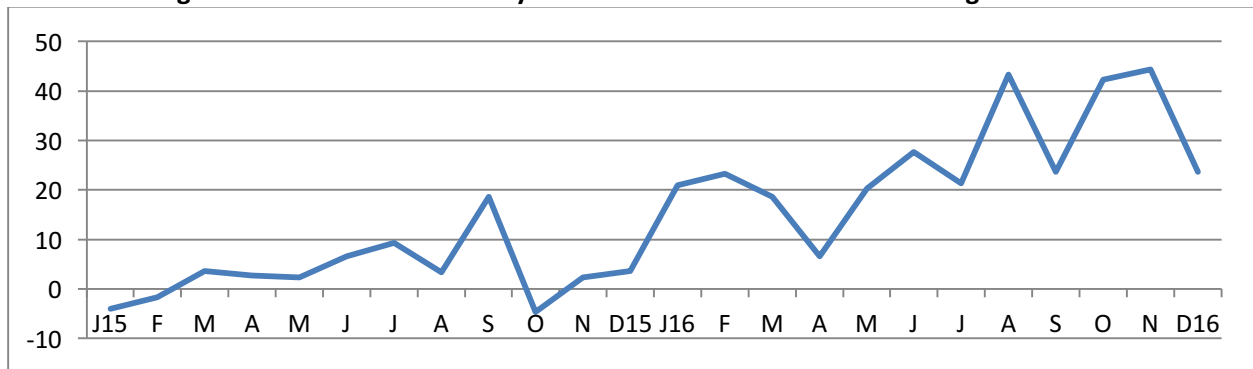
The high 2016 total was part of a gradual upward trend that began at the latest in mid-2015, and may have begun in 2014.

Analysis by the University of Chicago's Crime Lab of the issue demonstrates that the survey did not correspond temporally to changes in gangs, public housing, school attendance areas, employment, or gun availability, revealing the complexity of explaining the cause of the surge.

Data from other cities with neighborhoods similar demographically to Chicago's highest crime neighborhoods suggests that the combination of the concentration of poverty, low employment, high racial segregation, low educational attainment, history of gangs, family stress, and availability of guns, virtually ensures persistent conflict and violence, particularly among younger residents, some of which will result in homicides. The persistence of these concentrated problems over the past 20 years has likely caused Chicago's decline in homicides from over 900 to the mid-400s to have plateaued in the mid-400s.

We can calculate the surge as the number of homicides occurring above what would have normally been expected: The difference between the 2015 and 2016 monthly homicide levels and the average of each month from 2012 through 2014 – the plateaued level. The surge began slowly, growing from around zero in May, 2015 to about 20 per month from September, 2015 through May, 2016. From June, 2016 through November 2016, the surge grew to about 40 per month.

Size of the Surge: Number of Homicides by Month 2015 and 2016 Above Average of 2012 to 2014



What led to the significant homicide increases beginning in 2015 and peaking in 2016?

Analysis of patterns of homicide by what is publicly known about the causes shows that homicides that occurred from domestic violence, deadly robberies, deaths in brawls or were clearly related to alcohol, or psychotic episodes, remained fairly constant from 2014 through 2016. The major increase was in non-domestic homicides, many of which were gang-related, or occurred when a young person or persons intentionally confronted another young person or persons, and intentionally shot at them, or intentionally shot at people in a residence, porch, or park without clear motive.

Analysis of the pattern of “non-domestic” homicides reveals the following:

- Levels of homicide gradually increased at an uneven pace across Chicago neighborhoods starting in 2014. Homicide levels became consistently high in many neighborhoods in 2015, and in some neighborhoods became almost constantly very high in 2016.
- Many homicides are retaliations for other homicides or assaults. For many periods in many neighborhoods, homicides occurred within 3 to 7 days of one another more often than would have been expected had homicides occurred randomly. Series of retaliations may have fueled the growth in homicides beginning in 2015.
- Analysis of whether homicides were conducted by assailants witnessed on foot or witnessed utilizing a vehicle indicates a gradual, although uneven, rise in the number on foot, suggesting growing brazenness of assailants and increased intra-neighborhood conflicts.
- Witness cooperation with police may have declined in 2015 and 2016. Evidence on reporting of crime by media, largely reliant on police sources, shows a steady increase in the number and percentage of homicides about which even a basic description of the crime was publicly unavailable within two days of the homicide. This would be consistent with lack of cooperation by potential witnesses, at least initially, a problem long acknowledged by the police.
- By 2016 the risk of arrest from shooting someone had significantly declined. Percentages of homicides resulting in arrest declined, as did arrests for hard drug transactions and hard drug possession, reducing the risk of arrest.
- Armed confrontations became more deadly in mid-2015. Increasing percentages of shootings were homicides and increasing percentages of armed confrontations became shootings or homicides. Thus homicide increases were attributable to both more shootings and increased likelihood that an armed confrontation would result in a homicide.
- Reasons for increases in homicides vary by neighborhood. Totals in some neighborhoods probably increased because of contested drug markets, some because of availability of guns, some because of loss of neighborhood support for police, and some because of diminished police engagement.

Based on this data best overall explanation for the 2015 – 2016 increase in Chicago homicide is as follows:

Because of persistent deep stresses on Chicago’s most impoverished neighborhoods, the threat of violence is consistently present in those places, resulting in annual homicide totals in the mid-400s. A combination of interventions including policing, CeaseFire, and social programs addressing youth, re-entering offenders, mental illness, substance use and domestic violence have managed to “contain” violence levels by diverting or interrupting threats, recovering firearms, providing young people with alternatives to violence, treating people who otherwise become at risk for violent confrontations, and deterring crime through surveillance and/or arrest.

2015 probably began with small homicide increases that fit within the normal pattern. But by mid-2015 elements of these containment strategies began fraying over the course of the year. Loss of no single strategy “caused” the increase in fatal confrontations and their frequent retaliations, but their loss in combination likely stopped preventing many crimes that then occurred and homicide levels began increasing beyond what had been normal. Fewer arrests for drugs, and hard drug transactions in particular, could have further reduced, or at least changed, police presence in Garfield Park and Austin and may have opened up increased contestation of drug markets there and nearby, resulting in violence.

Police/neighborhood relations and witness cooperation continued to deteriorate in 2016, particularly following release of the Laquan MacDonald video, which probably accelerated shooting and homicides as likelihood of arrest became significantly lower. Armed confrontations became more deadly in mid-2015 and 2016 in many neighborhoods as the cost of using a firearm decreased with fewer homicide arrests and clearances. As arrests became less likely, assailants might have become more aggressive and more people on the street believed they needed to be better armed, increasing the likelihood of shooting and creating exponential rises in homicides to very high levels.

These problems accelerated more quickly in several African American neighborhoods where relations with police were particularly strained, social services more vital, and density of crime is higher than elsewhere in the city, resulting in very high levels in Austin, Garfield Park, Englewood and southeast neighborhoods.

Because many homicides generate one or two retaliations, and because people on the street were probably becoming better armed by mid-2016, only one additional homicide per week above the stasis of the past decade could have generated the chains that turned the late 2015 and 2016 totals from a statistically normal, albeit deeply unfortunate, fluctuation into a crisis.

INTRODUCTION

This report analyzes the increase in homicides in Chicago that began in early 2015 and extended through 2016, leading Chicago to have the highest total number of homicides among American cities during 2016.

For approximately the decade from 2005 through 2015, Chicago had homicide totals ranging from the low to mid 400s.

Year	Homicides
2010	437
2011	437
2012	506
2013	421
2014	416
2015	485
2016	764

Source: University of Chicago Crime Lab

This decade of relative stability followed a long decline beginning in the early 1990s when Chicago, like most of the rest of the nation, experienced a significant decline in the total number of homicides. (Kneebone & Raphael, 2011)

We cannot finally know the reason for the recent surge in homicides, or any annual homicide level for that matter, short of attaining honest interviews with the perpetrator of each homicide, an obvious impossibility. Court records and witness accounts provide details on reasons for some homicides, but the overall clearance rate for Chicago homicides has fallen to around 30%, leaving the vast majority of homicides individually unexplained.

At this writing, no analyst has provided an explanation for why the 2015-2016 surge began when it did or what caused it. Much has been written about causes of homicide in Chicago overall (Crime Lab, 2017; Heartland Alliance, 2017) but explanation of even substantial changes in homicide rates has been elusive, both in Chicago and elsewhere. Scholars and law enforcement even continue to debate why national homicide and crime rates fell so much over the past several decades.

This report utilizes a variety of metrics, some of them conventional and some of them not, to attempt an explanation of the Chicago surge in 2015 and 2016. The first section of the report explores when the surge likely began. While it is easiest to rely on annual homicide totals, which would place the surge, and hence its explanation, at the start of 2016, analyzing homicide data on a monthly basis reveals that homicide totals began rising possibly as early as 2014, and at the latest in mid-2015. It is important to the explanation to recognize that the surge did not begin suddenly; rather, the surge as a whole is a combination of erratic but gradual increases occurring at different times and different places. Causes may not have been the same everywhere. The balance of the report evaluates data on homicide timing,

location, methods, arrests, gun crimes, robberies and narcotics transactions to assess the likely causes of the increase.

Note we are not attempting to explain the total number of homicides; rather, the increase above what had become Chicago's plateaued level in the low to mid-400s annually. The annual 400-plus homicides are the consequences of concentrated poverty, low school performance, relocation of public housing residents, racial segregation, contested drug markets, contested neighborhood spaces and the easy availability of guns. There is no evidence that poverty, educational attainment, or public housing or school assignment changed in ways that might have caused homicide levels to rise so significantly from 2014 through 2016. (Crime Lab, 2017) However, we have identified a number of items that may in combination have:

- Narcotics markets may have become increasingly contested in the Garfield Park area.
- Armed confrontations became increasingly lethal over the period.
- Neighborhood social capital that deters violence diminished significantly over the period as state-funded social services were reduced and the police department lost support in many neighborhoods.
- Witness cooperation may have declined in many neighborhoods and further deteriorated as many neighborhoods became more violent and perceived risk of working with police rose.
- Risk of arrest declined significantly in many neighborhoods, further emboldening assailants.
- Homicide data suggests conflicts over neighborhood space may explain changes in homicide levels in some neighborhoods.
- Chains of retaliations for assaults help explain how homicide totals grew exponentially.

These changes, operating in combination and in different sequences in different neighborhoods, may have created the gradual upward trend in total homicides. The following report documents each of these observations and concludes by showing how many of them may have operated in combination in individual neighborhoods to accelerate violence.

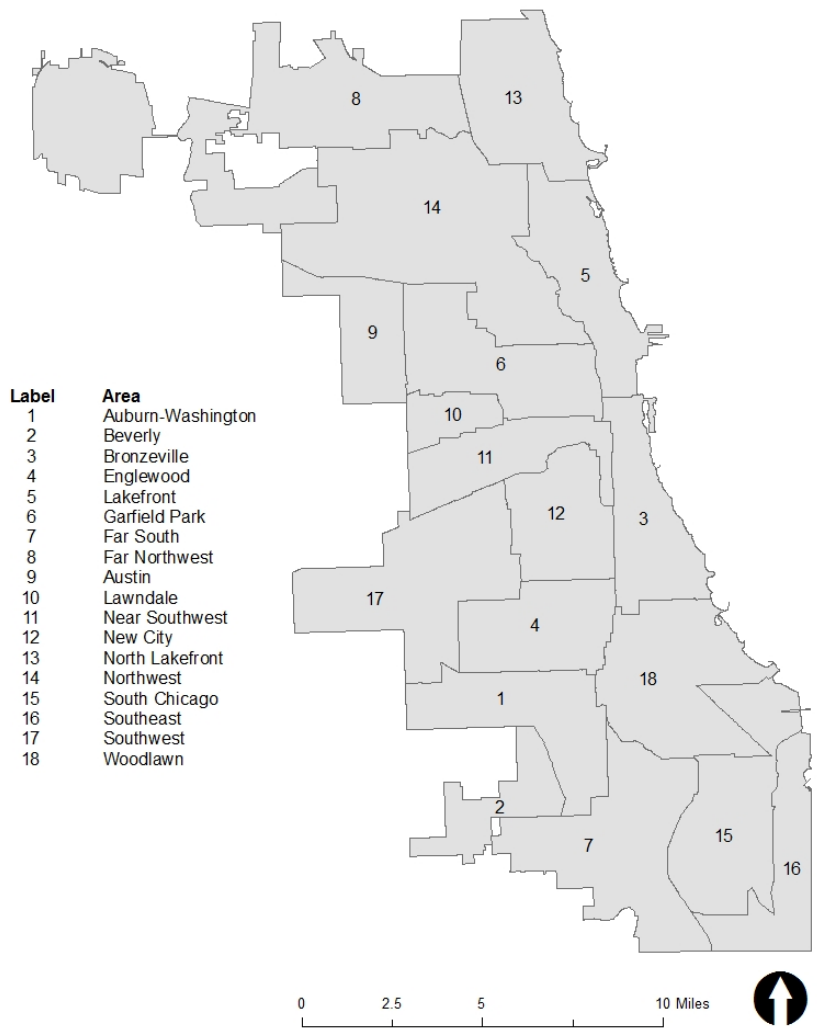
Methodology

Most of the analysis in the report is based on information from two data bases, individual records of offenses found on the City of Chicago Data Portal, and a second data base describing each homicide that occurred between 2014 through 2016 drawn from local media sources. The Data Portal provides information on the time and location of virtually all types of crime reported to the police including whether in the CPD's view the event was "domestic", information about the site, whether an arrest was made, and what type of weapon was used. For this analysis, records of homicides, shootings, assaults and drug arrests were used. The official FBI codes comprising these categories are listed in the report Appendix.

The second “media” database was created to attempt to construct a fuller view of why each homicide may have taken place as some media reports provide witness descriptions and describe characteristics of many of the victims and, sometimes, the offender(s). Knowing the cause of homicides is difficult because few offenders are arrested and little public record exists on the cause of each individual homicide. Media stories sometimes provide detail that can inform cause. The media database includes the name, date, location, circumstances and apparent cause of each homicide occurring from 2014 through 2016 relying on accounts published of the events by the *Chicago Tribune*, *Chicago Sun Times* and *DNAInfo*. In some cases, stories provide a motive and explanation. In other instances, such as “Smith was found dead in an ally” nothing is explained. From this data one can reasonably estimate that about 15 percent of homicides occurred for idiosyncratic reasons such as parents abusing children, domestic quarrels, drunken brawls, acute mental illness or the like. The Chicago Police Department (CPD) makes similar assessments on records available on the Data Portal, denoting “domestic” homicides as a unique category. The category constructed from media sources includes what CPD labels domestic, but also others. Homicide totals differ to some degree between the two databases, or from other official sources, because of decisions to include or exclude deaths from shootings by police officers, from negligent vehicular operation, hit-and-run traffic accidents and the like. These types of deaths were excluded from this analysis because they do not bear in any meaningful way on the reasons for the 2015/2016 surge in Chicago homicides.

Most of the report analyzes possible causes of changes in the number of “non-domestic” homicides and aggregates explanatory data into neighborhoods based on the twelve seasonal quarters from 2014 through 2016. This can be done at both the 77 Community Area level and a consolidated 17 areas, which aggregates smaller places similar in sociology. The simplification into 17 regions is done for three reasons: First to make presentation of the data and its interpretation more manageable, second, because the 77 Community Area boundaries were created a century ago and do not necessarily represent policy- or sociologically relevant spaces today. For example, this analysis combines the two Englewoods with Oak Lawn, creates a mid-south area here called Bronzeville, aggregates the two Garfield Parks with a sociologically similar portion of Humboldt Park and so on. The third reason was that homicides are sufficiently rare events statistically speaking that the irregularity of numbers from month to month in some of the 77 smaller community areas obscures trends that are visible when several adjacent community areas are aggregated.

The guiding theory of the report is that changes in citywide homicide levels occurred gradually rather than suddenly and that changes may have occurred in different neighborhoods for different reasons. Accordingly, across the report data is presented in tables and charts that show quarterly trends over the three years presented by neighborhood area. Changes in data that illustrate violence surges in particular times and places, and/or their explanations, are illustrated by shading table cells. Thus, on each table the gradual evolution of the surge can be observed through the gradual darkening of cells on the tables.



1. TIMING OF THE HOMICIDE SURGE

Homicides had been gradually rising since late 2014, and clearly since mid-2015

For a number of years, Chicago’s homicide total had hovered in the low to mid-400s with a spike to 506 in 2012. Having declined from as high as over 900 25 years before, Chicago’s long downward trend was typical of other large American cities over that time period. (Kneebone & Raphael, 2011) However, in 2016, Chicago’s homicide level was markedly higher than in previous years, while levels in New York and Los Angeles, cities often compared with Chicago, continued to decline.

While the most attention has been drawn to the extremely high 760-plus homicides that occurred in 2016, Table 1.1 below shows that viewed as monthly totals rather than annual totals, homicide totals for many other months of the previous 4 years would fit neatly into a series of 2016 months. For instance, there were 50 or more homicides in March, May, July and August of 2012, July and August of 2013, and May, June, July, August and September of 2015.

Table 1.1 Chicago Homicides by Month, 2012 to 2016

	Jan	Feb	March	April	May	June	July	August	Sept	Oct	Nov	Dec
2012	41	29	52	43	51	48	51	57	45	41	38	27
2013	44	15	17	24	48	45	53	53	43	32	28	40
2014	23	21	25	36	44	40	42	48	45	34	38	39
2015	32	20	35	37	50	51	58	56	63	31	37	39
2016	57	45	50	41	68	72	70	96	68	78	79	59

Note: Data were obtained from reports by *Chicago Tribune* and *Chicago Sun Times* and may vary slightly from Chicago Police Department data in some months. Any differences are slight and in no way affect the conclusions drawn herein.

Seasonal changes in weather, employment, school schedules, ebb and flow of rivalries between street organizations, and the randomness of what in statistical terms might be considered “rare” events cause variation in homicide levels from one month to another. To control for some of these causes, we can view change across the same month from one year to the next, rather than from month to month within the same year, or year to year.

Comparing year over year by month reveals some extraordinary monthly year-over-year increases occurred during 2016. Table 1.2 shoes that February 2016 saw a 125% increase over February 2015, August 2016 a 71% increase over August 2015, October 2016 a 152% increase and November 2016 a 114% increase. However, many of the 2016 increases over 2015 would fit neatly into a comparison of 2014 to 2015, and vice versa. The pattern of increases is not unique to 2016. The years 2014 and 2015 were not steadily low with a sudden and steady increase unique to 2016.

Table 1.2 Percent Change in Chicago Homicides by Month, Year to Year

	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec
2012 to 13	7%	-48%	-67%	-44%	-6%	-6%	4%	-7%	-4%	-22%	-26%	48%
2013 to 14	-48%	40%	47%	50%	-8%	-11%	-21%	-9%	5%	6%	36%	-3%

2014 to 15	39%	-5%	40%	3%	14%	28%	38%	17%	40%	-9%	-3%	0%
2015 to 16	78%	125%	43%	11%	36%	41%	21%	71%	8%	152%	114%	51%

Looking at change in the monthly absolute size of increase from year to year, rather than the percentage increase, Table 1.3 shows that while year over year monthly homicide levels increased in 2016 by 20 homicides or more, and then at the end of 2016 40 homicides or more, a number of the monthly increases in 2015 would also fit into the 2016 monthly series: for instance the 10 of March 2015, 11 of June 2015, 16 of July 2015 and 18 of September 2015.

Table 1.3 Absolute Change in Chicago Homicides by Month, Year to Year

	Jan	Feb	March	April	May	June	July	August	Sept	Oct	Nov	Dec
2012 to 13	3	-14	-35	-19	-3	-3	2	-4	-2	-9	-10	13
2013 to 14	-21	6	8	12	-4	-5	-11	-5	2	2	10	-1
2014 to 15	9	-1	10	1	6	11	16	8	18	-3	-1	0
2015 to 16	25	25	15	4	18	21	12	40	5	47	42	20

Because of the randomness of the date of homicides, and because the reason they occur does not necessarily correspond to the beginning or end of a month, it is helpful to create moving 3 month averages to smooth the peaks and cliffs between months resulting from the arbitrary beginning and end of a month. Doing this raises slightly the low monthly homicide figures and lowers slightly the higher ones. For instance, the 12-40-5-47 pattern of increase from August to October 2016 becomes 24-19-31-31 when the pattern is smoothed by averaging, probably a better representation of latent social conditions that underlay the homicide levels.

Smoothing the year-over-year monthly changes in Table 1.4 shows that 2013 was a very good year for homicides with long periods of decline from 2012 levels in the first half of the year, which saw double digit declines from 2012. Homicide levels slowly increased toward the end of 2013 and through the first half of 2014, but this was followed by another summer of gradual improvement, monthly decreases averaging 7 in June, 7 in July and 5 in August.

Homicide levels were stable but growing slightly from September, 2014 through May 2015, each month averaging about 4 to 6 more homicides than the same monthly period of the previous year. The summer of 2015 was bad with increases of 11, 12 and 14 for June through August compared to 2014. The increase in homicides abated briefly around October and November, but began increasing again with 8 in December 2015 compared to December 2014. Totals remained in the mid to high teens through June 2016 compared to 2015, and then expanded to the 30s in the fall of 2016 compared to fall of 2015.

Table 1.4 Three Month Average Change in Chicago Homicides by Month, Year to Year

	Jan	Feb	March	April	May	June	July	August	Sept	Oct	Nov	Dec
2012 to 13		-15	-23	-19	-8	-1	-2	-1	-5	-7	-2	-6
2013 to 14	-1	-2	9	5	1	-7	-7	-5	0	5	4	6
2014 to 15	2	6	3	6	6	11	12	14	8	5	-1	8

2015 to 16 17 22 15 12 14 17 24 19 31 31 36

The origins of Chicago’s very high 2016 homicide totals are observable as early as mid-2015, or arguably earlier.

Because homicides are reported publicly as monthly and yearly totals, and because monthly totals vary extremely from one month to another, gradual increases that cross beginnings and endings of months and years can be hard to detect. Through March of 2015, the pattern of increases looks fairly consistent with the previous 18 months. However, the trend clearly begins to point upward in April and May of 2015, and although it seems to recover briefly in November, 2015, that period is the statistical anomaly, not the summer of 2015.

Consequently, understanding of the causes of the high 2016 figure should be anchored in events or social changes occurring in early to mid-2015.

2. Explaining the Homicide Surge

2.1 DISTINGUISHING BETWEEN LONG- AND SHORT-TERM EXPLANATIONS OF HOMICIDES

To understand the surge, we have to separate its explanation into two categories: understanding the reasons behind the 400 or so homicides that had occurred annually over the past decade, the Long Term, and the increase above that level, or the “surge”, which occurred in 2015 and 2016.

Long Term: Deplorable social conditions in many Chicago neighborhoods virtually guarantee some level of ongoing violence.

Chicago’s high level of homicides is predictable to the extent that over the long term, most large American cities have multiple social problems that, in combination with the ready availability of guns, all but guarantee unacceptable levels of violence. (Krivo, Peterson and Kuhl, pp. 1765-1802) We know that a person’s likelihood of committing a violent crime correlates with living in a low-income neighborhood, being low income, living in a family where family members have committed crimes, having low educational attainment, and associating with persons who commit crimes. (Krivo, Peterson and Kuhl, Eligon, 2016) Places with concentrated poverty have higher crime and homicide levels than places where poverty is not concentrated. (Friedson and Sharkey, pp. 353-355); Krivo, Peterson and Kuhl) The availability of guns is also associated with commission of violent crimes in urban areas. (Crime Lab, 9)

Because presence of these problems leads to violent crime, many American cities with neighborhoods characterized by high levels of poverty, segregation, and related problems have homicide rates similar to or worse than Chicago’s. These include Baltimore, New Orleans, Newark, Oakland, Washington D.C., Detroit, St. Louis, Kansas City, Gary and many others. (Friedman, 2016; McCall, 2010) Isolating the neighborhoods in cities across the nation with social characteristics similar to those of the Chicago neighborhoods that have high homicide levels, one finds that their homicide rates per 100,000 residents are similar to Chicago’s. (Krivo, Peterson and Kuhl)

The very high number of persons circulating through the revolving door of felony conviction and short-term incarceration also likely contributes to Chicago’s ongoing problem with violent crime. The perpetual criminalization of young African American men in Chicago, in particular, likely contributes to gun violence. Illinois is a high-incarceration state, with an annual average prison population around 47,000. This is down from around 50,000 in the early 2010s. A large percentage of these convictions are Class 4 felonies for low-level drug possession or theft. (Krisai, 2016) At the point of conviction, most Class 4 felons have rarely been convicted of violent crimes, but their conviction for a Class 4 offense labels them, creates street “cred” for having survived a prison term, however short, and has a debilitating effect on their futures because a felony conviction disqualifies one for many employment and housing opportunities. (Alexander, 2012) Felony conviction and incarceration reduce likelihood of employment and reduce probability of marriage. About three-quarters of homicide offenders had previous contact with the criminal justice system. (Chicago Murder Report, 2011) Detention of violent offenders likely has some net preventative effects, but prosecuting and incarcerating so many Class 4 offenders likely offsets those benefits by drawing large numbers of young men into criminality.

As Brookings showed, Chicago’s homicide level declined during the 1990s and early 2000s along with many other large American cities but then, for reasons likely unique to Chicago’s environment, those gains stopped and until recently levels had remained in the low 400s. There is no single or conclusive

explanation for why violent crime and homicide levels fell nationwide, and in Chicago during the 1990s and early 2000s. (Skogan, 2007) Most likely each city with declines, Chicago included, experienced its own unique combination of demographic change, increasing residence of low-crime new-immigrants, dispersed public housing, improved schools, historically low unemployment during the 1990s, innovative police deployment and arrest strategies, reduction of firearms, decreased prevalence of crack cocaine and increased availability of social services. Many of these conditions occurred in Chicago during this period and some combination of them literally reduced Chicago’s homicide problem by half. (Skogan, 2007) However, nothing has proved sufficient to reduce homicide levels further absent fundamental changes in employment and income, educational attainment, housing segregation, effective social reintegration of ex-offenders, or availability of guns.

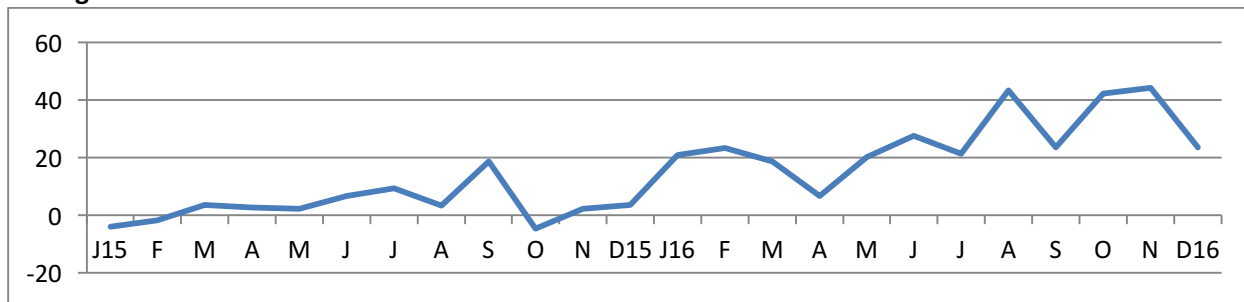
Given the persistence of poverty, segregation-related problems, and guns in high crime Chicago neighborhoods, and the homicide rates of other cities with similar conditions, many of which exceed Chicago’s rate, we may view levels of homicide typical of the period from 2005 to 2014 as Chicago’s plateaued level.

Short Term: The 2015 and 2016 Surge: A variety of factors contributed to the surge, which began at different times in different neighborhoods.

The surge is the number of homicides occurring in 2015 and 2016 above what would have normally been expected based on levels of the previous decade – the low 400s. Because the 2005 through 2014 levels are reasonably predictable given the social challenges faced by Chicago’s highest crime neighborhoods as explained above, we seek an explanation beyond those persistent problems for the relatively sudden change in levels of homicide.

As will be explained further below, so-called “domestic” homicides had little to do with the surge so the increase in the number of “non-domestic” homicides requires explanation. To do this we calculate the approximate size of the surge monthly by comparing the 2015 and 2016 monthly homicide levels with the average of each month from 2012 through 2014. As Figure 2.1 shows, the surge began slowly, growing from around zero in May, 2015 to about 20 per month from September, 2015 through May, 2016. From June, 2016 through November 2016, the surge grew to about 40 per month.

Figure 2.1 Size of the Surge: Number of Non-Domestic Homicides by Month 2015 and 2016 Above Average of 2012 to 2014



Source: Media database

The “surge” homicide levels clearly exceed what would be explained by reasonably likely parameters of random probability and so likely has a cause or causes different from the causes that explain Chicago’s

plateaued homicide level. The balance of the paper argues that data on short-term neighborhood-level change in likelihood of arrest, cooperation with police, drug arrests, ways of committing homicides, and increased arming of people coincides with changes in policing, social service interventions, and police-community relations sufficient to explain the 2015/2016 surge.

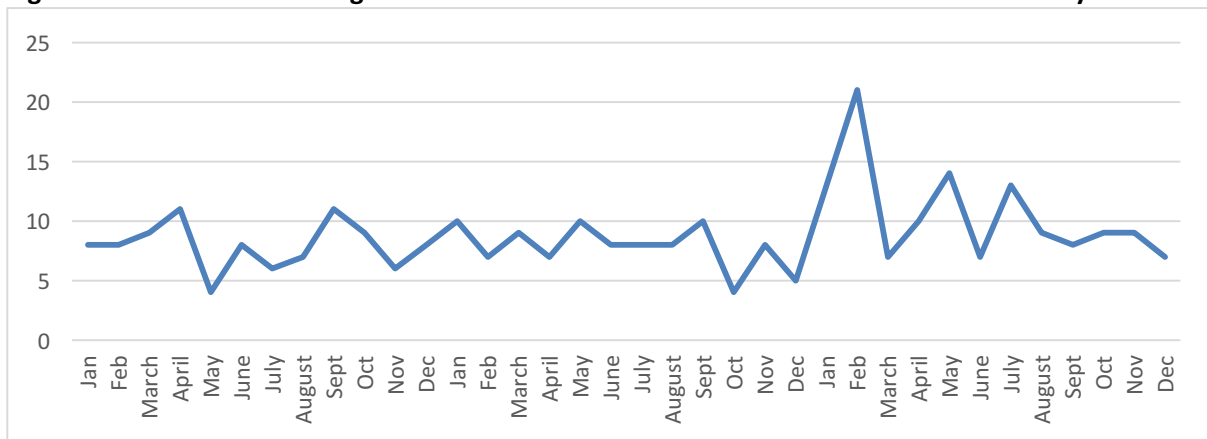
2.2 DISTINGUISHING BETWEEN DIFFERENT CAUSES OF HOMICIDES

Gradual, and then steep, rises in the number of non-domestic homicides fueled the surge

To understand better why homicides increased substantially in 2015 and 2016, we have to isolate some of the possible causes. The first step is to distinguish homicides resulting from random, idiosyncratic or domestic events, which we term “domestic”, from those that were purposeful and separated temporally from their ostensible cause, termed here “non-domestic”. (Green, 2017; Crime Lab, 2017)

Figure 2.2 shows the trend in these “domestic” homicides did not appreciably change from 2014 to 2016 and these types of killings did not drive Chicago’s significant homicide increase.

Figure 2.2 Number of Chicago Homicides Attributable to Identifiable Personal Causes by Month



Source: Database of crime descriptions created from *Chicago Tribune*, *Chicago Sun Times* and *DNA Info*

The remainder of homicides consists of situations where people are reported to have shot someone on foot, from a car, or there were no witness accounts made public at the time of media reporting. While some of these could have been motivated by “domestic” causes or robberies gone bad, in most cases the presented evidence suggests the assailant planned to injure or kill the victim but the reason is not immediately apparent. Men between the ages of 17 and 30 were likely most of the shooters. Media reports and other scholarly homicide research suggest that these are caused by a) contested neighborhood space, b) drug markets, c) gang conflict, or d) responses to perceived insults. (Harding, 2009; Phillips, 2003) In some cases the assailant knew the victim; in other cases not. In some cases media reporting suggests the individual was targeted; in other cases the assault appears to have been aimed more at a community or neighborhood (spraying bullets at a park or gathering) than at a specific individual. Around 8% of homicides were assailants shooting people sitting in parked cars, many of which may have been drug-transaction related. For this report, we call these “non-domestic”.

The most common acts of this “non-domestic” violence are shots fired at someone suspected of being a member of a rival gang, shots fired randomly at a street corner or park associated with a particular rival gang, walking or driving up to an individual on the street and shooting at them with no attempt to rob them or speak with them, or approaching persons in a parked car (sometimes the site of drug transactions) and shooting them. While the perpetrator may know, or know of, the intended victim, the underlying cause of the shooting is perceived defense of a neighborhood, a drug or weapons market, a gang, or retaliation for a related precipitating assault or insult. (Papachristos, 2013)

While gang organizations remain a strong presence in Chicago, it is often unclear the degree to which gang membership influenced commission of many violent acts. Media reports that many of these types of homicides appear to have been committed by persons with some type of “gang” affiliation, but the concept is fluid and the term “gang” is often used to indicate a set of people known to one another, most of whom associate with, are related to, or are acquainted with, someone who has a more formal gang affiliation. The concept is often not meaningful for knowing why a violent act took place. Persons with supposed gang affiliations may engage in violent acts that are irrelevant to a gang affiliation they may have. Gang membership can include individuals who have undergone initiation rituals, have affiliated tattoos, wear clothes or colors indicating gang affiliation and/or may have accumulated extensive criminal records, and/or killed, in altercations related to gang affiliation. At the other end of the spectrum is more casual gang “membership” - a cousin who may run an occasional errand for a committed gang member, may hang out with gang members but never committed a crime directly in the service of the “gang”, or become involved in defense of a neighborhood coterminous with gang “ownership”, even though not having close association with the gang *per se*. In some instances, crimes may be committed by small groups of friends who live in an area ostensibly controlled by a gang, but that group’s actions are unrelated to a larger gang’s control. (Heinzmann, 2016; Neyfakh, 2016) The group’s actions may constitute a conspiracy, but not gang activity as defined by a gang’s cultural trappings and tradition or history. Countless homicides are committed by irresponsible young people who feel they have been insulted in some manner, sometimes related to some form of identity and sometimes not. To the extent that gang affiliation drives homicides, anecdotal evidence indicates that the structure of Chicago’s gangs has fragmented significantly over the past 25 years but there is no evidence that meaningful changes in structure occurred in late 2015 or 2016 that would have led to the substantial homicide increase.

There are a number of reasons to separate homicides into these two categories.

- 1) Eliminating guns would decrease, but not eliminate the idiosyncratic, domestic deaths, whereas eliminating guns would virtually eliminate the “non-domestic” deaths.
- 2) Domestic homicides are committed by a wide age range, whereas non-domestic homicides are mainly committed by, and against, people in their teens through early 30s.
- 3) Domestic homicides occur more randomly across the Chicago region, while non-domestic homicides disproportionately occur in a few neighborhoods.
- 4) In Chicago, whites are much more likely to be involved in domestic homicides, while African Americans and Latinos are far more likely to perpetrate or be victims of non-domestic homicides.

2.3. GEOGRAPHIC PATTERNS OF HOMICIDES

Most Chicago homicides occur in a few neighborhoods and those neighborhood levels increased at different times and rates

Chicago gradually became more violent beginning in 2015. Most homicides occurred in a few neighborhoods and the timing of the homicide surge is irregular across those places. The table below lists those neighborhood areas, omitting areas on the far southwest side, lakefront and far northwest sides where very few homicides occur. As the shading illustrates in Table 2.1, homicides increased unevenly in many places. Some areas have “local” peaks that occurred during 2015, and even 2014. Homicide levels ebbed and flowed within neighborhoods in 2016 as well.

Many Chicago areas have not experienced the violence surge, or experience it only minimally. Three of these have never had many homicides and the ones that occurred were mostly in the non-domestic category:

Minimal Homicide

- Far northwest extending from North Park to O’Hare
- Far southwest including Beverly and Mount Greenwood
- Lakefront from the loop to Lake View

Several areas have commonly had homicides, but the trend barely changed from 2014 through 2016:

Homicides, but Little Change

- North Lakefront extending from Uptown to West Ridge experienced a modest increase of 15 anonymous homicides in 2014 to 18 in 2016.
- South Chicago had 16 anonymous homicides in 2014 and 15 in 2016.

The remaining portions of the city experienced gradual increases over multiple years. These can be characterized by two types:

Long increases that first peaked in 2015

- Austin - Had 22 and 23 in late 2016, but also had 16, 14, 11, 14 in the four prior quarters
- Bronzeville – Had 7 and 9 in 2016, but also had 7 and 9 in mid-2015
- Far South – Had 19 and 13 in late 2016, but also had 17 in 3rd Quarter 2015
- Garfield – Had 20s in 3 quarters of 2016, but also had 18 in 4th Quarter 2014 and 19 in 3rd Quarter 2015
- Lawndale – Had 12s in mid 2016, abut also had 12 in mid 2015
- New City – Averaged 9 across 2016, but had 9 and 10 in 2015
- Woodlawn – Had 20 and 22 in late 2016, but had 18 and 22 in mid-2016

Long increases that peaked in 2016

- Auburn Gresham/Washington Heights - Peaked 2nd Quarter, 2016

- Austin – Peaked 3rd Quarter 2016
- Northwest – Peaked 1st Quarter 2016 and receded
- Southwest – Peaked 3rd Quarter 2016

Gradual Increase from 2014

- The near Southwest (Little Village/Pilsen) could be said to have increased gradually from 2014.

No Pattern

- Englewood presents an erratic pattern, with 23 in 3rd Quarter 2014, 17 in 4th Quarter 2015, and 29 and 31 in mid-2016, before dropping back to 18 4th Quarter 2016.

This variety of sequences argues against a single explanation for the surge.

Table 2.1 Number of Homicides by Quarter by Aggregated Community Area

	Q1-14	Q2-14	Q3-14	Q4-14	Q1-15	Q2-15	Q3-15	Q4-15	Q1-16	Q2-16	Q3-16	Q4-16
Auburn Washington	4	7	7	3	5	5	6	6	7	15	12	12
Austin	6	12	6	7	7	10	14	11	14	16	22	23
Bronzeville	1	5	4	2	2	7	9	2	3	9	4	7
Englewood	6	13	23	14	9	12	8	17	15	29	31	18
Far Northwest	0	0	0	0	0	0	0	0	0	1	0	1
Far South	4	7	10	6	5	8	17	5	5	6	19	13
Garfield	5	13	16	18	4	11	19	9	20	15	22	26
Lakefront	0	0	2	2	0	0	0	0	0	3	3	2
Lawndale	0	4	3	0	2	5	12	0	3	12	12	9
Near Southwest	5	5	4	3	3	4	6	4	7	3	7	9
New City	1	4	6	4	2	7	9	6	10	8	8	11
North Lakefront	1	5	6	3	4	7	4	2	2	3	7	6
Northwest	3	4	8	8	5	8	8	4	13	6	10	9
South Chicago	3	3	5	5	3	4	4	0	1	2	8	4
Southeast	0	2	0	1	1	0	2	0	0	0	1	1
Southwest	0	1	3	2	2	2	5	4	4	6	11	12
Woodlawn	5	12	8	11	6	18	22	15	8	17	20	25

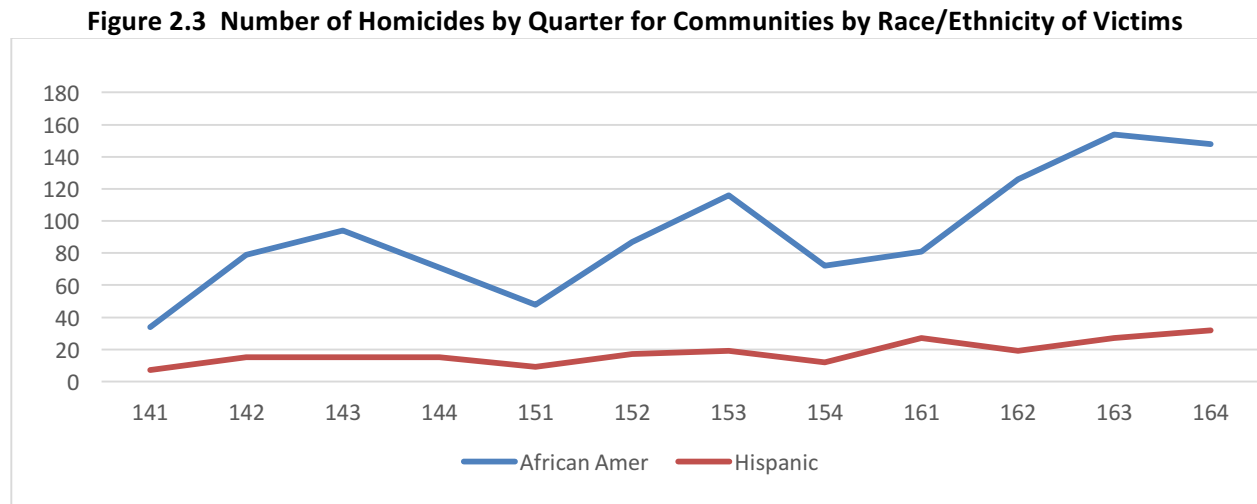
Source: Media Database

Homicide trends need to be understood at the neighborhood level because patterns of violent crime and homicide are structured by communities of people defined by race/ethnicity and social relationships that correspond to geographic areas. The intersection of economic segregation and racial segregation matters in part because commission of crime and gang membership in Chicago are highly associated with racial/ethnic identification and because as Massey has shown, segregation severely limits most

types of social opportunity. (Papachristos, 2013; Massey, 1995; Vargas, 2015) Criminal offending defines a sort of community which, while not absolutely bound to specific place, has strong geographic correlates. Papachristos has demonstrated the strong relationship between previous acquaintance (evidenced by being arrested together) and likelihood of being shot. The most recent Chicago murder study by the police department finds that people who have arrest records are more likely to be both homicide perpetrators or homicide victims than people who do not. (Chicago Murder Report, 2011). Papachristos and others (Harding, 2009; Phillips, 2003) have argued that both the perpetrators and victims of violence in Chicago, and in other cities, likely come from a community of individuals living in relatively few neighborhoods who are socially related to one another. These networks of association tend to be racially homogenous – primarily either African American or Hispanic.

Gangs also tend toward racial homogeneity. In Chicago, for instance, the Gangster Disciples and Black P Stones are largely African American, and operate in racially segregated African American neighborhoods while the Latin Kings, Spanish Cobras and others have largely Hispanic membership and operate in neighborhoods that are more densely Hispanic populated. Neighborhoods where most of Chicago’s African-Americans live are much more densely African American than are neighborhoods where most of Chicago’s Hispanics live and it is probably, therefore, no accident, that shooting and homicide rates are higher in those hyper-segregated African American neighborhoods than they are in the only somewhat segregated Hispanic ones.

While numbers of homicides increased in both African American and Hispanic neighborhoods, Figure 2.3 shows the exceptional increase was driven by events occurring in African American communities.



Source: Media database

2.4 DECLINING RISK OF ARREST

Likelihood of arrest for homicide declined precipitously in late 2015 and some evidence suggests witnesses became less forthcoming

The probability of arrest and punishment of offenders is a factor in deterring crime. (U.S. Department of Justice, 2017) We might hypothesize that where the percentage of homicides for whom someone is arrested declines, more offenders would be willing to take the chance of fatally shooting someone. While young people in high-crime Chicago neighborhoods are surely unaware of the actual statistics, they may well be aware of whether an arrest was made for a homicide in their neighborhood. This is not to argue that deterrence through arrest is the most important mitigating factor in homicide prevention, but that likelihood of arrest does have an effect on some potential offenders.

As Table 2.2 shows, from early 2014 to late 2016, Data Portal data shows the likelihood of arrest for a homicide in Chicago declined from around 40% to around 20%. During the winter and spring of 2014, city-wide arrest rates were 51% and 41% respectively. The arrest rate declined to a quarterly plateau of around 30% from summer 2014 through winter of 2016, before declining even further to around 20% for the majority of 2016. But in many times and places, the arrest rate was even smaller.

The homicide arrest rate declined more in some places than in others. For instance, arrest rates were low throughout 2014 through 2016 in the Far South, already as low as 25% for the first quarter of 2014. Major declines hit Englewood (7%) and Woodlawn (15%) at the end of 2014, continuing at low levels. By mid 2015, all of the higher crime neighborhoods suffered from extremely low arrest rates that ranged from 20% to 30%.

The plunge to very low levels began in late 2015 when none of the homicides in New City or the Near Southwest resulted in arrests, and many areas including Auburn Washington, Austin, Englewood, Garfield Park, Northwest and Lawndale routinely saw fewer than 15% of their homicides result in an arrest.

Table 2.2 Percent of Homicides Resulting in Arrest by Quarter and Aggregated Area

	Q1-14	Q2-14	Q3-14	Q4-14	Q1-15	Q2-15	Q3-15	Q4-15	Q1-16	Q2-16	Q3-16	Q4-16	Total
Auburn Washington	50%	50%	0%	40%	83%	0%	25%	33%	22%	14%	13%	0%	38%
Austin	40%	50%	50%	33%	0%	33%	18%	21%	21%	11%	14%	7%	39%
Bronzeville	75%	40%	50%	50%	0%	43%	11%	50%	71%	44%	29%	17%	22%
Englewood	50%	50%	27%	7%	11%	31%	0%	17%	13%	6%	13%	17%	45%
Far South	25%	29%	0%	33%	60%	0%	31%	43%	17%	17%	29%	6%	37%
Garfield Park	50%	36%	35%	5%	29%	36%	34%	17%	41%	6%	12%	4%	36%
Lawndale		20%	25%	0%	33%	33%	27%	100%	0%	8%	22%	0%	40%
Near Southwest	40%	25%	60%	67%	25%	20%	20%	0%	14%	0%	14%	8%	39%
New City	50%	60%	0%	25%	50%	50%	56%	0%	10%	69%	17%	23%	25%
North Lakefront	0%	0%	17%	33%	25%	25%	60%	50%	75%	0%	14%	33%	29%
Northwest	33%	40%	33%	29%	67%	50%	33%	0%	20%	64%	13%	11%	24%
South Chicago	50%	75%	40%	20%	0%	25%	20%	0%	0%	0%	56%	0%	27%
Southwest	100%	100%	50%	33%	0%	50%	25%	0%	80%	14%	23%	23%	24%

Woodlawn	63%	27%	82%	15%	14%	21%	27%	23%	27%	24%	26%	7%	32%
Total	51%	41%	34%	23%	31%	31%	28%	22%	31%	21%	20%	10%	

Source: City Data Portal

Declining Information Shared with Media in Early 2016

Law enforcement relies on witness cooperation to make arrests and we may be able to observe the loss of neighborhood cooperation with law enforcement through the presence or absence of event details in media data. The chart below shows the trend line for homicides for which media was unable to report how the homicide happened beyond that the victim had been killed – in contrast to those articles that observed whether a vehicle was used or whether the assailant was on foot, or even posed a possible motive, information that witnesses pass on to police, media or both.

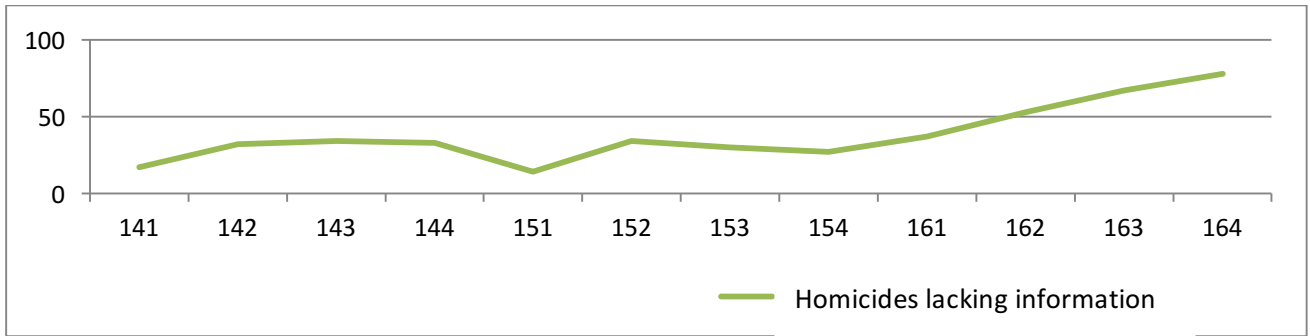
Reporters for print, television and social media outlets typically file a story on a homicide within one day of the discovery of the victim. Text of these stories reveals that in most cases reporters obtain information for the story from Chicago police sources. In the instances charted below, reporters did not report anything about the circumstances of the killing other than where the body was found, identification of the person, and when the body was discovered. This implies that either the murder was committed without witnesses, or witnesses chose not to provide information, at least initially.

The number and percentage of media reports that contained information regarding how the homicide occurred changed beginning in the late fall of 2015. As Figure 2.4 shows, the percentage of homicide reports lacking information was fairly constant from 2014 through 2015, but then began to rise steadily. The percent of reports lacking information begins rising around the time of the release of the Laquan MacDonald video (late November, 2015), although the Chicago police, and Superintendent McCarthy in particular, had for years publicly called for greater witness cooperation in solving crimes so the problem was not unique to a MacDonald backlash. (Kotlowitz, 2016)

Kirk and Papachristos (2011), utilizing data from the Project on Human Development in Chicago Neighborhoods, found that individual values regarding crime and public safety were a different construct from cynicism about the police and the efficacy of working with them. Levels of violent crime correlated strongly with levels of local cynicism across Chicago neighborhoods. Variation in arrest rates and public information about homicides may indicate that cynicism and therefore be linked to local homicide levels over time.

The evidence presented here should be viewed with caution because it is possible that information about the crime and witnesses eventually materializes with time as investigations deepen so the trend could be an artifact of the length of time from the homicide to the present. On the other hand, the number and percent of homicides lacking full reporting remained more constant in some neighborhoods than others and high figures were recorded for homicides more than two years ago in some neighborhoods – a measure of internal reliability validating the authenticity of the 2016 upward trend.

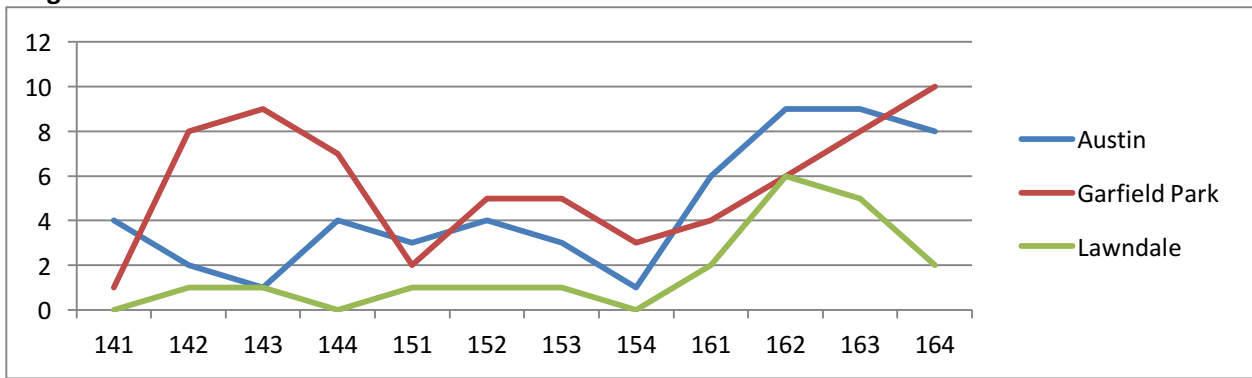
Figure 2.4 Percent of Homicides Lacking Description in Media by Quarter



Source: Media Database

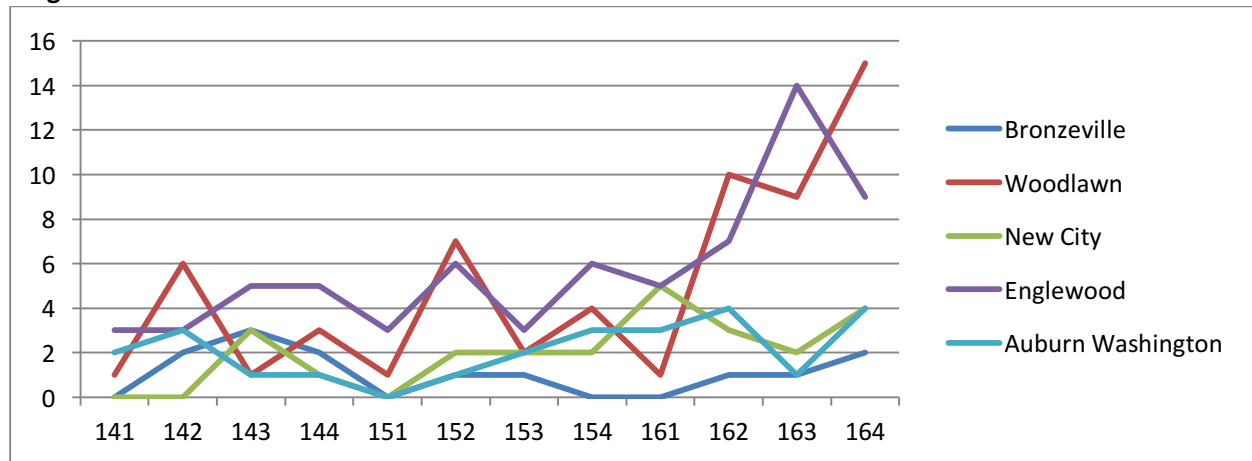
As Figures 2.5 and 2.6 indicate, among eight neighborhoods with high homicide levels, Austin, Garfield Park, Woodlawn and Englewood stand out for the significant increases in the number of unexplained homicides beginning in late 2015. Lawndale, New City and Auburn Washington each appeared to follow this pattern, but their patterns had returned to pre-2016 levels by mid-2016.

Figure 2.5 Number of Homicides Unexplained in Initial Media Reports by Quarter, Selected North Neighborhoods



Source: Media Data Base

Figure 2.6 Number of Homicides Unexplained in Initial Media Reports by Quarter, Selected South Neighborhoods



Source: Media Data Base

The measure of media information suggests deteriorating cooperation in high-crime neighborhoods and, whatever the reason, the arrest measure confirms that the risk of committing a homicide declined steadily and substantially from mid-2014 to the end of 2016. While declining witness cooperation and declining arrest rates do not cause homicides, street knowledge of reduced risk removes a cognitive barrier to shooting someone, as well as leaves individuals who are armed and have shot someone at large where they could become repeat offenders, raising homicide levels higher than they would be were offenders detained.

2. 5 CONTESTED NARCOTICS MARKETS

Hard drug arrests declined significantly over the entire period but particularly in Garfield Park, which has a large and contested drug market.

Drug trade is a significant cause of violence in large American cities. (Werb et al, 2011) Trafficking in and demand for crack cocaine is widely credited with causing many hundreds of homicides in Chicago, and other cities during the 1990s. Shootings and killings occur as both individuals and gangs challenge one another for shares of the market. While murders have occurred in Chicago for the least of reasons, drug sales can involve very large sums of money and penalties for conviction for many types of drug-related crimes carry penalties comparable to homicides, thereby reducing the potential relative cost differential of resorting to deadly violence to gain advantage. Because it is well-known that drug traffickers will kill, individuals in significant conflict over drugs must be willing to defend themselves with deadly force, either reactively or pre-emptively. (O'Flaherty & Sethi, 2010)

The last few years have been a transitional period regarding narcotics in Chicago in at least two respects. First, possession of small amounts of cannabis has been nearly decriminalized, reducing the risk of holding or transacting cannabis sales. Because of its ubiquity, a vastly disproportionate number of narcotics arrests have been for cannabis possession or sale. While some violence occurs over these sales, cannabis trade is unlikely a major driver of homicides.

Second, and much more serious, is the current heroin and opioid epidemic in the Chicago region. The number of deaths from heroin and other opiate overdoses far exceeds the number of homicides in the Chicago area and demand for heroin, and for other hard drugs, is high at this time. Traffickers can make very large amounts of money from hard drug transactions and levels of violence surrounding competition for markets are high. Suburban as well as Chicago users consume these drugs so the Garfield Park area has become a major drug market serving suburban buyers who have easy access via the Eisenhower Expressway. (Guardian, 2015)

Data on arrests for trafficking of hard drugs reflects the market structure. Violence often stems from transactions between suppliers and dealers and transactions between dealers and buyers. Given the types of records publicly available, the best available indicator of where transactions occur is arrests for manufacture or sale of substances. This data has the limitation that it reflects where and when police choose to enforce and arrest and a rising arrest figure could indicate either burgeoning or receding numbers of drug transactions. That said, of the 7,000 such arrests between 2014 and 2016, over 3,000 of them occurred in Garfield Park alone. Another 1,000 were in adjacent Austin. Englewood, Lawndale and Woodlawn also had significant drug arrest levels, but nowhere near as high as in Garfield Park (Table 2.3 and Figure 2.7). Clearly the drug trade is a major driver of homicide in Garfield Park, probably in Austin, and a significant driver in other high-crime/high-trade areas.

Table 2.3 Total Hard Drug Arrests by Aggregated Area by Quarter

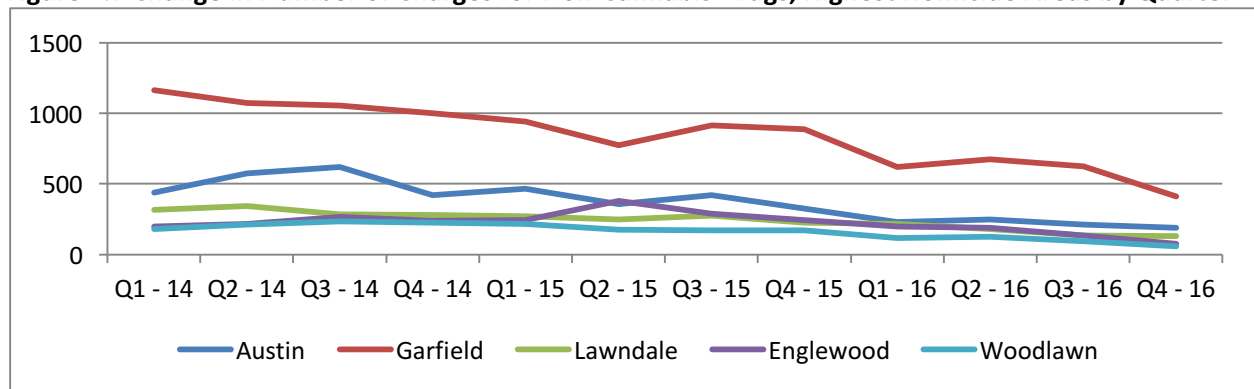
	Q1-14	Q2-14	Q3-14	Q4-14	Q1-15	Q2-15	Q3-15	Q4-15	Q1-16	Q2-16	Q3-16	Q4-16	Total
Auburn Washington	9	33	16	14	6	10	13	11	12	10	10	3	147
Austin	82	172	141	79	61	76	101	64	60	59	68	30	993
Bronzeville	12	15	22	4	5	18	23	11	9	19	5	0	143
Englewood	26	26	37	60	43	131	82	75	88	73	37	10	688
Far South	18	30	20	18	18	10	9	12	26	9	21	8	199
Garfield	306	352	369	324	284	184	254	327	252	228	240	62	3182
Lawndale	65	82	63	68	39	54	56	29	62	34	21	8	581
Near Southwest	4	2	3	2	3	5	3	3	6	0	2	0	33
New City	7	5	11	7	4	5	22	44	34	16	10	3	168
North Lakefront	3	7	12	4	8	6	13	11	15	5	5	1	90
Northwest	18	13	11	8	11	11	28	16	14	9	3	6	148
South Chicago	2	14	4	18	8	1	3	8	22	7	6	1	94
Southwest	3	5	5	5	5	3	5	4	6	2	6	0	49
Woodlawn	32	43	50	45	43	33	31	26	29	32	29	11	404
Total	603	811	783	665	542	556	662	654	643	518	480	146	7063

Source: City Data Portal

While no evidence shows that the volume of drug trade lessened from 2014 through 2016 – overdose deaths and emergency room mentions remained high – the number of transaction-related hard narcotics arrests decreased steadily in most city neighborhoods and, most importantly, in the highest crime neighborhoods. During 2014 Chicago as a whole averaged around 700 arrests per quarter. By 2016, that had declined to around 400. The most precipitous decline began in early 2016.

Arrest data in Figure 2.8 shows that by mid-2015 hard drug transactions, which are more associated with violence, were growing. Garfield Park and Austin had a significant surge in the percentage of all drug arrests that were from hard drug transactions, as opposed to possession, in mid-2014. But because of their unique role as major drug markets, those increases were not felt city-wide at that time. By mid-2015, Bronzeville, Englewood, and other neighborhoods showed signs of heavier incidence of hard drug trafficking. By early 2016, hard drug transactions were a steadily growing proportion of all drug arrests in most of the high-crime neighborhoods and particularly in Garfield Park.

Figure 2.7 Change in Number of Charges for Non-Cannabis Drugs, Highest Homicide Areas by Quarter



Source: City Data Portal

It is both intuitive and documented that high-stakes narcotics transactions are associated with increased violence as the risk/reward calculation may reward, and require, violence in order to remain in the marketplace. (O’Flaherty and Sethi, 2010) Policing and arrests may place some curbs on that violence through mere presence, and by detaining, at least temporarily, some potential offenders. The decriminalization of cannabis likely reduced violence somewhat by reducing the stakes of possession or transactions, thereby reducing the likelihood of escalation of what might in earlier days have been deadly conflicts.

However, reducing arrests in the hard drug trade in the midst of an expanding market with potential for deadly conflict over high-value/high-stakes transaction sites, may have allowed transaction-related violence to climb when policing reached a sufficiently low level. In Garfield Park the precipitous decline in drug arrests in a place with a very high concentration of drug trafficking could have set off a wave of incursions and retaliations.

Figure 2.8 Non-Cannabis Drug Transactions as a Percent of All Drug Offenses Excluding Cannabis

	Possession												Total
	Q1-14	Q2-14	Q3-14	Q4-14	Q1-15	Q2-15	Q3-15	Q4-15	Q1-16	Q2-16	Q3-16	Q4-16	
Auburn Washington	8%	21%	13%	14%	6%	11%	13%	9%	20%	15%	19%	6%	13%
Austin	15%	26%	20%	16%	12%	18%	20%	17%	19%	17%	24%	13%	18%
Bronzeville	10%	12%	18%	8%	8%	22%	26%	14%	24%	33%	14%	0%	16%
Englewood	11%	10%	12%	22%	16%	29%	24%	26%	37%	33%	24%	10%	22%
Far South	12%	15%	11%	12%	11%	8%	8%	13%	24%	11%	15%	11%	13%
Garfield	24%	30%	31%	29%	26%	21%	25%	33%	37%	31%	35%	14%	28%
Lawndale	20%	23%	21%	23%	13%	21%	19%	12%	27%	18%	14%	6%	19%
Near Southwest	7%	3%	4%	3%	5%	9%	6%	5%	16%	0%	5%	0%	5%
New City	7%	7%	11%	9%	3%	5%	19%	31%	38%	20%	18%	8%	15%
North Lakefront	4%	6%	9%	5%	9%	8%	15%	15%	33%	9%	14%	3%	10%
Northwest	14%	8%	6%	6%	7%	8%	16%	12%	16%	12%	3%	11%	10%
South Chicago	5%	16%	4%	19%	13%	3%	5%	19%	43%	21%	25%	3%	14%
Southwest	4%	5%	4%	5%	4%	3%	5%	6%	9%	3%	9%	0%	5%
Woodlawn	15%	17%	17%	16%	17%	16%	14%	13%	21%	21%	24%	13%	17%
Total	17%	21%	19%	20%	16%	18%	19%	22%	28%	22%	23%	10%	19%

Source: City Data Portal

2.6 SHOOTERS BECOME BOLDER

Increasingly, homicides were carried out by assailants arriving and fleeing on foot rather than in vehicles

Media reports on homicides often note whether the assailants utilized a vehicle in the commission of the homicide by either shooting from a car or SUV or exiting the vehicle and then fleeing in it, or simply walked up to the victim, shot him, and then ran away.

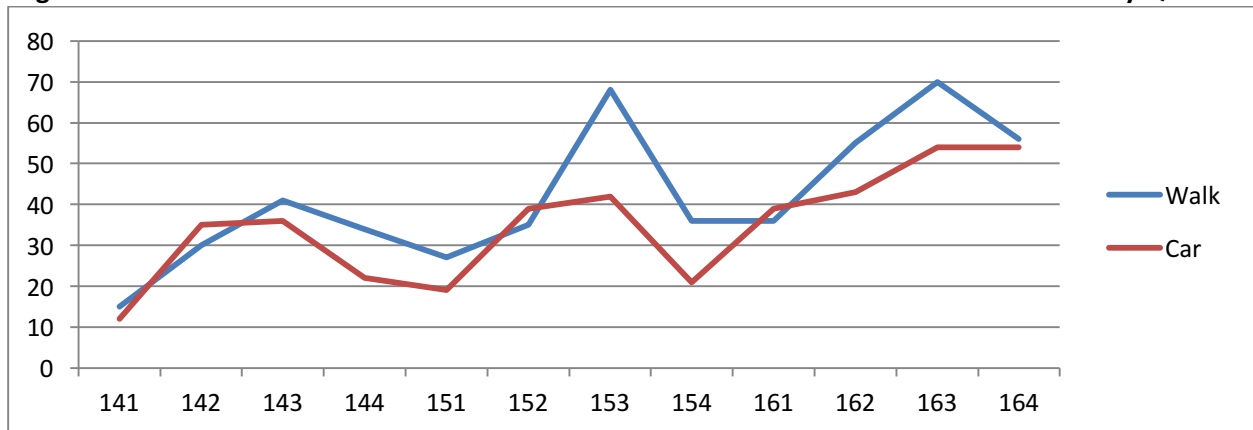
As Figure 2.9 below indicates, the number of homicides by assailants reported to have arrived and fled on foot relative to assailants using vehicles increased over the past two years. On-foot spikes occurred in the third quarter of 2015 and the middle two quarters of 2016, which include summer months. Like for other measures, patterns of on-foot versus vehicular homicide vary by neighborhood and by period.

Increases in homicides on foot could mean at least two things:

More homicides were the results of local rather than inter-neighborhood conflicts as vehicles were less necessary for transport over greater distance, possibly as a result of the fragmentation of gang structure.

Assailants became less fearful of identification or immediate apprehension and so were emboldened to walk in the victim's neighborhood rather than seek the relative anonymity, mobility and protection afforded by a vehicle.

Figure 2.9 Number of Homicides Where Assailant Left in Vehicle or Assailant Left on Foot by Quarter



Source: Media Database

2.7 VIOLENCE BECAME MORE LETHAL

In mid-2015, more robbers used guns and more altercations became shootings.

The presence of guns is the major contributor to the lethality of violence. (Crime Lab, 2017) Chicago is known for its large number of guns and that story need not be recounted here. While there is no evidence that the total number of guns in Chicago changed appreciably between 2014 and 2015, the number of firearms recovered by police changed little over the period according to CPC data analyzed by the University of Chicago Crime Lab, 6,762 in 2015 and 6,644 in 2016, or that such a change would have caused the significant upsurge in homicides, people began using them more.

The number of homicides fluctuates month to month and year to year owing to a combination of local circumstances and random chance. Because shooting is often inaccurate, and sometimes random – consider a shooter spraying bullets at a park or at a moving car - “only” between 20% and 25% of it results in a homicide. (Lewinski et al, 2015) This element of randomness also helps account for monthly differences. However, some evidence suggests that homicide levels are affected by intentionality of shooters. (O’Flaherty and Sethi, 2010)

The data presented below is consistent with a theory that as homicide totals began to rise in the most violent Chicago neighborhoods, more young people armed themselves, thereby making streets more dangerous. O’Flaherty and Sethi (2010) modeled how persons in dangerous neighborhoods might arm themselves or take pre-emptive action given their perception of increased mortal danger to themselves, leading to an increasingly armed and dangerous population. As more armed people use guns, more persons arm themselves, creating an upward cycle of homicides. (Jacobs and Wright, 2006)

Guns Were More Likely to Be Used in Robberies from Mid-2015 through 2016.

The percent of robberies in which a robber had a firearm is one indication of the availability of guns in the environment, and the presence of guns in homicides increases the likelihood of a robbery becoming a homicide.

As Table 2.5 indicates, use of guns in street confrontations began to increase in the 4th Quarter of 2014. In the low 40% through 3rd Quarter 2014, in 4th Quarter 2014 gun usage rose to 48%. In the 4th Quarter of 2015 it hit 50%, a level approximately sustained through 2016. More than 60% of robberies involved guns in 20 Quarters across the period in high-crime neighborhoods. Most of these quarters occurred from mid-2015 through 2016.

Likelihood of use of a firearm in a robbery varied by neighborhood. Robbers were more likely to use guns in predominantly African-American neighborhoods than in Hispanic ones. Robbers were most likely to use guns in Austin (57%), Auburn-Washington (56%), Far South (56%) and Woodlawn (54%). Among the high-homicide areas, robbers were least likely to use guns in the three largely Hispanic areas, Near Southwest (39%), Northwest (43%), Southwest (44%), and in New City (43%).

Table 2.5 Percent of Robberies with Firearms by Area by Quarter

Q1-14	Q2-14	Q3-14	Q4-14	Q1-15	Q2-15	Q3-15	Q4-15	Q1-16	Q2-16	Q3-16	Q4-16	Total

Auburn Washington	53%	48%	35%	56%	71%	51%	53%	56%	71%	63%	54%	68%	56%
Austin	55%	47%	46%	64%	57%	56%	58%	63%	60%	60%	50%	60%	57%
Bronzeville	42%	50%	50%	53%	47%	54%	61%	47%	48%	49%	60%	53%	52%
Englewood	56%	42%	33%	49%	49%	44%	46%	47%	48%	52%	51%	55%	47%
Far South	52%	52%	49%	49%	48%	52%	56%	60%	63%	47%	63%	72%	56%
Garfield	50%	50%	49%	47%	49%	49%	51%	57%	55%	45%	55%	56%	51%
Lawndale	48%	39%	35%	55%	49%	65%	53%	59%	48%	44%	42%	64%	51%
Near Southwest	41%	23%	40%	42%	33%	37%	31%	42%	48%	38%	44%	49%	39%
New City	37%	38%	34%	40%	39%	38%	36%	41%	43%	38%	55%	59%	43%
North Lakefront	35%	23%	35%	23%	37%	36%	31%	37%	44%	31%	28%	41%	34%
Northwest	33%	36%	32%	40%	51%	34%	46%	52%	41%	49%	50%	42%	43%
South Chicago	48%	39%	46%	59%	39%	53%	61%	73%	53%	34%	50%	61%	52%
Southwest	38%	40%	36%	53%	39%	34%	30%	37%	56%	53%	50%	54%	44%
Woodlawn	51%	51%	50%	51%	53%	54%	45%	52%	55%	55%	59%	63%	54%
Total	46%	42%	40%	48%	48%	46%	46%	50%	50%	47%	51%	54%	47%

Source: City Data Portal

The Percentage of Shootings Increased Relative to the Percentage of Stabbings in Mid-2015

Concurrent with the increased use of guns in robberies, was increased shootings relative to the number of stabbings and other forms of assault.

Table 2.6 shows that in the 1st Quarter of 2014, shootings were only 57% of the total shootings plus stabbings and assaults. That figure moved into the mid 60% during 2014 and hit 70% in 2nd Quarter of 2015. By 2nd Quarter of 2016 it had hit 79% and peaked in the 4th Quarter of 2016 at 81%. Beginning in Mid-2015 more than 75% of these armed confrontations involved a shooting in most neighborhoods.

Levels of shooting varied across neighborhoods. Auburn-Washington (81%), Austin (79%) and Far South (80%) had both very high likelihoods of shootings as well as high use of guns in robberies. High shooting also occurred in Englewood (76%), Far South (80%), Near Southwest (77%) and New City (75%).

Table 2.6 Shootings as a Percent of All Assaults by Quarter and Area

	Q1-14	Q2-14	Q3-14	Q4-14	Q1-15	Q2-15	Q3-15	Q4-15	Q1-16	Q2-16	Q3-16	Q4-16	Total
Auburn Washington	.731	.818	.808	.765	.697	.878	.839	.830	.723	.828	.754	.901	.808
Austin	.656	.775	.650	.712	.800	.634	.824	.808	.826	.801	.819	.911	.788
Bronzeville	.538	.688	.725	.667	.636	.714	.758	.676	.610	.817	.776	.705	.709
Englewood	.651	.688	.680	.745	.697	.845	.680	.798	.748	.820	.816	.825	.760
Far South	.586	.756	.885	.764	.600	.756	.796	.868	.803	.784	.870	.818	.795
Garfield	.604	.604	.640	.759	.648	.631	.787	.679	.801	.817	.699	.823	.723
Lawndale	.462	.500	.559	.621	.476	.574	.787	.680	.694	.800	.773	.896	.702
Near Southwest	.792	.650	.813	.731	.733	.625	.763	.730	.786	.839	.807	.870	.766
New City	.600	.606	.595	.647	.741	.730	.754	.719	.865	.808	.820	.881	.751
North Lakefront	.462	.543	.528	.469	.538	.738	.475	.588	.706	.700	.606	.714	.597

Northwest	.447	.590	.541	.608	.582	.700	.640	.625	.721	.699	.762	.691	.642
South Chicago	.722	.765	.841	.952	.692	.714	.711	.615	.650	.727	.756	.800	.758
Southwest	.500	.692	.645	.565	.611	.727	.813	.786	.800	.675	.826	.837	.734
Woodlawn	.557	.720	.636	.750	.649	.727	.681	.620	.671	.817	.718	.725	.701
Total	.565	.668	.664	.694	.632	.705	.723	.706	.736	.785	.763	.810	.719

Source: City Data Portal

Homicides as a percent of all armed incidents increased beginning in Mid-2015

Although the pattern is not as strong as for the above measures, Table 2.7 shows homicides gradually became an increasing percentage of all armed incidents. Averaging around 5% per quarter through early 2015, in mid 2015 they increased to from 6% to 7%. The 4th Quarter of 2015 was low (4%), but the average returned to over 6% across 2016. Austin, New City, Englewood and Southwest had the highest percentages overall and in particular quarters.

Table 2.7 Homicides as a Percent of Armed Incidents by Quarter and Area

	Q1-14	Q2-14	Q3-14	Q4-14	Q1-15	Q2-15	Q3-15	Q4-15	Q1-16	Q2-16	Q3-16	Q4-16	Total
Auburn Washington	4%	4%	7%	4%	6%	4%	5%	4%	5%	7%	9%	5%	6%
Austin	4%	8%	6%	4%	7%	5%	8%	7%	9%	6%	7%	10%	7%
Bronzeville	5%	3%	3%	2%	3%	5%	5%	2%	6%	6%	3%	4%	4%
Englewood	5%	6%	11%	7%	6%	5%	3%	8%	7%	10%	10%	8%	7%
Far South	4%	4%	5%	4%	4%	5%	9%	4%	4%	3%	8%	7%	5%
Garfield	7%	7%	6%	8%	4%	5%	10%	4%	8%	5%	9%	7%	7%
Lawndale	0%	8%	6%	1%	6%	6%	10%	2%	2%	10%	6%	5%	6%
Near Southwest	10%	6%	7%	5%	11%	7%	6%	4%	6%	4%	5%	10%	6%
New City	4%	7%	9%	6%	9%	8%	8%	7%	13%	12%	8%	8%	8%
North Lakefront	2%	7%	7%	13%	7%	9%	7%	5%	4%	5%	7%	6%	6%
Northwest	3%	3%	5%	4%	6%	6%	4%	3%	5%	4%	3%	4%	4%
South Chicago	4%	5%	6%	7%	9%	6%	5%	0%	4%	5%	9%	4%	5%
Southwest	5%	2%	3%	4%	4%	8%	10%	4%	9%	6%	10%	8%	7%
Woodlawn	4%	5%	3%	5%	3%	7%	8%	5%	4%	6%	6%	7%	5%
Total	4%	5%	6%	5%	5%	6%	7%	4%	6%	6%	7%	7%	6%

Source: City Data Portal

In Several Neighborhoods, Shooting Became More Lethal in 2015 and 2016 than in 2014

Studies have shown that it is hard to shoot someone. Even trained police officers miss their human targets more often than they hit them, even at short range. (Lewinski et al, 2015) For people on the street, shooting another person usually requires a combination of luck and skill. Some shots are fired to frighten or to intimidate, others with the intention of wounding, and others with the intention of killing. In the heat of an event, one motive can easily turn temporarily and tragically into another. It has been

hypothesized that the “efficiency” of shooting is related to the intentionality and intensity of the shooter. (O’Flaherty & Sethi, 2010)

Analyzing the ratio of homicides to all shootings reveals fluctuations and patterns over time and between neighborhoods. Shooting “efficiency” can rise if more powerful weapons are used, if assailants are closer physically to their victims, if shooters are more experienced or more insensitive, or if shooters are more determined to take the life.

Table 2.8 shows that across the city from 2014 to 2016, about 20% of shootings resulted in a homicide. Ratios were very high at both the beginning of the period (24%) and at the end (24%). While there is not large variation from period to period, a gradual increase in ratio is observed from 2nd quarter 2016 (19%) to 3rd quarter (22%) to 4th quarter (24%).

However, significant differences do exist between neighborhoods. Shooting appears to have been more purposeful in Auburn Washington, New City, North Lakefront, and Southwest. The 4th Quarter of 2015, when shootings resulting in homicides were low, also saw the lowest homicide level of 2014 and 2015. Only a small change in the likelihood that a shooting becomes a death can affect homicide totals significantly.

Table 2.8 Percent of Shootings Resulting in Homicide by Quarter and Area

	Q1-14	Q2-14	Q3-14	Q4-14	Q1-15	Q2-15	Q3-15	Q4-15	Q1-16	Q2-16	Q3-16	Q4-16	Total
Auburn Washington	21%	11%	21%	19%	26%	12%	15%	15%	26%	26%	31%	19%	20%
Austin	24%	23%	21%	24%	25%	17%	24%	22%	27%	17%	17%	24%	215
Bronzeville	29%	15%	11%	10%	14%	20%	19%	8%	28%	18%	16%	19%	175
Englewood	29%	18%	25%	19%	17%	10%	8%	23%	19%	25%	23%	23%	205
Far South	24%	11%	14%	14%	24%	14%	21%	15%	12%	10%	21%	22%	17%
Garfield	34%	22%	21%	22%	15%	16%	27%	16%	20%	12%	27%	23%	21%
Lawndale	0%	24%	21%	6%	30%	22%	30%	12%	6%	20%	13%	13%	17%
Near Southwest	26%	15%	19%	16%	36%	20%	17%	15%	21%	15%	15%	26%	19%
New City	22%	25%	24%	18%	20%	22%	21%	22%	31%	31%	24%	25%	24%
North Lakefront	17%	21%	32%	40%	29%	26%	26%	20%	17%	24%	35%	24%	26%
Northwest	18%	10%	23%	23%	28%	24%	16%	15%	23%	19%	13%	24%	19%
South Chicago	15%	15%	14%	25%	33%	20%	19%	0%	15%	19%	26%	13%	18%
Southwest	29%	11%	10%	23%	18%	25%	31%	18%	31%	26%	34%	36%	27%
Woodlawn	24%	18%	14%	19%	15%	20%	28%	23%	20%	17%	21%	32%	21%
Total	24%	17%	19%	20%	21%	17%	21%	18%	21%	19%	21%	24%	20%

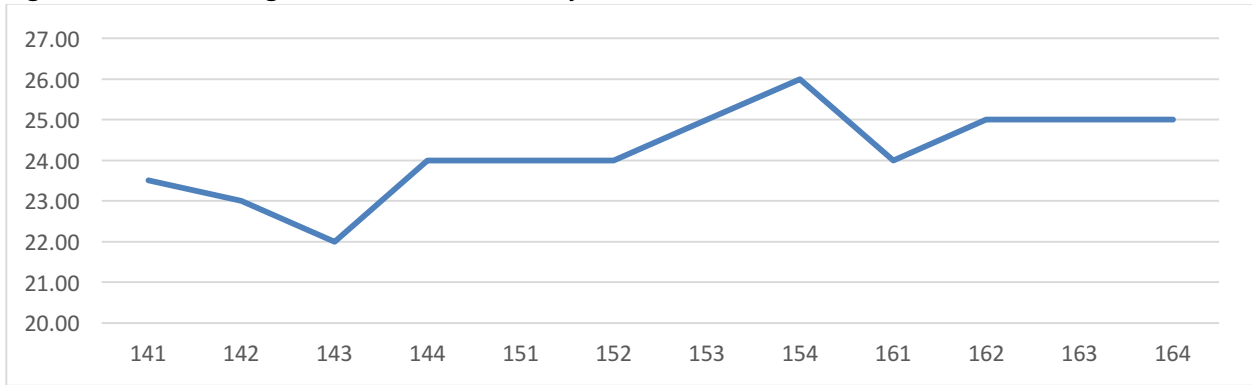
Source: City Data Portal

Age of homicide victims increased

The median age of homicide victims gradually increased over the 3 year period with a low average age of just 22 in mid-2014 and a high mark of 26 two years later (Figure 2.10) .

As shootings became a greater percentage of all armed confrontations, it is possible that shooters discriminated less in who they shot at. Increasing levels of violence could have involved persons less experienced with guns, who were more likely to either shoot randomly at people in a neighborhood or who were part of social circles populated with increasingly older persons.

Figure 2.10 Median Age of Homicide Victims by Quarter



Source: Media Database

2.8 RETALIATION HOMICIDES

Data suggests retaliations help explain totals in high homicide neighborhoods

That many homicides are retaliations for prior assaults is well established from the research literature, on-line commentary drawn from the offender community, and among social service practitioners. (Papachristos, 2013; Sweeney, 2015; Phillips, 2003; Jacobs & Wright, 2006) Chains of retaliations can extend through multiple homicides. So well-established is this that CeaseFire's hospital ER-based program operating in three Chicago hospitals exists to intervene with families of shooting victims before a family member can retaliate. (Ransford, 2016)

Sequences of homicidal retaliation can occur within groups or neighborhoods, not just between them, particularly because of the fragmenting of the historic gang structures of Chicago. (Neyfakh, 2016; Phillips, 2003) Most research on retaliations is qualitative and statistical methods for identifying which homicides are retaliatory are undeveloped currently. However, in neighborhoods where sequences of homicide retaliation exist, it may be possible to observe retaliation patterns by calculating the extent to which homicide sequences, i.e. the length of days between homicides, vary from statistical randomness, considering the total number of homicides in a place over a period of time.

The number of homicides expected to occur within any number of days of one another can be calculated utilizing a Poisson distribution applied to a neighborhood's homicide data. The resulting calculations suggest that there are periods in certain neighborhoods where the number and size of homicide clusters exceeds what would have been expected randomly. This could be indicative of retaliation patterns within a neighborhood.

Homicides may be grouped into one of two categories: those that are 1) **original** in that either they are used to assert a claim of some type, or raise a violence "ante", or 2) **retaliations** for an "original" homicide. An original followed by one or more retaliations over a short period of time may be said to form a "cluster". The following two tables report the incidence of homicide "clusters" for 7 day periods and for 3 day periods, meaning within a neighborhood over a year more homicides occurred within 7 days or within 3 days of one another than would have been expected by chance. These two time periods were selected in part because in areas with large numbers of homicides meaningful clusters are statistically undetectable within larger hypotheses of time from original offense to retaliation, and in part because a period of 7 days or less seems reasonable for many types of retaliations to take place, particularly among younger persons who may act impulsively. Numerous examples cited by Phillips and by Jacobs and Wright showed persons responding to affronts within a few days. The three columns on the right report the differences between the number of homicides randomly predicted within a 7 day or 3 day time frame, and the actual number that occurred. Positive figures, possibly indicative of retaliation, are shaded.

The absolute number reported here is less important than simply distinguishing between times and places that have more or fewer because these figures are a highly conservative estimate of retribution killings given that they estimate only those that may have happened within 7 days of the original affront. Anecdotal evidence, as well as observations by Papachristos, indicates that retributions can occur six months or more after an original affront, suggesting that actual retribution figures are probably higher than those calculated here by many multiples. High positive numbers indicate more clustering than would be normally expected; lower or negative numbers indicate much more even temporal distribution than would normally be expected. This method is, by nature, a blunt statistical tool. Some clustered

homicides may not be related and some homicides separated by weeks or months may be belated retaliations.

Table 2.9 Number of Homicides Occurring within 7 Days of Previous Homicide by Area and Year, Estimated Random and Actual

	2014 Random	2014 Actual	2015 Random	2015 Actual	2016 Random	2016 Actual	2014 Actual Above Random	2015 Actual Above Random	2016 Actual Above Random
Garfield Park	34.1	36	24.2	25	66.8	70	1.9	0.8	3.2
North Lawndale	1	0	5.5	10	17.9	18	-1	4.5	0.1
New City	4	5	9.3	14	17.1	15	1	4.7	-2.1
Englewood	38.2	42	28.1	29	78.1	78	3.8	0.9	-0.1
Bronzeville	2.6	1	6.1	5	8.6	11	-1.6	-1.1	2.4
Austin	14.6	17	25.2	26	57.8	57	2.4	0.8	-0.8
South Chicago	4	7	2.2	2	2.2	1	3	-0.2	-1.2
Woodlawn	18.8	17	38.3	37	52.2	52	-1.8	-1.3	-0.2
Southwest	1	1	3	5	15.4	16	0	2	0.6
Northwest	8.6	10	10	8	19.7	19	1.4	-2	-0.7
North Lakefront	3.9	3	5	4	5.6	7	-0.9	-1	1.4
Near Southwest	5	6	5	4	10	9	1	-1	-1
Far south	11.5	8	16	17	25.2	23	-3.5	1	-2.2
Auburn Washington	7.3	8	8	8	28.1	30	0.7	0	1.9

Source: Calculated from Media Database

Table 2.10 Number of Homicides Occurring within 3 Days of Previous Homicide by Area and Year, Estimated Random and Actual

	2014 Random	2014 Actual	2015 Random	2015 Actual	2016 Random	2016 Actual	2014 Actual Above Random	2015 Actual Above Random	2016 Actual Above Random
Garfield Park	20.4	25	13.9	15	44.6	46	4.6	1.1	1.4
North Lawndale	.5	0	3.2	6	10	11	-0.5	2.8	1
New City	2	3	4.9	6	9.5	11	1	1.1	1.5
Englewood	23.3	24	16.4	19	53.9	60	0.7	2.6	6.1
Bronzeville	1.3	0	3.2	2	4.6	4	-1.3	-1.2	-0.6
Austin	8	10	14.5	17	36.7	33	2	2.5	-3.7
South Chicago	2.3	6	3.8	2	.5	0	3.7	-1.8	-0.5
Woodlawn	10.5	8	24	25	33.4	38	-2.5	1	4.6
Southwest	.3	1	1.5	4	8.5	11	0.7	2.5	2.5
Northwest	4.6	4	5.3	5	11.1	12	-0.6	-0.3	0.9
North Lakefront	2	0	2.6	3	2.6	4	-2	0.4	1.4

Near Southwest	2.6	3	2.6	2	4.9	5	0.4	-0.6	0.1
Far south	6.2	6	9.5	12	13.9	17	-0.2	2.5	3.1
Auburn Washington	3.5	5	3.8	5	15.8	13	1.5	1.2	-2.8

Source: Calculated from Media Database

Table 2.9 and 2.10 show that homicides cluster temporally more in some places than others, and that clustering appears more likely in some years than in others. Adjacent Englewood and Woodlawn, and Far South, showed clear increases in the number of homicides that occurred within 3 days of one another beyond what would have been expected randomly. Adjacent Garfield Park and Austin had in common high numbers in 2014 that subsided in 2015 and 2016.

The clustering of homicides is consistent with the earlier finding that fluctuating numbers of total homicides correlated highly for these same neighborhoods. This data is consistent with a theory that conflicts between persons in Austin and Garfield Park, and Englewood and Woodlawn that began in 2015 played a major part in propelling the 2015/2016 homicide surge and that a large number of these homicides were retaliatory.

2.10 REDUCED STREET-LEVEL SOCIAL CAPITAL

In 2015 a variety of social programs suffered reduced funding and police-neighborhood relations became increasingly strained

In low income, under-resourced neighborhoods where guns are readily available and many people carry them, social capital that helps prevent potential violence includes social services, attentive residents and effective policing. Morenoff, Sampson and Raudenbush (2001) illustrated the impact on violence of local organizations and collective efficacy in Chicago. In many Chicago neighborhoods, shortages of each have existed for many years, but 2015 brought significant changes in each that are consistent with the data presented in this report.

2015 was a difficult year for human service programming in Chicago. Social programming supported by the City of Chicago remained generally stable from 2014 through 2016, but many programs supported by funds from the State of Illinois suffered significant cut-backs in 2015. (Heartland Alliance, 2017; Voices for Illinois Children, 2016) Due to the inability of the State to pass a budget in the spring of 2015, State revenue shortages relative to expenses, and suspension of funding for a variety of programs earlier in the Spring of 2015, a variety of human services programs that served persons at-risk for violence either closed or had to downsize due to lack of funding. Some organizations were forced to close entirely when state funding fell in arrears or ended; in other cases organizations continued to operate at lower service levels utilizing reserves or much smaller alternative sources of funding. (United Way, 2017)

A number of programs served clients in Chicago who were either enrolled in the program because of their previous record of offending, or because they were potentially at risk of offending. In other cases, potential victims of violence may have participated in out-of-school time programs or other social programs that would have insulated them from potential harm.

CeaseFire

CeaseFire is a highly evaluated program (Northwestern University, Johns Hopkins University) operated by Cure Violence shown to reduce shooting and homicide in numerous Chicago neighborhoods where it has operated for more than a decade. Chicago CeaseFire's state funding was suspended in spring of 2015 and was not restored until the Stop Gap budget over one year later. This necessitated releasing its street workers in nearly all of its 14 Chicago sites, most of which operated in Chicago's most dangerous neighborhoods. (Ransford, 2016) While it is impossible to estimate the number of shootings that would have been averted by a normally-functioning CeaseFire program, it is reasonable to assume, given the evidence of its efficacy from its two rigorous evaluations, that some number of actual shootings would have been prevented.

CeaseFire has the most direct effect on shootings and homicides in Chicago, but loss of funding to other programs could have had an effect as well. Persons 20 years old or younger comprise a significant minority of homicide victims and offenders and two programs, Teen REACH and Comprehensive Community Based Youth Services (CCBYS) work with young persons in high-crime neighborhoods. In the case of the CCBYS, clients are young person's deemed at risk of commission of violence. In the case of Teen REACH, program participants may be either persons at risk for commission of violence or young persons seeking constructive out-of-school activities that have the effect of keeping them out of harm's way. Based on what is known about program closures, see below, cutbacks to these programs had the

effect of reducing services to probably between 500 and 1,000 young persons during 2015 in high-crime neighborhoods.

Teen REACH

Teen Reach provides students in at-risk neighborhoods with after school tutoring, mentoring, behavioral health and service learning. Funding was cut beginning in July, 2015 with Chicago programming gradually diminishing as providers ran out of discretionary resources. By October 2015, eleven after-school programs had closed. Some funding was provided in the “Stop Gap” budget. (Lyons, 2015) As its name suggests, Teen Reach serves school-aged youth.

Comprehensive Community Based Youth Services

The program provides crisis intervention and various types of individual and group counseling for persons aged 11 through 17. Funding was eliminated in July 2015 and service gradually decreased. Although funding was in the Stop Gap budget, at least one Chicago provider determined not to renew its contract in June 2016. (Capital Fax reported suspension of Children’s Home and Aid CCBYS services in Englewood as of January 2016 following six months of unpaid program operations.) According to a survey by Illinois Coalition on Youth, 40% of Illinois CCBYS providers reduced services during the second half of 2015. (Capital Fax, 2016)

We know from the most recent Chicago homicide report that most offenders and victims in recent years have had prior contact with the criminal justice system, and we know that 19% of Illinois offenders recidivate within one year of release from incarceration. (Sentencing Policy Advisory Council, 2015) This underscores the importance of quality processes for facilitating prisoner re-entry. Reports by the Urban Institute and Chicago Urban League from the previous decade illustrate that the vast majority of Chicago area releases are made to residents of Chicago’s homicide areas. (LaVigne & Mamalian, 2003) No reason exists to think that pattern has changed in the intervening years.

Re-entry and Rehabilitation Services

Safer Foundation, Lutheran Social Services of Illinois and other community-based services for re-entering offenders have had to reduce services or eliminate programs in Chicago due to funding shortfalls and delayed payments during 2015 and 2016. It is possible that service reductions affected as many as several hundred re-entering offenders and that some of these individuals were involved in homicides during 2015.

The effects of reductions in services for mental health, drug treatment and homelessness are harder to assess. While cuts to programs in these fields occurred for Chicago providers, we know less about incidence of these programs in high-crime neighborhoods, risk factors for homicide among program participants, and the extent and timing of service declines. The large numbers of inmates in Cook County Jail and in the State prison system with documented drug use or mental illness suggests that some portion of crimes are caused by mental illness and/or by use or participation in the drug trade. It is reasonable to believe that increased drug treatment would remove significant numbers of persons out of the drug trade, thereby lessening their likelihood of becoming either homicide victims or offenders.

Evidence on the relationship between diagnosable mental illness and homicide is mixed. Coid et al (2013) demonstrated a relationship between gang-member violence and mental illness, but only ten percent or fewer of homicides are done by persons with diagnosable conditions so reductions in Chicago mental health treatment services likely would have had a small affect on numbers of shootings and

homicides. It is possible that some shooters either lost or were denied needed treatment but there is no means presently to estimate how many.

Mental Health

Significant cuts occurred to state-funded mental health services beginning in June 2015, many of which affected providers operating in Chicago. This followed the closing of 6 neighborhood-based clinics funded by the City of Chicago in 2012 that by many accounts had already left the system under-resourced. (Pickett, Brandenhorst & Powell, 2015)

Substance Use Prevention and Treatment

Significant reductions in funding have occurred since mid-2015 in state-funded drug treatment programs operated in Chicago.

Homeless Youth Services

While homeless persons are not disposed to homicide, the loss of services could have put some persons in harm's way. Two Chicago youth service providers closed services in September, 2015. By 2016, most youth providers had reduced services. Some money was provided in the June 2016 "Stop-Gap" budget that restored services. (Voices for Illinois Children, 2016)

Policing

The nature of policing changed significantly in many Chicago neighborhoods during 2015 and 2016 and certain of those changes could have contributed to the rise in homicides over the period. For policing to be effective in the long term, and particularly in distressed neighborhoods, police officers must have strong and positive relationships with local residents. (U.S Justice Department, 2017; Gorner, 2016) For decades a difficult relationship in Chicago, in 2015 the police-resident relationship took a turn for the worse in many neighborhoods. Kirk and Papachristos (2011) demonstrated the strong impact of what they termed "legal cynicism" on levels of violence. Residents of even the most violent communities may still believe in the importance of law enforcement and hate crime, but in the most violent, they have lost confidence in law enforcement and the legal system to protect them or to operate effectively. The Laquan MacDonald shooting and subsequent release of the video exacerbated problematic police-community relations. Former Superintendent McCarthy had for years stated publicly the need for greater witness cooperation in solving crimes, and homicides in particular. The grievances highlighted in the 2016 U.S. Justice Department report were not new and the lack of neighborhood trust of the police had been building for years with each new revelation of abuse of power by officers, generally against young African American men. (Moore, 2012; ACLU, 2015; U.S. Justice Department, 2017)

The use of street stops had long irritated and eventually outraged many African American residents. Residents had long objected to the practice and in late 2015, as a result of ACLU litigation, CPD substantially curtailed the practice. (Crime Lab, 2017; Mitchell, 2016) How effective the stops had ever been in Chicago has been debated with advocates arguing that they had been successful in New York City, but critics contending that they had little value in New York or Chicago and that their irritant effects and legally discriminatory nature alienated community residents, far outweighing any value for law enforcement. At their best, excessive street stops were very expensive in terms of costs to constitutional rights and community relations. Data tends to corroborate this as clearance rates for homicide have steadily declined in Chicago for over a decade, not just in the past year.

Data also show a multi-year decline in drug arrests citywide. The long-term reduction in hard drug arrests may have, as a policing strategy, removed some police presence from some neighborhoods over time. Hard drug arrests in Garfield Park appear to have decreased particularly steeply in 2014.

Across all of these changes, police and neighborhood residents have gradually disengaged in many Chicago neighborhoods and a new low point may have been reached during 2016 that permitted violent actions in distressed Chicago neighborhoods that might have been prevented in earlier years.

Conclusion – How the Surge Occurred

Chicago's highly concentrated poverty, lack of quality education for many students (increasing high school graduation doesn't mean kids necessarily learned much), fluid family structures, high availability of guns, low homicide clearance rates, and multi-generational gang rivalry tradition in many neighborhoods has led to persistent homicides in particular Chicago neighborhoods owing to a readiness by some people to use violence in any number of situations.

The data above shows that the increase began in 2015, or perhaps even earlier, and that it was neither uniform nor sudden. The timing of the surge tends to eliminate changes in public housing, school attendance areas, gang structure, employment or increased gun availability as reasons for the increase.

Quality of neighborhood-police relations in many places likely deteriorated somewhat in mid-2015. This would be consistent with the trend toward more homicides by people on foot as opposed to vehicles, the reduced clearance rate citywide that is well known, and the provisional evidence presented here that may be an indication of less local cooperation from witnesses. With this, assailants could have been emboldened, becoming increasingly likely to use guns and more likely to attack and retreat on foot rather than in vehicles. As places became increasingly dangerous, people on the street felt they needed to be more armed to defend themselves (more robbers used guns), making conflict increasingly deadly.

The presence of CeaseFire and other social programs have for almost a decade contained the violence in many Chicago neighborhoods to around 400 homicides per year, but could not eliminate it. The retreat from these containment strategies in early/mid 2015 could have provided sufficient loss of social control of and therapy for the relatively small subset of potentially dangerous people to start homicide retaliation chains and neighborhood arms races that gained exponential frequency over late 2015 and 2016, resulting in the current high homicide levels.

POLICY RECOMMENDATIONS

Long term reduction in violence and homicides requires a number of interventions. These include:

- Economic development accessible to low-income/high-crime neighborhoods that create jobs for neighborhood residents, and particularly young men.
- Improved educational opportunities, including parental engagement.
- Reduction in availability of firearms.
- Provision of mental health and substance use treatment available particularly to low-income/high-crime neighborhood residents.
- Improved relationships between neighborhood residents and law enforcement.
- Decriminalization of low-level drug possession.
- Strengthening offender re-entry, juvenile justice, and offender intervention programming.
- Reduced racial segregation and elimination of racial discrimination.

Short term reduction in violence and homicides will require:

- Police and local residents must restore confidence in one another. This includes police always treating neighborhood residents with respect, providing appropriate anonymity and protection to people reporting on crimes, and maintaining effective side-walk level presence in neighborhoods.
- Neighborhood residents must cooperate with police on crime reporting.
- Effective social service programs that support youth, intercede in potentially violent situations, and provide mental health, substance use treatment and homeless services should be strengthened.

DATA APPENDIX

Computation of Retaliation Clusters

If a homicide is in retaliation for an earlier homicide, then we might hypothesize that the second homicide is more likely to occur within a shorter time period of the original homicide than would the next randomly occurring homicide.

If homicides occur randomly throughout the year, a neighborhood with n murders per year is modeled as a Poisson process with parameter

$$\lambda = \frac{n-1}{365}$$

The probability of a homicide occurring within t days of the previous homicide is:

$$1 - e^{-\lambda t}$$

Since t is a continuous variable and the data is at the day level, t is corrected by a half-day. This makes the question “Does the next homicide occur within t days of the previous one?” a Bernoulli trial with probability of success equal to:

$$1 - e^{-\lambda(t+0.5)}$$

Variable Definitions

Data obtained from the City of Chicago Data Portal was coded for analysis herein as follows:

Homicide: 0110, 0141, 0142

Shootings: 041A, 041B

Robbery: 312,313, 031A, 031B, 320

Drug Transactions: 2094, 2095, 2050, 2070, 1840, 2015, 2014, 2013, 2032, 2010, 2012, 2017, 2019, 2030, 2016, 2018, 2033

Armed Encounters: 051A, 041A, 041B, 051B, 033B, 110, 141A, 141B, 1479, 031A, 031B, 033A

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