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INTRODUCTION

Despite the enormous toll of gun violence in America, shockingly little is known about what works to reduce gun violence or the illegal gun markets that put guns in dangerous hands. Research suggests that a typical crime gun is likely to be involved in a series of transactions between its first legal purchase from a Federal Firearms Licensee (FFL) and its recovery by police. These intermediate exchanges are largely invisible to gun trace data systems and governmental regulatory bodies, and known only to those involved in or close to these underground gun markets. The hypothesis motivating this project is that substantial progress could be made in the near term in reducing gun involvement in violence through strategic law enforcement interventions against what we call underground gun markets – if only we knew more about how such markets actually worked. To that end, the goal of this project is to learn more about how underground markets supply guns to people at highest risk of using them in violent crimes, through a mixed-methods study in Chicago that collects and analyzes several unique new sources of qualitative and quantitative data. The specific research activities we carried out in order to achieve that goal include:

1. Analysis of multiple Chicago Police Department (CPD) administrative datasets: Using Bureau of Alcohol, Tobacco, Firearms and Explosives (ATF) crime-gun trace data, together with the corresponding arrest data provided by the CPD we sought to update previous research on the sources of crime guns in Chicago (Cook, Harris, Ludwig, Pollack 2015). A second objective was to analyze patterns of gun theft, using CPD data on guns reported stolen, matched with CPD data on gun recoveries.
2. Ethnographic interviews of gun brokers and gang leaders: In partnership with Sudhir Venkatesh, an affiliate of the University of Chicago Crime Lab and formerly a professor of sociology at Columbia University (now a researcher at Facebook), we interviewed brokers who help facilitate exchanges in the underground gun market, and women who facilitate either the purchase or storage of firearms.

3. Survey of Illinois Department of Corrections (IDOC) inmates: The primary objective under this grant was to conduct a survey of gun offenders in order to learn about the workings of the underground gun market. This research also had a methodological objective: Interview data were linked to administrative data on respondents' prior records, which created a unique opportunity to better understand the reliability of the information gathered during the interviews.

We report here on the research supported by the generous funding of the NIJ. In what follows, we report on the purpose of each project activity, project design and methods, data analysis, findings, dissemination and some implications for criminal justice policy and practice in the United States.

1) ANALYSIS OF MULTIPLE CHICAGO POLICE DEPARTMENT (CPD) ADMINISTRATIVE DATASETS

As a complement to the IDOC inmate surveys described later in greater detail, which provide information for the most recent transaction for a survey sample that over-represents the small subset of people at highly elevated risk for being shooters, we analyzed three different sources of Chicago PD (CPD) administrative data to understand different parts of the underground gun market.

a) Sources of Crime Guns Recovered in Chicago

The first element of administrative data that we examined is crime gun trace data, provided to CPD by the ATF. With the support of this grant the Crime Lab has updated the 2015 Chicago trace data analysis, "[Some Sources of Crime Guns in Chicago](#)," incorporating two additional years of arrest and trace records. In addition, we identified new ways to refine our analysis through the use of more sophisticated probabilistic matching techniques. From this dataset, we were able to identify violators who are or have been identified by CPD as gang-involved and compare their guns with those of violators who are not identified as gang-involved. We focused on how gang-involved individuals obtain guns since this population is at greatly elevated risk for gun violence both as perpetrators and victims. Consistent with the results of our 2015 analysis, our preliminary analysis of the updated data suggests that the guns confiscated by the police from

gang members tend to be quite old with every indication that they have gone through a series of transactions before being acquired by the current owner. Our preliminary analysis also suggests that it is very rare for these guns to be purchased new from a gun dealer in a documented sale. We plan to submit the final set of analysis for peer review at Northwestern University's *Journal of Criminal Law and Criminology* in spring 2018. We will make a copy of the article, along with a summary of the key findings, available to NIJ when it is complete.

b) Gun Theft and Crime

The second data source we analyzed comes from linking together data from the CPD and ATF on recovered crime guns in Chicago. One fundamental question we attempted to answer is – how important are stolen guns in supplying guns to those at highest risk for being shooters? Various commentators, including scholars and police chiefs, have claimed that theft plays an outsized role when it comes to supplying gangs and other violent criminals with guns. However, there is little systematic evidence on the extent to which those stolen guns do end up in the hands of violent criminals. Better evidence on this issue would be helpful in directing law enforcement efforts. If theft is the predominant method by which guns are redirected to the underground market and end up in the hands of dangerous people, then there would be a strong case for a large public investment in reducing gun theft. If, on the other hand, only a small percentage of guns used in violent crimes have been stolen, then anti-theft measures warrant the low priority they currently appear to have.

The Crime Lab received data on all guns reported stolen to CPD between 2010 and 2016. By matching the CPD stolen guns data to the ATF eTrace data provided to CPD on recovered guns, we have learned more about the characteristics of guns reported as stolen to CPD, the time to reported theft, the victims of gun theft, and the possessors of recovered stolen guns. A full report of our findings can be found in the attached *Gun theft and crime* paper, with tentative conclusions about the extent to which these guns end up in the hands of active criminals. *Gun theft and crime* will be published by the Journal of Urban Health in spring 2018.

Some findings of note included that of the gun theft reports received by CPD between 2010 and 2016, just over half (53%) included a serial number and manufacturer name, which was the minimum required to match them against the guns recovered by the CPD. Using the database of firearms recovered by CPD during that same period to identify which of the stolen firearms were subsequently recovered by CPD, we find a potential match rate of 2.8%. And while this match rate appears too low to support the claim that theft is an important part of the supply chain of crime guns, there are many caveats. First, this match rate assumes that the 53% of theft reports with serial numbers are representative of all guns reported stolen. We also acknowledge that gun thefts may be greatly underreported in Chicago, so more of the guns being recovered by CPD may have been stolen but owners failed to report the theft to police. Additionally, it is plausible that a large percentage of the firearms recovered by CPD had been stolen in another jurisdiction at some point. So the result that 2.8% of crime guns had at some point been reported stolen in Chicago may safely be considered a lower bound on the percentage of guns used in Chicago violence that had been stolen in Chicago or elsewhere. Whether the true figure is close to this bound, or much higher, is unknown.

We also sought to utilize data from the Chicago Police Department on the recovery of stolen guns to determine the likelihood that a gun stolen in Chicago will show up among the crime guns later recovered by the CPD. Based on theft and recovery reports going back to 2001, we can conclude that the great bulk of gun recoveries occur within the first 3 years following the report of the theft. Only about 20% of guns reported stolen are ever recovered. The recoveries are usually coupled with an arrest, and the arrest in most cases is for illegal possession or carrying, although a subset of those arrested in this context have a history of arrests for violent crimes.

Our analysis and findings to date highlight the gaps in our knowledge about the role of gun theft in violent crime. Some additional areas of analysis, which could be performed using available data, include matching crime guns that have been recovered by the police with the FBI's National Crime Information Center (NCIC) records of guns reported stolen. The NCIC maintains a comprehensive national dataset of firearms reported stolen to law enforcement, and access to this data would allow us to capture the extent to which

firearms stolen from outside Chicago are recovered by CPD. One important aspect of this inquiry would be to assess the quality of the NCIC stolen guns data base, and of the matching procedures used by the NCIC when police departments submit a query about whether a recovered gun was ever reported stolen. The Crime Lab was able to obtain data provided by the NCIC to CPD on which crime guns recovered in Chicago had been reported stolen somewhere in the United States, but this dataset proved unusable. The Crime Lab is currently working with CPD to obtain a new dataset on firearms reported stolen to NCIC. As such we do not expect analysis of the NCIC data to be ready during the reporting period for this grant, but we will share copies of all reports with NIJ if the results become available. Another analysis of potential interest would compare ballistics data on stolen guns that are recovered with data on ballistics data from crime-scene shell casings to determine the extent to which these guns have been used in criminal shootings.

2) *ETHNOGRAPHY*

The ethnographic component of the project complements other analyses by providing additional details about the gun transactions that occur between first sale by a FFL (captured by ATF trace data) and the last acquisition that put the gun in the hands of someone who misused it in crime (captured by IDOC surveys). To date, Venkatesh has engaged in several forms of data collection. He has conducted direct, structured interviews with 100 key players in gun distribution, which include gang members, gun brokers who sell guns to the public, and “gun runners” who move large quantities of guns from one area to another. Venkatesh has conducted over three dozen interviews with community members whose lives are impacted by gun violence and who might also play a role in gun markets—e.g., by storing guns for gangs for a fee. From these interviews, Venkatesh has generated the following findings:

- Gun Markets as Social Networks: Gun markets can be thought of as social webs of individuals who each play varied, but crucial roles in the distribution of firearms. A social network that distributes firearms can range from 6 to 15 individuals, each of whom plays an important role. These connections are built on familiarity and trust, and individuals usually must provide a third-party

reference to become included in a network. Indeed, a consistent theme in our interviews is that social networks exercise caution when incorporating new individuals.

- Gangs and Guns: While gang cohesion in Chicago is dropping, gangs are becoming more involved in gun distribution, both to gang and non-gang members. We hypothesize that increased access to the illicit market by non-gang members may be driving the violence in some Chicago neighborhoods.
- Non-Gang-Affiliated Gun Sellers: Both “craft” and “transitory” non-gang-affiliated sellers operate in Chicago’s most dangerous neighborhoods; the number of “transitory” or “non-specialist” gun sellers has increased in recent years.
- Asset Based Approach to Public Safety: Our research suggests that a resigned attitude towards gun violence in certain communities is most prevalent in those residing outside of these communities; residents living in these communities are optimistic about social change and actively work to create safer neighborhoods.

Through our project we have also documented the returns to ancillary functions such as storing weapons, providing safe spaces for gun transactions, and acting as a lookout for police. These services can enable cash-strapped individuals to obtain immediate off-the-books revenue. The payment for such services appears to be quite similar in each of our field sites. For example, individuals who allow gangs, gun traders and others to store weapons in their home recall receiving up to \$250 per month. Other activities include storing weapons in vehicles or performing security services for gun traders, such as looking out for police, monitoring prospective buyers, or assisting gun traders.

In each of our communities, we discovered several dozen residents who routinely performed such services. Nearly all were unemployed or working part-time in menial jobs. Thus for such individuals, the revenue from performing these services could be quite valuable. Our ethnographic work has underscored the diffuse nature of the illicit markets that arm dangerous offenders. This work suggests that a substantial portion of the market is made up of the formal and informal networks that operate in these communities and facilitate

access to firearms and ammunition. This understanding of the supply chain for illegal guns has been very important for the way we think about both enforcement and non-enforcement strategies for intervening and interrupting these markets.

3) SURVEY OF ILLINOIS DEPARTMENT OF CORRECTIONS (IDOC) INMATES

While gun violence research indicates that many of the individuals who commit gun crimes are legally prohibited from possessing firearms and therefore rely on underground markets to procure firearms, we have extremely limited data on the individuals and types of transactions involved in these secondary markets. The Illinois Department of Corrections (IDOC) survey aims to document the characteristics and functioning of the local underground gun market, an undertaking that is especially timely given Chicago's recent spike in gun violence. By conducting interviews with incarcerated individuals, the survey explores the social and economic pathways that individuals use to procure firearms in the illicit market and their motivations behind gun acquisition.

We surveyed 221 recently sentenced males between March and September, 2016, who were incarcerated in seven IDOC prisons for gun- or weapons-charges. Interviews were semi-structured, with both multiple choice and open-ended questions that covered a range of topics, including individual and neighborhood characteristics, experiences with guns and gun violence, perceptions of the criminal justice system, and additional information about ammunition, gangs, and guns in Chicago.

One key strength of this study was the set of administrative data sets the research team was able to access and link to the IDOC survey sample. We used IDOC sentencing data, CPD arrest and victim data, ATF Chicago Trace Data, and Cook County disposition data to better understand respondents' criminal history and to validate self-reported responses.

The interviews revealed that respondents were extensively involved with guns and violence. Fully 93% of respondents said they had been shot at on at least one occasion, and more than 40% reported having actually been shot and wounded at least once. About 77% of respondents admitted to owning a gun within six

months prior to their arrest. Since virtually none of these individuals were eligible for an Illinois gun license (FOID) to purchase a gun legally, our study population was well-situated to speak about the secondary gun market in Chicago.

Respondents discussed the sources and methods of acquisition for guns they possessed within six months of their arrest. As expected, less than 1% of the guns were purchased from a store. Most reported obtaining guns from voluntary transactions with friends and acquaintances – their social network. The transactions included purchases, trades, loans, gifts, and sharing arrangements. Only 7% of respondents reported acquiring a gun through theft. Ammunition was also obtained through street sources, though about 15% of respondents reported that someone else straw purchased ammunition for them, compared with just 5% who reported obtaining a gun by straw purchase.

Many respondents reported having little trouble acquiring a gun, though 15% of those who were specifically looking for a gun at the time said it took more than a month. Surprisingly there was no indication that self-professed gang members had an easier time in gaining access to a gun than other respondents, despite being more involved with guns or having potential access to a stash of guns owned by their gang. The lag between gun acquisition and gun use in crime tended to be brief; when asked about the gun they used in the crime that led to their arrest, almost one-third said they obtained it less than a month earlier.

Finally, respondents were asked about their cooperation with the police in instances where they had been shot or shot at, and responses confirmed the widely reported belief that criminally involved gun-assault victims have valuable information, yet are reluctant to cooperate with the police. Respondents typically mentioned that they did not trust the police, or that the police “don’t care” and hence would not act on any information they provided.

The IDOC Survey questions on individuals’ experience with guns help establish the importance of the underground gun market in fueling gun crime. The transactions discussed were heterogeneous but often facilitated by social networks, indicating that interpersonal connections are useful for acquiring a gun in the underground market. Additionally, the time from gun acquisition to criminal use was typically a matter of

weeks or months. That pattern suggests that a successful crackdown on illegal transactions would have a quick and pervasive effect on gun crime.

In addition to a comprehensive report detailing the methodology and findings, the team is working collaboratively on publications of the findings in scholarly journals. We plan to prepare three journal articles using the data from the IDOC survey:

- **Ammunition.** In our survey we asked respondents about their use of ammunition, the sources and means of acquiring ammunition, as well as about prices and other indicators of the market. In this paper we will report our findings and discuss potential policy implications. We will target this paper to a public health journal in fall 2018.
- **Time-to-Crime.** Using the results from our survey we will make the empirical case for regulations that focus on transactions (rather than reducing the stock or prevalence of gun ownership). We will target this paper to a public health journal in fall 2018.
- **Victimization.** Using IDOC data, we will examine the link between individuals' histories of experiencing gun violence, their perceptions of safety in Chicago neighborhoods, and the effectiveness of police officers and gun regulations in deterring prohibited individuals from acquiring, carrying, and using guns in Chicago. We will target this paper to a public health journal in fall 2018.

DISSEMINATION

We believe the results from this project could have potentially important impacts on current understanding of underground gun markets, future research on this issue, and on law enforcement practices across the country. Throughout the duration of the project we sought to reach as broad an audience as possible of academic researchers, policymakers at the city, state and federal levels, and law enforcement practitioners through briefings, presentations, and regular updates. We include a complete list of dissemination activities in the Appendix.

CONCLUSION

We are grateful to the NIJ for its support of this work that we believe has generated insights into the nature and functioning of the underground market that may have important implications for our understanding of the illicit market for firearms in cities across the country. We believe that this research will have a significant impact not only on policy, but also on the lives of individuals and communities in cities throughout the country.

APPENDIX I: DISSEMINATION

Presentations:

- John Jay/HF Guggenheim Symposium on Crime in America (February 2018): Philip J. Cook and Kim Smith (Research Manager, Crime Lab) will share findings from the survey of IDOC inmates and the analysis of CPD stolen gun data on the Unregulated Gun Market panel at the annual Guggenheim Symposium on Crime in America.
- University of Chicago Crime Lab Briefing IDOC Results (November 2017): Philip J. Cook shared results from the surveys of IDOC with key stakeholders during a briefing at the University of Chicago Crime Lab office in Chicago. Representatives from IDOC, CPD, the Cook County State's Attorney Office, and FBI were in attendance.
- Association for Public Policy Analysis & Management's fall research conference (November 2017): Philip J. Cook presented findings from our stolen guns analysis as part of the Firearm Policies panel.
- International Association of Chiefs of Police annual conference (October 2017): As part of the *Stolen Guns and the Role that Theft Plays in Arming Criminals* panel Philip Cook, along with Kim Smith and a representative from the Los Angeles Police Department, discussed the role of theft in supplying the underground market.
- Association for Public Policy Analysis and Management fall research conference (November 2016): On the panel "Illicit Markets," Philip J. Cook presented findings from the IDOC prisoner survey. Findings shed light on how illegal guns make their way from gun stores into the hands of gang members and others who are likely to use them in crimes on our city streets and will highlight opportunities for community or policing interventions to reduce the flow of guns into and within this secondary market.
- American Society of Criminology Conference (November 2016): Philip J. Cook also presented IDOC findings on the "Understanding the Underground Gun Market" panel at the annual ASC Conference. The panel consisted of presentations from investigators studying underground gun markets in Los Angeles, Chicago, and Boston.
- Russell Sage Foundation Symposium on Multi-City Gun Markets Project (April 2016): Affiliates from the across the multi-city underground gun markets project came together to discuss and compare findings and plan for next steps.
- International Association of the Chiefs of Police annual conference (October 2015): presentation to the Research Advisory Committee (RAC) on the progress of this multi-city, multi-methods study of underground gun markets.

Publications:

- Russell Sage Foundation Journal of the Social Sciences, released Oct. 2017. Principal Investigators Philip Cook and Harold Pollack organized and published a symposium titled *The Underground Gun Market: Implications for Regulation and Enforcement* (Russell Sage Foundation Journal of the Social Sciences). It includes a comprehensive review written by the editors.
- University of Chicago Crime Lab. "Research in Brief: The Underground Gun Market." *Police Chief Magazine*. Alexandria, VA. (February 2016): This report summarizes both the findings and ongoing initiatives of the Crime Lab's multi-city, multi-method underground gun markets study.